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*Journal writing is a voyage to the interior.*

*Christina Baldwin*

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## **From the Editor's Desk**

It is a great pleasure to release volume 13, Issue 1& 2 of International Journal on Global Business Management and Research. Unlike our previous issues, this issue also has brought highly productive and standard papers for the benefit of the readers.

Each of the papers discussed is significant in its own way. We are very thankful to our contributors and readers of our journal worldwide, without whose patronage this wonderful journey may be impossible. We welcome innovative contributions from corporate members, academicians, and researchers across the globe to contribute and benefit from our journal.

Thanks and Regards

**Dr.Uma Raman M**  
**Dr.Aistė Vitkūnė**

*The art of writing is the art of discovering what you believe*

- *Gustave Flaubert*

## **SUSTAINABLE LEADERSHIP PRACTICES: BALANCING PROFITABILITY AND ENVIRONMENTAL RESPONSIBILITY**

**Dr. R. USHARANI<sup>1</sup>**

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### **ABSTRACT**

*Sustainable leadership has emerged as a crucial paradigm in today's business landscape, addressing the need to balance profitability with environmental responsibility. As companies face increasing pressure from stakeholders, governments, and consumers to adopt eco-friendly practices, leaders are challenged to drive both economic growth and sustainable development. This study explores the integration of sustainable leadership practices that prioritize long-term environmental stewardship while ensuring financial viability. It highlights key strategies such as eco-efficient technologies, circular economy models, and responsible supply chain management, which help organizations reduce their environmental footprint while maintaining competitiveness. The research also examines how fostering a culture of sustainability within the organization, supported by transparent policies and continuous innovation, can contribute to both ecological preservation and profit maximization. By adopting sustainable leadership practices, businesses not only fulfill their ethical obligations but also enhance their brand value, employee engagement, and stakeholder trust, leading to a more resilient and sustainable future. This abstract provides an overview of how leadership in modern enterprises can successfully align profitability with environmental responsibility, demonstrating that sustainability and profitability can coexist and reinforce one another.*

**KEYWORDS:** *Sustainable Leadership, Profitability, Environmental Responsibility, Eco-efficient Technologies, Circular Economy.*

### **I. INTRODUCTION**

In an increasingly interconnected and environmentally conscious world, sustainable leadership has gained prominence as a critical approach for businesses seeking to thrive in the 21st century. The global shift toward sustainability is driven by rising environmental concerns, resource scarcity, and evolving consumer expectations. Today's businesses are not only expected to generate profits but also to take proactive measures to minimize their environmental impact and contribute to the well-being of society. This shift requires a reevaluation of traditional leadership models that prioritize short-term financial gains over long-term sustainability. Sustainable leadership involves guiding organizations in ways that balance profitability with environmental and social responsibility. It extends beyond corporate social responsibility (CSR) and focuses on embedding sustainability into the core of business strategies, decision-making processes, and operational models. By embracing sustainable practices, companies can mitigate risks associated with environmental degradation, regulatory changes, and shifting market demands while positioning themselves as forward-thinking, responsible entities. At the heart of sustainable leadership is the concept of "triple bottom line" – an approach that measures success not only by financial performance but also by environmental and social impact.

Leaders adopting this model understand that long-term profitability and corporate success are inextricably linked to the well-being of the planet and the societies in which businesses operate. Moreover, sustainable leadership encourages innovation, resilience, and adaptability, which are essential for navigating the complexities of today's volatile and unpredictable markets. This introduction sets the stage for exploring the strategies and practices that allow leaders to balance environmental responsibility with economic growth. The implementation of eco-efficient technologies, circular economy models, and responsible supply chain management are central to these efforts. Leaders who prioritize sustainability create organizational cultures that value transparency, ethics, and innovation, fostering a competitive advantage in the marketplace. Additionally, they cultivate trust among stakeholders, including customers, employees, investors, and communities, who are increasingly prioritizing sustainability in their decision-making processes. Balancing profitability and environmental responsibility is not without challenges. Companies must navigate complex trade-offs, such as the potential short-term costs associated with adopting sustainable practices. Leaders are tasked with aligning these practices with the organization's goals while ensuring financial sustainability. The key to success lies in the ability of leaders to integrate sustainability into their vision, cultivate stakeholder collaboration, and embrace continuous innovation to achieve long-term benefits for both business and society. we delve into sustainable leadership practices that provide a roadmap for organizations aiming to achieve this delicate balance. We analyze how businesses can integrate environmentally responsible strategies into their operations, and we examine the benefits that arise from aligning profitability with environmental stewardship. The findings contribute to the growing body of knowledge on sustainable leadership by offering insights into best practices and highlighting the role of leadership in driving the transition toward a more sustainable and profitable future.

**Tabular analysis** for sustainable leadership practices, we can compare various strategies and their impact on profitability, environmental responsibility, and other related factors. Below is an example of a tabular analysis showcasing the key sustainable leadership strategies, their implementation requirements, challenges, and their potential impacts on both profitability and environmental responsibility.

<b>Sustainable Leadership Strategy</b>	<b>Implementation Requirements</b>	<b>Challenges</b>	<b>Impact on Profitability</b>	<b>Impact on Environmental Responsibility</b>
Eco-efficient Technologies	Investment in energy-efficient technologies and infrastructure	High upfront costs, need for technical expertise	Long-term cost savings due to reduced energy consumption	Significant reduction in carbon emissions and waste
Circular Economy Model	Design of products for reuse, recycling, or composting	Re-engineering supply chains, collaboration with partners	New revenue streams through waste minimization and resource	Reduction in waste, conservation of natural resources

Responsible Supply Chain Management	Sourcing sustainable materials, auditing suppliers' practices	Monitoring compliance, increased supply chain costs	Enhanced brand reputation, risk mitigation, long-term cost savings	Minimize s ecological damage, promotes
Green Product Innovation	R&D for eco- friendly products, lifecycle assessment	High R&D costs, longer time-to- market	Creation of new markets, increased consumer demand for green products	Reduced environmental impact, promotion of sustainable
Employee Engagement in Sustainability	Sustainability training, incentives for green initiatives	Resistance to change, upfront investment in training	Higher employee productivity, reduced operational waste	Positive workplace culture, internal sustainability champions
Sustainable Packaging	Shift to biodegradable or reusable packaging materials	Increased packaging costs, supplier limitations	Competitive differentiation, long-term savings from material efficiency	Significant reduction in plastic waste and landfill usage
Energy Management Systems	Installation of energy-efficient systems (solar, wind, etc.)	High initial capital, regulatory hurdles	Lower operational energy costs, tax credits/subsidies	Decreased reliance on non-renewable energy sources, lower carbon footprint
Transparent Reporting and Accountability	Publishing sustainability reports, third-party audits	Time-consuming data collection, potential for greenwashing	Builds stakeholder trust, enhances corporate transparency	Promotes accountability , encourages continuous improvement in sustainability efforts

This analysis highlights how different sustainable leadership practices can vary in their challenges and their effects on both profitability and environmental goals. The focus is on how companies can leverage each strategy for long-term benefits, despite potential short-term costs or implementation hurdles.

## **II.SUSTAINABLE LEADERSHIP PRACTICES – AN OVERVIEW**

### **The Emergence of Sustainable Leadership**

Sustainable leadership emerged as a response to growing environmental concerns and corporate social responsibility. It recognizes the interdependence between business operations and environmental sustainability. According to Avery and Bergsteiner (2011), sustainable leadership goes beyond short-term profits and integrates long-term social, economic, and environmental considerations into business strategies.

### **Triple Bottom Line (TBL) Approach**

The "Triple Bottom Line" framework introduced by Elkington (1997) is central to sustainable leadership, emphasizing the importance of considering people, planet, and profit. Businesses adopting the TBL approach are more likely to sustain long-term success by addressing social and environmental impacts alongside economic outcomes.

### **Sustainable Leadership and Competitive Advantage**



Porter and Kramer (2006) argue that businesses that incorporate sustainability into their core strategy gain a competitive advantage. Sustainable leadership practices allow organizations to differentiate themselves from competitors by aligning business goals with environmental and social goals.

### **The Role of Eco-efficiency in Sustainable Leadership**

Eco-efficiency, the ability to deliver goods and services using fewer resources, is a cornerstone of sustainable leadership (Schaltegger & Burritt, 2000). Companies like Interface Inc. have demonstrated how adopting eco-efficient technologies not only reduces environmental impact but also boosts profitability through cost savings.

### **The Circular Economy and Sustainable Leadership**

The circular economy model, which promotes reusing, recycling, and reducing waste, has gained momentum as a sustainable leadership practice. According to Ghisellini, Cialani, and Ulgiati (2016), the shift to circular economy practices can lead to both environmental and economic benefits by minimizing resource dependency.

### **Supply Chain Sustainability**

Sustainable leadership extends to supply chain management. Companies are increasingly held accountable for the environmental and social practices of their suppliers. Research by Carter and Rogers (2008) shows that responsible supply chain management can enhance brand reputation, mitigate risks, and improve stakeholder relations.

### **Stakeholder Theory in Sustainable Leadership**

Freeman's (1984) stakeholder theory emphasizes the importance of considering the interests of all stakeholders in corporate decision-making. Sustainable leaders adopt this perspective, recognizing that long-term success is built on trust and cooperation with stakeholders, including employees, customers, and communities.

### **Sustainability and Employee Engagement**

Employee engagement plays a pivotal role in the successful implementation of sustainability initiatives. Research by Collier and Esteban (2007) demonstrates that when employees are actively engaged in sustainability goals, they contribute to higher levels of organizational commitment and innovation.

### **Innovation for Sustainability**

Sustainable leadership fosters a culture of innovation. Dangelico and Pujari (2010) found that companies investing in sustainable innovation often develop new products, services, or business models that lead to long-term profitability while minimizing environmental impact.

### **Green Product Design**

Designing products with sustainability in mind is a key aspect of sustainable leadership. Ottman (2011) suggests that green product innovation not only reduces waste and resource consumption but also taps into the growing market demand for eco-friendly products, driving profitability.

### **Regulatory Drivers of Sustainable Leadership**

Governments worldwide are implementing regulations aimed at reducing environmental impact. According to Delmas and Montes-Sancho (2011), businesses that anticipate and comply with these regulations can avoid fines, gain competitive advantages, and enhance their reputation.

### **Corporate Social Responsibility (CSR) and Sustainable Leadership**

Corporate Social Responsibility (CSR) is closely linked to sustainable leadership. According to Carroll (1999), CSR involves businesses taking responsibility for their environmental and social impact. Leaders who integrate CSR into their corporate strategies ensure long-term success by aligning with stakeholder values.

### **Measuring Sustainability Performance**

Kaplan and Norton (2004) proposed the Balanced Scorecard as a tool to measure corporate performance, including sustainability. Incorporating environmental and social metrics into corporate performance evaluations allows leaders to track progress toward sustainability goals while ensuring profitability.

### **Sustainability Reporting and Accountability**

Transparent sustainability reporting is a vital aspect of sustainable leadership. Research by Adams (2004) highlights that companies providing clear, accurate sustainability reports build trust with stakeholders and create opportunities for continuous improvement.

### **Energy Efficiency and Profitability**

Energy-efficient practices have a direct impact on both environmental sustainability and profitability. Boyd, Pang, and McNeil (2009) show that companies implementing energy management systems benefit from lower energy costs and reduced greenhouse gas emissions, improving their bottom line.

### **Leadership and Environmental Stewardship**

Sustainable leaders see themselves as stewards of the environment. According to Caldwell, Hayes, and Long (2010), such leaders are committed to ensuring that business operations do not deplete natural resources or harm ecosystems, thus contributing to the long-term viability of both the business and the environment.

### **Corporate Culture and Sustainability**

Corporate culture plays a key role in driving sustainable leadership. Schein (2010) argues that leaders must foster a culture that prioritizes sustainability, embedding it into organizational values, practices, and policies to ensure the long-term adoption of sustainable practices.

## **III. FINANCIAL BENEFITS OF SUSTAINABILITY**

The notion that sustainability comes at the cost of profitability is being challenged. Eccles, Ioannou, and Serafeim (2014) show that companies integrating sustainability into their core operations outperform their peers in terms of financial returns over the long term.

### **Consumer Demand for Sustainability**

Consumer preferences are shifting toward environmentally responsible companies. According to Ottman (2011), companies that fail to meet these expectations risk losing market share, while those that embrace sustainability are well-positioned to capture the growing demand for green products and services.

### **Future Directions in Sustainable Leadership**

Sustainable leadership will continue to evolve as businesses face new challenges and opportunities in a resource-constrained world. Research by Benn, Edwards, and Williams (2014) suggests that future sustainable leaders will need to be even more adaptable, innovative,

and collaborative, working across sectors to drive systemic change toward a more sustainable global economy.

#### **IV.CONCLUSION**

Sustainable leadership is no longer an optional strategy but a critical necessity for businesses aiming to thrive in the modern era. As companies face growing pressures from stakeholders, regulators, and consumers to adopt environmentally responsible practices, leadership that balances profitability with sustainability is increasingly recognized as the key to long-term success. By embracing frameworks such as the Triple Bottom Line and focusing on eco-efficiency, circular economy models, and responsible supply chain management, sustainable leaders can reduce environmental impacts while enhancing economic performance. Sustainable leadership also fosters innovation and employee engagement, encouraging organizations to rethink traditional business models and develop new, environmentally conscious products and services. Leaders who prioritize transparency and stakeholder engagement are able to build trust, strengthen brand reputation, and cultivate long-term relationships that are essential for business resilience in a rapidly changing world. Although challenges remain, such as balancing short-term costs with long-term benefits and navigating regulatory complexities, businesses that integrate sustainability into their core operations are better equipped to adapt to future market conditions and mitigate risks. Ultimately, sustainable leadership not only contributes to environmental stewardship but also unlocks new opportunities for growth, competitiveness, and profitability. As the business landscape continues to evolve, the role of sustainable leadership will become increasingly crucial in shaping a more responsible, resilient, and sustainable future.

#### **References**

- Avery, G. C., & Bergsteiner, H. (2011). Sustainable leadership: Honeybee and locust approaches. Routledge.
- Elkington, J. (1997). Cannibals with forks: The triple bottom line of 21st-century business. Capstone.
- Porter, M. E., & Kramer, M. R. (2006). Strategy and society: The link between competitive advantage and corporate social responsibility. *Harvard Business Review*, 84(12), 78-92.
- Schaltegger, S., & Burritt, R. (2000). *Eco-efficiency in corporate strategy*. Edward Elgar Publishing.
- Ghisellini, P., Cialani, C., & Ulgiati, S. (2016). A review on circular economy: The expected transition to a balanced interplay of environmental and economic systems. *Journal of Cleaner Production*, 114, 11-32.
- Carter, C. R., & Rogers, D. S. (2008). A framework of sustainable supply chain management: Moving toward new theory. *International Journal of Physical Distribution & Logistics Management*, 38(5), 360-387.
- Freeman, R. E. (1984). *Strategic management: A stakeholder approach*. Cambridge University Press.

## **A DESCRIPTIVE STUDY ON WORK LIFE BALANCE AMONG WOMEN IT PROFESSIONALS IN CHENNAI**

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### **ABSTRACT**

*Work-Life Balance (WLB) is a state of equilibrium achieved between employee's primary job responsibilities and personal commitments. In the current scenario, managing time for both career and personal aspects of life is challenging for both employees and employers. The disparity in managing time often generates low productivity, dissatisfied employees, deprived performance and vice versa. The objective of this study is to know if the women IT Professionals their Work-Life Balance and to find the related attributes and parameters that contribute to their work-life balance. The primary data is collected through research questionnaire and personal interview. Descriptive research is used to find out the characteristic feature of the respondents. The hypotheses were framed based on the relationship between colleagues, compensation policy, job satisfaction, welfare facility and organizational climate. The findings from this study reveal that the following parameters will significantly influence work-life balance.*

**KEY WORDS:** *Work life, Challenges, Commitment, Personal Life, Involvement.*

### **I. INTRODUCTION**

The challenge to enthruse work-life balance lies in creating a work environment which is supportive of a women employee to balance her 2Ps of life i.e. Professional and Personal Life. The role of women in the 21<sup>st</sup> century, both within organization & family is highly demanding and hence work-life balance has become extremely challenging. This research has shown that women employees are experiencing a high level of conflict between work and family, especially due to longer working hours and job commitments. They have a dilemma in deciding their priority of work over family life.

The organization can implement work-life balance programs by identifying the required parameters. This can ensure that the programs have the desired effect on both employees and the organization. As a result, the organization would see the growth in productivity and performance while the women employees would be happy with their work-life balance.

### **RESEARCH OBJECTIVES:**

- To analyse the women IT employees, get balanced between their Profession and family.

- To find the related parameters and attributes that help to balance their personal and Professional life.

## **II.REVIEW OF LITERATURE**

- Higgins & Duxbury, 2005<sup>1</sup>; Howard, D’Onofrio & Boles, 2004, The effective management of employees’ work-life balance (WLB) requires organizations to recognize and account for the array of non-work roles that impact on their working lives.
- Broers, 2005<sup>2</sup>, It is believed that balancing a successful career with a personal or family life can be challenging and impact on a person’s satisfaction in their work and personal life’s roles.
- Gonyea&Goggins, 1992<sup>3</sup>; Liddicoat, 1999; MacInnes, 2006, American businesses were the first to develop and implement family-friendly initiatives in the 1970s.
- Liddicoat, 1999<sup>4</sup>; White, Hill, McGovern, Mills & Smeaton, 2003, It is commonly asserted that WLB policies evolved from family-friendly initiatives.
- Lewis & Cooper, 1995<sup>5</sup>, The desire to maintain an adequate standard of living; and the changing structure of families, particularly the decline in family size, delayed parenthood and the increase in solo parents.
- Dex&Scheibl, 1999<sup>6</sup>; Hyman, Baldry, Scholarious&Bunzel, 2003; Liddicoat, 1999, Work-life balance debate emerged regarding the desirability of ensuring a greater balance between work and one’s private life for all employees irrespective of family status.
- Bloom, Kretschmer& van Reenen 2006<sup>7</sup>; Gambles, Lewis & Rapoport, 2006; Major & Germano, 2006, A number of these strategies are said to undermine an individual’s sense of work-life balance includes: increasing and varying the number of hours people work, increased work intensity as a result of downsizing and restructuring, and the adoption of technological advances in information technology.

## **STATEMENT OF THE PROBLEM**

One of the prime challenges for an organization is to offer a work atmosphere amiable for a work-life balance. A win-win metrics both for the organization and the employees (more importantly women employees since this constitutes a majority of the workforce under the subject of study) is desirable in this context. This study has been conducted to understand the gap between the existing work-life balance policies of the organization viz a vis the desired level of satisfaction. This will become the basis to recommend revised policies which will ensure a better work-life balance and thereby facilitating optimal Productivity.

## **HYPOTHESIS**

Ho: There is some significant difference between the age of the employees and work-life balance.

## **III.RESEARCH METHODOLOGY**

Descriptive research is applied to study the respondents and characteristic features of the women employee's work life balance working at IT Professional in Chennai. Non-probabilistic convenient sampling method was adopted to collect the primary data and the total numbers of respondents were 105. The researcher has applied primary data collection through questionnaire and personal interview. The secondary data from the company records and indirect observation method. The statistical tools used are Percentage Analysis and Chi-Square Test.

## **IV.ANALYSIS AND INTERPRETATION**

**Table 1: Socio-economic profile of the Employees**

<b>Category</b>	<b>Variable</b>	<b>No. of Respondents</b>	<b>Percentage</b>
<b>Age</b>	Below 20	0	0
	21 – 30	60	80
	31 – 40	13	17
	41 – 50	2	3
	Above 50	0	0
	<b>Total</b>	<b>75</b>	<b>100</b>
<b>Marital Status</b>	Married	43	57
	Unmarried	32	43
	<b>Total</b>	<b>75</b>	<b>100</b>

**Source: Primary data**

### **Research Major Findings:**

- 80% of the women employees are between 21 – 30 years and only 3% of the women employees are between 41 – 50 years.
- This clearly shows that most of the female workers can work energetically. This helps in

fast and rapid production of the materials.

- 57% of the women employees are married and 43% of women employees are single. This shows that both the categories are of equal in status. Hence the women can cope up with the work and have a balance in their life too due to a good working environment in the organization.

**Table 2: Factors affecting Work-life Balance among the Women IT Professionals**

Category	Variable	No. of Respondents	Percentage
<b>Working Hours</b>	7-8 hours	32	43
	8-9 hours	8	11
	9-10 hours	20	26
	More than 10 hours	15	20
	<b>Total</b>	<b>75</b>	<b>100</b>
<b>Working in Shift</b>	General/Day shift (9.30am to 5.30pm)	63	84
	Night (9.30pm to 6am)	0	0
	Alternate (6.00pm to 9.00pm)	12	16
	<b>Total</b>	<b>75</b>	<b>100</b>
<b>Overtime Working Hours</b>	Regularly	17	23
	Rarely	17	23
	Sometimes	17	23
	No Overtime	24	31
	<b>Total</b>	<b>75</b>	<b>100</b>
<b>Opinion About the Time Spent at Work</b>	Very Unhappy	0	0
	Unhappy	5	6
	In Different	9	12
	Happy	22	30
	Very Happy	39	52
<b>Total</b>	<b>75</b>	<b>100</b>	
<b>Feeling Tired or Depressed</b>	Always	6	9



	Often	5	6
	Sometimes	15	20
	Rarely	17	22
	Never	32	43
	<b>Total</b>	<b>75</b>	<b>100</b>
<b>Ways to Manage Stress</b>	Yoga	2	3
	Meditation	2	3
	Entertainment	28	37
	Books	20	26
	Music	23	31
	<b>Total</b>	<b>75</b>	<b>100</b>
<b>Easy or Difficult to Take Leave</b>	Most Difficult	56	74
	Difficult	2	3
	Easy	17	23
	<b>Total</b>	<b>75</b>	<b>100</b>
<b>Employee Satisfaction towards welfare measures</b>	Dissatisfied	8	11
	Neither Satisfied Nor Dissatisfied	7	9
	Satisfied	60	80
	<b>Total</b>	<b>75</b>	<b>100</b>

**Findings:**

- 43% of women employees are normally working hours in a day are 7-8 hours and 20% of women employees are working more than 10 hours a day. If they feel the demand in the market is higher and they are in lack of money some employees work for an extra hours which make them monetarily benefitted.
- 84% of women employees are working on day shift and 16% are working on alternate shift. Those employees who feel economically back prefer these third shift and those who are in studies they work as a part time job in the evening for stable financial support.



- 31% of women employees not at all working more than two hours in overtime and remaining employees are working between half an hour to two hours per day. Depends upon their money requirement and their health situations and family condition they prefer extra working hours.
- The table clearly predicts that 52% of women employees who feel very happy about their time spent at work and women 6% of employees who feel unhappy about their time spent at work. Majority of the workers are happy to work in the organization due to the better organizational climate and secure for their job. This leads to a good rapport and communication.
- 22% of women employees rarely feel stress about their work and 9% of women employees always feel stress about their work. If the demand outside for the product is higher automatically stress is created inside the minds of the employees as they have to produce the product with in the time frame and satisfy the customers according to their needs and wants.
- 37% of the women employees prefer entertainment to manage their stress and 31% of the women employees prefer music to manage their stress. As a women employee they need to sacrifice their health condition, happy life, and valuable time this leads to a stress. To reduce the stress level they prefer some of the stress busters.
- 74% of the women employees feel that it is most difficult to take leave and 23% of the women employees feel that it is easy to take leave.
- 80% of the women employees are satisfied and 11% of the women employees are dissatisfied with the welfare measures provided by the company. This shows that the company provides a best welfare measures for the women employees and they are highly satisfied with the benefits.

### **CHI-SQUARE TEST**

*Null Hypothesis (Ho)* - There is no significant difference between the age of the employees and the factors mentioned in the Table 3.

**Table 3: Age of the Employees and Factors Not Significant to Work-life Balance**

S.No.	Factor	Calculated Value	Table Value	Degrees of Freedom	S/NS
1	Marital Status	4.02	9.210	2	NS
2	Work-Life Balance	0.786	9.210	2	NS

3	Over Time Work	3.319	7.842	5	NS
4	Feelings about Amount Time Spend at Work	2.689	7.831	5	NS
5	Feeling Tired or Depressed due to Work	5.535	7.334	7	NS
6	Manage Stress due to Work	8.924	9.341	9	NS
7	Support of Colleagues and Superiors at Work	5.144	7.310	8	NS
8	Missing of Quality Time with Family due to Work	5.673	7.343	8	NS
9	Separate Provision for Work-Life Balance	4.890	5.983	4	NS
10	Respect given by Superior	.277	4.604	2	NS
11	Peaceful Sleep without Stress	3.687	7.840	6	NS
12	Balancing Personal and Professional Commitments	5.712	7.341	8	NS

(S= significant, NS= Not significant)

Since the calculated value is lesser than the table value, the null hypothesis (Ho) is accepted, i.e. there is no significant difference between the age of the employees and the factors mentioned in the Table 3.

**1. Alternate Hypothesis (H1)** – There is a significant difference between the age of the employees and the factors mentioned in the Table 4.

**Table 4: Age of the Employees and Factors Significant to Work-life Balance**

S.No.	Factor	Calculated Value	Table Value	Degrees of Freedom	S/NS
1	Normal Working Hours in a Day	7.981	7.841	6	S
2	Traveling Hours	6.933	6.626	5	S

3	Working in Shifts	9.346	9.210	2	S
4	Superiors Support in Balancing Work Life	9.731	7.841	6	S
5	Work Carried to Home Leads to Stress	9.970	7.841	6	S
6	Pressure due to Work Load by Superior	10.925	7.841	6	S
7	Good Day at Work Makes a Better Companion at Home	6.590	5.989	4	S
8	Refreshment in a Day	12.150	7.841	6	S

Since the calculated value is higher than the table value, the null hypothesis (Ho) is rejected and the alternate hypothesis (H1) is accepted, i.e there is a significant difference between the age of the employees and the factors mentioned in the Table 4.

### **SUGGESTIONS:**

- Certain best practices contributing towards job satisfaction can be identified
- Recreational facilities for de-stressing along with flexible break hours can further improve their performance.
- Avoiding longer or extended working hours by effective day shift rotation / flexible timing in batches can be planned if feasible.
- Training on effective time management for self and work-related aspects can help achieve their task objectives which would further help work life balance.

### **V.CONCLUSION**

The organization can concentrate on those factors which have helped them bag 75% of women IT Professionals who have expressed satisfaction with their current work-life balance. Findings in this study indicate welfare measures, recreation/refreshment facilities along with good working environment or work culture in the form of supportive colleagues/superiors goes a long way in ensuring job satisfaction which in turn helps people balance life at home. Last but not the least, balanced work hours is critical and crucial to ensuring a better work-life balance.

### **REFERENCES**

- Kothari C R, Research Methodology, 2008 Methods and Technology, (2nd ed; New Delhi: New Age International. 2008).

- Wayne F. Cascio, Quality of work life balance, 2008 (7th ed; Tata Mc Grew hill.2008)
- Jahoda, 1992, Work-life balance.
- Zedeck and Mosier, 1990, Explain the relationship between work and life outside work.
- Higgins & Duxbury, 2005, The effective management of employees' work-life balance (WLB).
- Hyman & Summers, 2004; Lewis, Rapoport& Gambles, 2003; Smithson &Stokoe, 2005, despite the literary attention given to the WLB.
- Arrulappan, 2003, p.6; MacInnes 2006, p.225; Maxwell & McDougal, 2004, p.378 "work patterns so that everyone regardless of age, race or gender can find a rhythm that enables them more easily to combine work and their other responsibilities and aspirations"
- Eikhof, Warhurst&Haunschild, 2007, It is believed that balancing a successful career with a personal or family life can be challenging and impact on a person's satisfaction in their work and personal life's roles
- B.Ezhilarasu, K.T.Manivannan., Work Life Balance of Women Employees.
- Kenexa., Women are more positive than men.
- Anne-Marie Slaughter,. 1950, director of policy planning in the State Department in part to spend more time with her family.
- Liddicoat, L. (1999). Stakeholder perceptions of family friendly workplaces: Case studies of six New Zealand organisations. PhD Thesis, Massey University, Palmerston North, New Zealand.
- Gornick, J.C., & Meyers, M.K. (2003). Families that work: Policies for reconciling parenthood and employment. New York: Russell and Sage Foundation.
- Gonyea, J.G., &Googins, B.K. (1992). Linking the worlds of work and family: Beyond the productivity trap. Human Resource Management Journal, 31, 3, 227-248.
- Dex, S., &Scheibl, F., (1999). Business performance and family-friendly policies. Journal of GeneralManagement, 24, 4, 22-37.
- Houston, D. (2005). Work life balance in the 21st century. Basingstoke, England: Palgrave.
- Gambles, R., Lewis, S., &Rapoport, R. (2006). The myth of work-life balance: The challenge of our time for men, women and societies. West Sussex, England: John Wiley & Sons.

- Sparks, K., Faragher, B., & Cooper, C.L. (2001). Well-being and occupational health in the 21st century workplace. *Journal of Occupational and Organizational Psychology*, 74, 489-509.
- Bonney, N. (2005). Overworked Britons? Part-time work and work-life balance. *Work, Employment and Society*, 19, 2, 391-401.
- Jones, F., Kinman, G., & Payne, N. (2006). Work stress and health behaviours: A work-life balance issue. In F.Jones, R.J. Burke & M. Westman (Eds.), *Work-life balance: A psychological perspective* (pp.185-215). East Sussex: Psychology Press.
- Dawson, D., McCulloch, K., & Baker, A. (2001). Extended working hours in Australia: Counting the costs. Retrieved 5 December, 2006.
- Gambles, R., Lewis, S., & Rapoport, R. (2006). *The myth of work-life balance: The challenge of our time for men, women and societies*. West Sussex, England: John Wiley & Sons.

## **A DESCRIPTIVE STUDY ON PERFORMANCE APPRAISAL SYSTEM IN ACC CEMENTS WITH SPECIAL REFERENCE TO COIMBATORE**

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### **ABSTRACT**

*Performance Appraisal System is one of the important components in the rational and systematic process of Human Resource Management. The information obtained through performance appraisal provides foundations for recruiting and selecting new hires, training, and development of existing staff and motivating and maintaining a quality work force by adequately and properly rewarding their performance. Performance appraisal deals with how organizations evaluate and measures its employee's achievements and behaviors. It is an employee review by his manager where his work performance is evaluated and strengths and weaknesses are identified so that the employee knows his improvement areas. Performance appraisal is the right time to set new goals and objectives for the employees. Without a reliable performance appraisal system human resource management system falls apart, resulting in the total waste of the Valuable human assets.*

**Key Words: Performance appraisal, employees, goals, appraisal system**

### **I.INTRODUCTION**

A performance appraisal is a method by which the job performance of an employee is evaluated (generally in terms of quality, quantity, cost, and time) typically by the corresponding manager or supervisor. A performance appraisal is a part of guiding and managing career development. It is the process of obtaining, analyzing, and recording information about the relative worth of an employee to the organization. Generally, the aims of a performance appraisal are to:

- Give employees feedback on performance, identify employee training needs.
- Document criteria used to allocate organizational rewards.
- Form a basis for personnel decisions: salary increases, promotions, disciplinary actions, bonuses, etc., provide the opportunity for organizational diagnosis and development.

- Facilitate communication between employee and administration.
- Validate selection techniques and human resource policies to meet federal Equal Employment Opportunity requirements.
- To improve performance through counseling, coaching and development.

## **RESEARCH OBJECTIVES**

- To study the employees that influences in their performance appraisal.
- To analyses the way of time management that influences in their performance appraisal.
- To assess the factors which influences in performance appraisal.

## **II. LITERATURE REVIEW**

The concept of performance appraisal has evolved significantly over the years, addressing various organizational needs and challenges. Below is a comprehensive review of literature on performance appraisal systems, highlighting key contributions, findings, and implications from various scholars.

### **Early Contributions to Performance Appraisal Systems**

Muczyk and Gable (1987) emphasized the importance of a **comprehensive performance appraisal system** to effectively manage sales performance. Their research outlined the need for structured appraisal frameworks to enhance employee outcomes and organizational productivity. Similarly, Wehrenberg and Stephen (1988) underlined the necessity of training supervisors to measure and evaluate employee performance accurately, advocating for tailored training programs to minimize biases in appraisals.

### **Advancing Research and Practice**

Bretz, Milkovitch, and Read (1992) provided a critical review of the state of performance appraisal research, identifying prevalent concerns such as subjectivity, lack of standardization, and limited employee involvement. They suggested future directions, including incorporating more robust evaluation metrics and employee participation. McAfee and Champagne (1993) viewed performance appraisal as a strategic tool for enhancing employee performance and productivity. Their work proposed strategies to align appraisal systems with organizational goals for optimal outcomes.

### **Innovations in System Design**

Waldman (1994) focused on designing appraisal systems conducive to **total quality management (TQM)** implementations. His research highlighted how appraisal systems could

integrate quality measures to foster continuous improvement. Allan (1995) provided practical insights into designing and implementing effective appraisal systems, stressing the importance of clear objectives, fair evaluation criteria, and consistent feedback mechanisms.

Flapper (1996) proposed the need for **consistency in performance appraisal systems** to eliminate discrepancies and improve reliability. His study emphasized aligning appraisal processes with organizational culture and employee expectations.

### **Employee Participation and Reactions**

Cawley and Levy (1998) explored employee participation in the appraisal process and its impact on employee reactions. They concluded that active participation fosters positive perceptions, increased motivation, and reduced resistance to feedback. Brown and Benson (2003) extended this idea, examining employee reactions to appraisal processes, and found that fairness, transparency, and inclusivity significantly influence satisfaction and acceptance.

### **Balanced and Holistic Approaches**

Stivers and Joyce (2000) proposed building balanced performance appraisal systems that consider both qualitative and quantitative factors. Their work advocated for incorporating behavioral and results-based assessments to create a well-rounded evaluation system. Fletcher (2001) emphasized the shift from traditional appraisals to **performance management**, arguing that continuous feedback and developmental goals are more effective in driving performance.

### **Industry-Specific Studies and Contemporary Practices**

Lawler and McDermott (2003) examined contemporary performance appraisal practices, highlighting their varying impacts across industries. Their research underscored the need for adaptable systems that cater to the unique demands of different organizational contexts. Ahmad and Ali (2004) focused on decision-making in performance appraisals within the **Malaysian public service**, revealing challenges related to subjectivity, cultural influences, and resource constraints.

### **Summary and Implications**

The reviewed literature collectively underscores the importance of performance appraisal systems as a tool for managing and enhancing employee performance. Early research focused on creating structured systems, while recent studies have highlighted the role of participation, fairness, and adaptability. Future research should continue exploring innovative practices, including the integration of technology and advanced analytics, to address emerging challenges in dynamic organizational environments. This comprehensive review establishes a foundation for understanding the evolution of performance appraisal systems and provides valuable insights for designing effective appraisal frameworks.



**III.RESEARCH METHODOLOGY**

This research is descriptive study; Descriptive research is also called statistical research. the main goal of this type of research is to describe the data and characteristics about what is being studied. The sampling method which is used here is Simple Random Sampling. A simple random sample is a subset of a statistical population in which each member of the subset has an equal probability of being chosen. Sample unit of ACC Cements Coimbatore Zone is 251. Sample size measures the number of individual samples measured or observations used in a survey here the sample size of the study is limited to 76respondents which is 30% of the population. Primary source are the data collected through questionnaire. The secondary data mainly consist of data and information collected from records, company websites, and books.

**TOOLS FOR DATA ANALYSIS:**

- Factor Analysis
- Chi-square
- ANOVA

**IV.RESEARCH ANALYSIS AND INTERPRETARATION**

**TABLE NO:1 FACTOR ANALYSIS**

**Rotated Component Matrix**

Dimension	Component								
	1	2	3	4	5	6	7	8	9
The skills are utilized	.209	.093	-.041	-.417	-.256	-.120	.262	-.282	.165
The degree of feeling extended in the job and helps incommitment towards the job	.018	-.009	-.130	-.112	-.062	.038	-.035	<b>.852</b>	-.044
Helps in the building attitude because of job itself	.122	.012	.172	.215	-.218	.094	-.245	-.048	-.625
The scope of job offers helps to realize its commitment towards task and maintenance of attendance	.152	.477	-.111	.548	.040	.128	.289	.000	-.057
The potential training needs motivates and to grade better in performance appraisal	-.100	-.142	.103	.071	-.007	.652	.058	.073	.097

The manner by which efforts are valued develops a strong commitment	.158	.114	-.049	-.085	.159	<b>.697</b>	.070	.021	-.004
Current career opportunities extend the feeling of strong career commitment	.155	.598	.166	.111	.151	.406	.143	-.126	-.034
The level of job security is influenced in general behavior	.643	-.106	.270	.323	-.060	.173	.007	-.194	.105
The method of evaluation does not lead conflict and helps in building of healthy relationship	.308	.313	.339	-.045	.057	.379	-.066	-.209	.191
Method of conflict resolution helps in the change of resistance	.360	.397	.381	.224	.082	-.023	-.046	.377	.151
Multi skill ability is possible because of openness towards new ideas and approaches	.109	.307	.292	<b>.619</b>	.182	-.043	.119	.073	.074
Skills related towards the job helps in job knowledge and in timely completion of job	.198	.432	-.059	.100	.550	.080	.253	-.153	-.051
Initiative ness is not a parameter to resist the change of job	.511	.306	.034	-.282	.299	.039	.033	-.131	.070
The system procedure clearly design the quality of work expected or allotted to adhere the system	.199	.067	.572	.403	.204	.025	-.060	-.157	-.007
Career opportunity helps in improvement of performance	.358	.262	.542	.012	.119	-.027	-.266	.049	-.108

**Inference:**

From the above factor analysis it is inferred that the variables namely, Felineness extended in job and building commitment in job; Making oneself to realize aspiration and ambition; Relationship between superior and peer is observed as a method of conflict resolving; Healthy information flow and communication; Quality of work life helps in personal growth and development; Quality of work life helps in realizing aspiration and ambition; General

behavior of the supervisor encourages to perform the task; Employees develops strong commitment; Skills related develops multi skilling ability to develop new approaches.

These factors have got loaded as the important factors in determining the Performance Appraisal System in ACC Cements limited, Coimbatore.

**TABLE NO:2 CHI SQUARE RESULTS EXPERIENCE VS INFLUNCE OF TRAINING IN PRODUCTIVITY**

S.No	Dimension	Ho	D.f	P value	Level of significance	Remarks
1	Experience vs skills utilized	There is no significant difference between experience and the opinion of the respondents towards utilization of skills	8	.238	0.05	Ho is accepted
2	Experience vs commitment towards jo	There is no significant difference between experience and the opinion of the respondents towards job commitment	8	.180	0.05	Ho is accepted
3	Experience vs building attitude	There is no significant difference between experience and the opinion of the respondents towards building attitude	8	.794	0.05	Ho is accepted
4	Experience vs commitment towards task	There is no significant difference between experience and the opinion of the respondents towards commitment towards task	8	.055	0.05	Ho is accepted
5	Experience vs potential training	There is no significant difference between experience and the opinion of the respondents towards potential training.	8	.273	0.05	Ho is accepted

**Inference:**

There is no significant difference between experience and the opinion of the respondents towards potential training where in Ho is accepted.

**TABLE NO:3 INCOME LEVEL VS EMPLOYEES COMMITMENT**

S.No	Dimension	Ho	D.f	P value	Level of significance	Remarks
1	Income level vs development of strong commitment	There is no significant difference between Income level and the opinion of the respondents towards development of strong commitment	8	.998	0.05	Ho is accepted
2	Income level vs current career opportunities	There is no significant difference between Income level and the opinion of the respondents towards career opportunities	8	.040	0.05	Ho is rejected
3	Income level vs level of job commitment	There is no significant difference between Income level and the opinion of the respondents towards level of job commitment	8	.016	0.05	Ho is rejected
4	Income level vs conflict	There is no significant difference between Income level and the opinion of the respondents towards conflict	8	.930	0.05	Ho is accepted
5	Income level vs change in resistance	There is no significant difference between Income level and the opinion of the respondents towards change in resistance	8	.806	0.05	Ho is accepted

**Inference**

There is no significant difference between income level and the opinion of the respondents towards development of strong commitment where in Ho is accepted.

**TABLE NO:4 EXPERIENCE VS RELATIONSHIP BETWEEN SUPERIOR AND PEERS**

S.No	Dimension	Ho	D.f	P value	Level of significance	Remarks
1	Experience vs inter personnel relationship	There is no significant difference between experience and the opinion of the respondents towards inter personnel relationship	8	.324	0.05	Ho is accepted
2	Experience vs method of conflict resolving	There is no significant difference between experience and the opinion of the respondents towards method of conflict resolving	8	.905	0.05	Ho is accepted
3	Experience vs communication flow	There is no significant difference between experience and the opinion of the respondents towards communication flow	8	.630	0.05	Ho is accepted
4	Experience vs healthier climate	There is no significant difference between experience and the opinion of the respondents towards healthier climate	8	.346	0.05	Ho is accepted
5	Experience vs participation in decision making	There is no significant difference between experience and the opinion of the respondents towards participation in decision making	8	.668	0.05	Ho is accepted

**Inference:**

There is no significant difference between experience and the opinion of the respondents towards building attitude, potential training, method of conflict resolving, communication flow, and participation in decision making where in Ho is accepted.

**TABLE NO:5 ANOVA**

**EDUCATIONAL OUALIFICATION VS SKILLS RELATED TOWARDS THE JOB**

S.No	Dimensions	Ho: Hypothesis		Sum of square	df	Mea square	F	sig.	Result	
1	Educational Qualification / Multi skill ability	There is no significant relationship between Educational Qualification and Multi skill ability	Between group	1.401	3	.467	.361	.782	<b>H0: Accepted</b>	
			Within group	124.309	96	1.295				
			Total	125.710	99					
2	Educational Qualification/Skills related towards the job	There is no significant relationship between Educational Qualification & Skills related towards the job	Between group	6.033	3	2.011	1.883	.138	<b>H0: Accepted</b>	
			Within group	102.557	96	1.068				
			Total	125.710	99					
3.	Educational Qualification/ Intuitiveness in the job	There is no significant relationship between Educational Qualification and Intuitiveness in the jo	Between group	5.204	3	1.735	1.604	.193	<b>H0: Accepted</b>	
			Within group	103.796	96	1.081				
			Total	109.000	99					
4.	Educational Qualification/ Quality of work	There is no significant relationship between Educational Qualification and Quality of work	Between group	8.118	3	2.706	2.586	.058	<b>H0: Accepted</b>	
			Within group	100.472	96	1.047				
			Total	108.590	99					
5.	Educational Qualification/ Career opportunity	There is no significant relationship between Educational Qualification and Career opportunity	Between group	5.499	3	1.833	2.489	.065	<b>H0: Accepted</b>	
			Within group	70.691	96	.736				
			Total	76.190	99					

**Inference:**

There is no significant relationship between educational qualification and multi skill ability and intuitiveness in job where in Ho is accepted.

**EDUCATIONAL QUALIFICATION VS QUALITY OF WORK LIFE**

6.	Educational qualification/ Helps to design in innovation and implementation	There is a significant relationship between educational qualification and innovation and implementation.	Between group	4.725	3	1.575	1.357	.261	<b>H0: Accepted</b>
		Within group	111.435	96	1.161				
		Total	116.160	99					
7.	Educational qualification/ Utilization of skills	There is no significant relationship between educational qualification and Utilization of skills	between group	3.149	3	1.050	1.077	.363	<b>H0: Accepted</b>
		Within group	93.601	96	.975				
		Total	96.750	99					
8.	Educational qualification/ Flexibility and independence allowed in that task	There is no significant relationship between educational qualification and Flexibility and independence allowed in that task	Between group	7.096	3	2.365	2.526	.062	<b>H0: Accepted</b>
		Within group	89.904	96	.937				
		Total	97.000	99					
9.	Educational qualification/ Organizational climate	There is no significant relationship between educational qualification and Organizational climate	Between group	2.632	3	.877	.874	.457	<b>H0: Accepted</b>
		Within group	96.368	96	1.004				
		Total	99.000	99					
10.	Educational qualification/Helps in the personal growth	There is no significant relationship between qualification and its help in the personal growth	Between group	3.338	3	1.113	1.072	.365	<b>H0: Accepted</b>
		Within group	99.622	96	1.038				
		Total	102.960	99					

**Inference:** There is no significant relationship between educational qualification and Organizational climate, and educational qualification and help in personnel growth where in Ho is accepted.

## **V.CONCLUSION**

Based on the research carried out by the researcher regarding the performance appraisal, various factors were critically examined to bring out constructive suggestion. There are some factors where the respondents made negative opinion towards the degree of utilizing their skill in productivity, job commitment which is influenced by training, building their attitude, level of salary related towards their experience, career opportunity, flexibility and independence allowed to perform their task, and flow of communication and information. So the organization has to completely reform and redesign the pattern of performance appraisal along with the training. Due weightage can be given in those parameters which has not got loaded in the factor analysis, because only few factors of performance appraisal have got significance. So, this makes explicit in redesigning the system.

## **REFERENCES:**

- **Muczyk, J. P. & Gable. M** (1987). Managing sales performance through a comprehensive Performance Appraisal System. *Journal of Personal Selling and Sales Management*, Vol.7 (), pp: 41-52.
- **Wehrenberg, and B. Stephen** (1988). Training: train supervisors to measure and evaluate performance. *Personnel Journal*, Vol. 67(2), pp: 77-79.
- **R.D.Bretz, G.T. Milkovitch, and W.Read.** (1992). The current state of performance appraisal research and practice; concerns, directions and implications, *Journal of Management*. Vol .18 (2) pp: 321-352.
- **McAfee.B.R and Champagne, P. J** (1993). Performance Appraisal: A strategy for improving employee performance and productivity. *Journal of Managerial Psychology*, Vol.8 (5), pp: 24-33.
- **A Waldman, David** (1994). Designing Performance Appraisal systems for total quality implementation. *Journal of Organizational Change Management*, Vol 7 (2), pp: 31 –44.
- **P.Allan.** (1995). Designing and implementing an effective Performance Appraisal System. *Journal of Review of Business*, Vol.16 (2), pp: 3-9.
- **Flapper, Simme D.P.** (1996). towards consistent Performance Appraisal Systems. *International Journal of Operations & Production Management*, Vol. 16(7), pp: 27 - 37.
- **Cawley, B. D., and Levy, P. E** (1998) “Participation in the Performance Appraisal process and employee reactions”: *Journal of applied psychology*, Vol .83 (4), pp: 615-633.
- **Stivers Bonnie P. and Joyce, Teresa** (2000). Building balanced performance Appraisal System. *SAM Advanced Management Journal*, Vol. 65(2), pp: 22-29.
- **Fletcher, Clive** (Nov 2001). Performance appraisal and management: *Journal of Occupational and Organizational Psychology*, Vol.74 (4), pp: 473-487.



- **E.E Lawler and Dermott MC (2003)** Current Performance Appraisal Practices: Examining the Varying Impacts ,“ WoldatWork Journal, Vol. 12, pp: 49–60.
- **Brown, M., & Benson, J (2003).** Reactions to performance appraisal processes. Industrial Relations Journal, Vol.34 (1), pp: 67-81.
- **Ahmad, R., & Ali, N.A (2004).** Performance Appraisal decision in Malaysian public service. International Journal of Public Sector Management, Vol. 17(1), pp: 48-64.

## **A DESCRIPTIVE STUDY ON SUPPLY CHAIN MANAGEMENT AT VRL LOGISTICS SOLUTIONS (P) LTD-CHENNAI.**

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### **ABSTRACT**

*Supply Chain Management (SCM) is an essential element to operational efficiency. SCM can be applied to customer satisfaction and company success, as well as within societal settings, including medical missions; disaster relief operations and other kinds of emergencies; cultural evolution; and it can help improve quality of life. Because of the vital role SCM plays within organizations, employers seek employees with an abundance of SCM skills and knowledge. Basically, the world is one big supply chain. Supply chain management touches major issues, including the rapid growth of multinational corporations and strategic partnerships; global expansion and sourcing; fluctuating gas prices and environmental concerns, each of these issues dramatically affects corporate strategy and bottom line. Because of these emerging trends, supply chain management is the most critical business discipline in the world today.*

**KEY WORDS:** *supply chain management, operation, sourcing, Logistics, customer*

### **1. INTRODUCTION**

The Indian economy has been growing at an average rate of more than 8 per cent over the last four years (Srinivas, 2006) putting enormous demands on its productive infrastructure. Whether it is the physical infrastructure of road, ports, water, power etc. or the digital infrastructure of broadband networks, telecommunication etc. or the service infrastructure of logistics – all are being stretched to perform beyond their capabilities. Interestingly, this is leading to an emergence of innovative practices to allow business and public service to operate at a higher growth rate in an environment where the support systems are getting augmented concurrently.

In this paper, we present the status of the evolving logistics sector in India, innovations therein through interesting business models and the challenges that it faces in years to come.

Broadly speaking, the Indian logistics sector, as elsewhere, comprises the entire inbound and outbound segments of the manufacturing and service supply chains. Of late, the logistics infrastructure has received lot of attention both from business and industry as well as policy makers.

### **Rapid growth of the warehousing sector**

- The role of a warehouse has also transformed from a conventional storehouse to an inventory management set-up with a greater emphasis on value added services.
- Warehouses now provide additional services like consolidation and breaking up of cargo, packaging, labelling, bar coding, reverse logistics etc.
- It has emerged as a critical growth driver, leading to large investments by logistics companies for the development of warehouses and logistics parks. Warehousing and related activities currently account for about 20 per cent of the total logistics industry.
- However, it is estimated that by 2010, this proportion would increase to approximately. The traditional concept of establishing warehouses in the proximity of manufacturing facilities and raw material sourcing centres is also undergoing a transformation.
- Today, there is an increased trend of relocating warehouses near consumer markets. Currently, the organized warehousing industry in India has a capacity of approximately 80 million metric tonnes (MT) and is growing at 35 to 40 per cent per annum.
- An investment of approximately US\$ 500 million is being planned by various logistics companies for the development of about 45 million square feet of warehouse space by 2012.

## **II.REVIEW OF LITERATURE**

**Mohamed Zairi, (1998) "Best practice in supply chain management: the experience of the retail sector"**, European Journal of Innovation Management, Notes that the retail industry sector is currently undergoing major changes resulting from factors such as increased competition and tighter profit margins.

**Douglas M. Lambert, Martha C. Cooper, Janus D. Pagh, (1998) "Supply Chain Management: Implementation Issues and Research Opportunities"**, **International Journal of Logistics Management, The, Vol. 9 Iss: 2, pp.1 – 20 In 1998**, the Council of Logistics Management modified its definition of logistics to indicate that logistics is a subset of supply chain management and that the two terms are not synonymous. Now that this difference has been recognized by the premier logistics professional organization, the challenge is to determine how to successfully implement supply chain management. This paper concentrates on operationalizing the supply chain management framework suggested in a 1997 article. Case studies conducted at several companies and involving multiple members of supply chains are used to illustrate the concepts described.

**Marilyn M. Helms, Lawrence P. Ettkin, Sharon Chapman, (2000) "Supply chain forecasting – Collaborative forecasting supports supply chain management"**, Supply chain management is built on the principles of partnerships and the development and use of the connections that exist between the links of the chain to provide information that will increase the efficiency of all members in the chain. Success stories abound describing lower costs, shorter lead times and increased customer service.

**Charu Chandra, Sameer Kumar, (2000) "Supply chain management in theory and practice: a passing fad or a fundamental change?"**, Industrial Management & Data Systems Supply chain management is a major issue in many industries as firms realize the importance of creating an integrated relationship with their suppliers and customers. Managing the supply chain has become a way of improving competitiveness by reducing uncertainty and enhancing customer service. This paper analyzes various issues important to supply chain management and provides broader awareness of supply chain principles and concepts. The role of planning and coordination in complex integrated systems and information technology to synchronize the supply chain is described in a framework that creates the appropriate structure and installs proper controls in the enterprise and other constituents in the chain.

**Sander de Leeuw, Ruud Grotenhuis, Ad R. van Goor, (2013) "Assessing complexity of supply chains: evidence from wholesalers"**, International Journal of Operations & Production Management, *Purpose* – The purpose of this paper is to discuss complexity assessment in supply chains, to describe a methodology for measuring supply chain complexity in distributive trade and to illustrate the measurement of supply chain complexity and mechanisms to cope with supply chain complexity in distributive trade. The study confirms the multifaceted nature of supply chain complexity. The paper identifies eight drivers of supply chain complexity and uses these to illustrate the measurement of supply chain complexity in a wholesale environment. The paper identifies six strategies used by wholesalers for coping with supply chain complexity and identifies interrelations between supply chain complexity drivers and these strategies. The study provides insights into how to identify and measure complexity in a supply chain and what can be done to manage supply chain complexity.

### **III. RESEARCH METHODOLOGY**

Research design is the plan that guides the data collection and analysis phase of the project. It is the Framework, which specifies the type of information to be collected. The required information is collected through primary and secondary data. Descriptive research studies which are concerned with describing the characteristic of a particular concerned with the prediction with narration of facts and characteristics concerning individual group of situations are all example of descriptive research studies. For the purpose of this study, data from two sources will be gathered namely: - Primary Source and Secondary Source. Method of sampling is Simple random sampling. The samples for data collection will be of approximately 105 respondents. The data collected will be compiled for final tabulation and Interpretation. Structured questionnaire will be used to collect primary data. Tools used for analysis in this study are Chi – Square test and ANOVA

**IV.ANALYSIS AND INTERPRETATION**

**CHI-SQURE ANALYSIS TABLE - 1**

**HYPOTHESIS**

**Null hypothesis (H0):** There is no significant difference between having a clear logistics strategic plan and managing the supply chain successfully

**Alternative hypothesis (H1):** There is a significant difference between having a clear logistics strategic plan and managing the supply chain successfully

<b>Chi-Square Tests</b>			
	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.711 <sup>a</sup>	3	.050
Likelihood Ratio	8.529	3	.036
Linear-by-Linear Association	5.486	1	.019
N of Valid Cases	23		

According to the Chi-square table the  $X^2 = 7.711$ , degree of freedom is 3 and 'p' value is 0.052. Here, the 'p' value is equal to 0.05 ( $0.050 = 0.05$ ). So the  $H_0$  is accepted and the  $H_1$  is rejected. Hence there is a no significant difference between having a clear logistics strategic plan and managing the supply chain successfully

**One Way ANOVA Table – 2**

**EXPERIENCE- One-Way ANOVA**

One way analyses were conducted to check whether the study variables differ across various experiences. The Experience break up among the respondents is as follows

	Frequency
<5 Yrs	5
6-10 Yrs	7
11-15 Yrs	7
16-20 Yrs	4
Total	23

To check whether the various study variables differ across different experience groups, one way ANOVA was conducted. The various hypotheses being considered are:

**NULL HYPOTHESIS**

$H_0$ : There is no significant difference between the experience and the various factors related to the performance of Supply chain metrics

**ALTERNATIVE HYPOTHESIS**

$H_{1a}$ : The respondents rating about the on time delivery will differ across various experience level of retailers

$H_{1b}$ : The respondents rating about the Transportation cost will differ across various experience level of retailers

$H_{1c}$ : The respondents rating about the order fill rates will differ across various experience level of retailers

H<sub>1d</sub>: The respondents rating about the In-stock availability will differ across various experience level of retailers

H<sub>1e</sub>:The respondents rating about the Annual inventory Turnover will differ across various experience level of retailers

H<sub>1f</sub>:The respondents rating about the DC cost as % of sales will differ across various experience level of retailers

**TABLE SHOWING ONE WAY ANALYSIS BETWEEN THE EXPERIENCE AND THE VARIOUS FACTORS RELATED TO THE PERFORMANCE OF SUPPLY CHAIN METRICS**

ANOVA						
		Sum of Squares	Df	Mean Square	F	Sig.
Ontimedelivery	Between Groups	2.634	3	.878	.915	.453
	Within Groups	18.236	19	.960		
	Total	20.870	22			
Transportation Cost	Between Groups	4.932	3	1.644	2.110	.133
	Within Groups	14.807	19	.779		
	Total	19.739	22			
OrderFillRates	Between Groups	2.168	3	.723	.781	.519
	Within Groups	17.571	19	.925		
	Total	19.739	22			
In-StockAvailability	Between Groups	1.135	3	.378	.440	.727
	Within Groups	16.343	19	.860		
	Total	17.478	22			
AnnualInventory	Between Groups	.326	3	.109	.059	.981
	Within Groups	34.979	19	1.841		
	Total	35.304	22			
DCCost	Between Groups	8.264	3	2.755	4.895	.011
	Within Groups	10.693	19	.563		
	Total	18.957	22			

From the above ANOVA analysis it is inferred that there is a significant difference between the experiences of the retailers and the various metrics of supply chain like on time delivery, Transportation Cost, Order Fill Rates, In-Stock Availability, and Annual Inventory as the P value of all those metrics are greater than the significant value of 0.05 except the DC cost as % of sales which has lesser P value 0.011 than the significant value, and so it is said that The respondents rating about the DC cost as % of sales will not differ across various experience level of retailer

**FINDINGS DERIVED FORM CHI-SQURE ANALYSIS**

- There is a significant difference between the age of the respondents and the method of managing the supply chain
- There is a no significant difference between having a clear logistics strategic plan and managing the supply chain successfully
- There is a significant difference between Experience and challenges faced by the retailers in implementing a supply chain

## **FINDINGS DERIVED FORM ANOVA ANALYSIS**

- ❖ The respondents rating about the DC cost as % of sales will not differ across various experience level of retailers
- ❖ the respondents rating about the Safe delivery of products will not differ across various genders of retailers

## **SUGGESTIONS**

- **Cross Docking: Grading** of the farm produce should be moved to collection centres from distribution centres. This will allow cross docking of the farm fresh products and non-perishable products.
- **Store Inventory Management:** currently Insource requires stores to provide the distribution centres with daily forecasts. Now, this can induce bullwhip effect at the distribution centre level causing high deviations in inventory levels at the warehouse.
- **Everyday low pricing: insource** at times provides products at discounts. This induces its customers to buy more when the price is low and buy less when the price is high.
- **Procurement strategy: Insource** should additionally focus on incentivizing suppliers to produce crops on rotation basis through long term contracts. This would allow better quality produce with lesser transportation costs
- **Plan markdowns:** Planning markdowns goes hand in hand with planning inventories. If we plan the date of the first seasonal markdown before the season even begins, we can plan the inventory we want to have on hand at that point in time, and thus our markdown percentage, as well as our markdown sales before our second markdown, as well as all subsequent markdowns

## **V.CONCLUSION**

Logistics must continuously evolve to keep up with the changing wants, needs, and desires of an increasingly fragmented consumer base. The four capabilities outlined above will continue to be important criteria for logistic striving to achieve best-in-class status in the coming years. However, SCM executives highlighted other areas that will form the foundation for future success. Few logistic fully understand the total cost of acquiring, transporting, storing, promoting, and ultimately selling their products. Several retailers are developing better systems that will track complete item cost profiles. Those logistics that crack the code in this area will gain greater control of mark-up / mark-down decisions. We expect this type of detailed cost knowledge will lead to improved financial performance for the entire organization. "Sometimes we need to incur costs within the supply chain to deliver a benefit of greater value to the company."

## **BIBLIOGRAPHY**

### **BOOKS**

- Fundamentals of Supply Chain Management Dr. Dawei Lu
- Kumar, N., "The Global Retail Challenge." Business Strategy Review Vol. 16, No. 1, 2005.

- Gibson, Brian J., J. Thomas Mentzer, and Robert L. Cook, "Supply Chain Management: The Pursuit of a Consensus Definition," *Journal of Business Logistics*, Vol. 26, No. 2, 2005.
- Manrodt, Karl, Brian J. Gibson, and Stephen M. Rutner, "Has Supply Chain Management Found its Seat at the Table?" *Harvard Business Review Supply Chain Strategy*, Vol. 1, No. 1, 2005.
- *Retail Horizons: Benchmarks for 2004, Forecasts for 2005*, (Washington, DC: National Retail Federation, 2005).

#### **WEBSITES**

- <http://supply-chain.org/top-supply-chain-challenges>
- [http://www.ril.com/html/business/business\\_retail.html](http://www.ril.com/html/business/business_retail.html)
- <http://www.reliancefresh.info/>
- <http://www.sdexec.com/article/10277599/100-great-supply-chain>
- [http://en.wikipedia.org/wiki/Supply\\_chain\\_management](http://en.wikipedia.org/wiki/Supply_chain_management)
- [http://www.4shared.com/document/bkJ1gGHa/52\\_-\\_Operations\\_Management\\_at\\_.html](http://www.4shared.com/document/bkJ1gGHa/52_-_Operations_Management_at_.html)
- <http://www.scribd.com/doc/45635774/Operational-analysis-of-Reliance-Fresh>
- [http://en.wikipedia.org/wiki/Reliance\\_Fresh](http://en.wikipedia.org/wiki/Reliance_Fresh)
- [http://www.chillibreeze.com/articles\\_various/Reliance-Industries.asp](http://www.chillibreeze.com/articles_various/Reliance-Industries.asp)
- Initiatives and Issues in Fresh Fruit and Vegetable Supply Chains in India <http://globalfoodchainpartnerships.org/india/Presentations/Meeta%20Presentation%20-%20Linking%20farmers%20to%20Markets.pdf>



## A COMPARATIVE STUDY ON DEBIT AND CREDIT CARD TRANSACTIONS FOR POINT OF SALE (POS) IN INDIA

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### ABSTRACT

*This study explores the growth and dynamics of Point of Sale (POS) transactions in India between 2020 and 2024, focusing on the usage of Debit and Credit Cards. The research highlights key trends in transaction volumes and values across these payment methods, analyzing their role in the evolution of cashless transactions. The study reveals that Debit Cards have seen a decline in volume over the years, while Credit Cards have shown consistent growth, particularly in high-value transactions. Descriptive statistics, including measures of central tendency, skewness, and kurtosis, provide insights into transaction patterns, while forecasting models predict a continued upward trend in Credit Card transactions through 2027. The analysis further explores the differences in Debit and Credit Card transaction volumes and values, offering valuable insights into consumer behavior and the shift toward digital payment solutions in India's retail landscape. The analysis reveals that Debit Cards process an average volume of 1811.98 lakh and a value of ₹35,071 crore, while Credit Cards handle an average volume of 1250.49 lakh and a value of ₹42,003.40 crore. Descriptive statistics indicate that POS transactions are moderately skewed, with mixed kurtosis levels suggesting deviations from normal distribution. Compound Annual Growth Rate (CAGR) analysis shows positive growth for Credit Card volumes and values, but negative growth for Debit Card volumes. Forecasting models project a decline in Debit Card usage and a significant rise in Credit Card usage by 2027. ANOVA results show no significant difference between Debit and Credit Card volumes or values. However, regression analysis reveals a statistically significant but negative relationship between Debit and Credit Card volumes ( $R^2 = 0.83$ ,  $P = 0.03$ ), suggesting an inverse usage trend. For values, no significant relationship is found ( $R^2 = 0.04$ ,  $P = 0.76$ ). Overall, the findings underscore a shift towards increased reliance on Credit Cards at POS, reflecting evolving consumer payment preferences.*

**Keywords:** *Point of Sale (PoS), Reserve Bank of India's (RBI), Debit Card volumes and values and Credit Card volumes and values.*

### 1. INTRODUCTION

The **Point of Sale (PoS)** system is a technology-driven platform that facilitates the acceptance of payments at the point where a sale is made. PoS systems, encompassing both physical devices and digital interfaces, have emerged as an integral part of India's payment ecosystem, aligning with the Reserve Bank of India's (RBI) vision to promote cashless transactions and enhance financial inclusion. These systems allow merchants to accept payments using debit cards, credit cards, UPI, mobile wallets, and other digital modes, transforming the way transactions are conducted in India. The evolution of PoS in India is a testament to the country's commitment to adopting a **Digital India** framework. From cash-based retail systems to sophisticated digital payment solutions, PoS has played a pivotal role in enhancing convenience, security, and transparency in transactions, ultimately reducing dependency on physical cash.

The introduction of PoS systems in India can be traced back to the early 1990s, when electronic payment infrastructure began taking shape. During this period the **First-generation PoS terminals** were introduced by banks to facilitate card-based transactions at merchant outlets. The use of credit and debit cards started gaining momentum, primarily in urban centers and among affluent customers. The penetration of PoS systems, however, remained limited due to a lack of widespread awareness and digital infrastructure. The 2000s saw a significant expansion in India's digital payment ecosystem to make Banks, encouraged by RBI, began issuing debit and credit cards on a larger scale, boosting the demand for PoS terminals. International payment networks like **Visa** and **MasterCard** partnered with Indian banks to enhance card acceptance through PoS. By 2008, India had over **300,000 PoS terminals**, though their usage was still concentrated in metropolitan cities. The evolution of PoS systems gained further momentum post-2010, driven by advancements in technology and government policy initiatives to **introduction of chip-enabled EMV cards** made transactions more secure, increasing consumer trust in card payments. RBI introduced policies to regulate the **Merchant Discount Rate (MDR)**, making PoS transactions affordable for merchants.

The emergence of **mobile PoS (mPoS)** systems allowed merchants to use smartphones and tablets as PoS devices, especially in Tier-2 and Tier-3 cities. The turning point for PoS adoption in India came after the demonetization drive in 2016 the government and RBI pushed for a **cashless economy**, incentivizing merchants and consumers to adopt digital payment solutions. The number of PoS terminals surged from **1.5 million in 2016** to over **6 million by 2023**, marking exponential growth. New technologies like **QR code-based payments** and **NFC-enabled PoS systems** further simplified and diversified payment options. The COVID-19 pandemic accelerated the shift to PoS systems as consumers sought contactless and digital payment options. Key developments during this period were the widespread integration of the Unified Payments Interface (UPI) with PoS devices. RBI's push for offline PoS systems to overcome internet connectivity challenges in remote areas. The growth for digital PoS solutions, where merchants could accept payments via QR codes and virtual payment terminals without the need for physical devices.

## **II.REVIEW OF LITERATURE**

Joshi, H. V., & Parmar, B. P. (2022). This study evaluates the role of POS machines in promoting cashless transactions in India. It analyzes the impact of POS expansion in Tier II and III cities. The authors find that debit cards dominate POS transactions, while credit cards are used for high-value payments. The study calls for lower transaction costs to boost adoption further.

Mukherjee, A., & Roy, P. (2022). This research examines the adoption of POS terminals for card payments in India. It finds that debit cards dominate transactions at POS terminals, particularly in urban areas. The study highlights the need for financial literacy programs to promote credit card adoption. Policy interventions for infrastructure development are also discussed.

Arora, A., & Chakraborty, S. (2021). This research investigates consumer preferences for debit and credit card transactions in India. It highlights factors like cashback offers, reward systems, and convenience as significant determinants of card usage at POS. The study emphasizes the role of transaction security in influencing consumer trust. It also identifies demographic patterns in card adoption.

Kothari, P., & Jha, A. (2021). This research explores the factors influencing credit card usage in Indian retail payments. It emphasizes the importance of credit limits, interest rates, and

reward points in shaping consumer behavior. The study also examines the limited usage of credit cards in rural areas and suggests strategies for increasing penetration.

Verma, S., & Gupta, R. (2021). This paper focuses on the challenges and opportunities of POS adoption in India. It highlights infrastructure, transaction costs, and consumer trust as key factors influencing the adoption of debit and credit cards. The authors suggest that targeted awareness campaigns could enhance the usage of digital payments in rural areas.

Agarwal, S., & Chakrabarti, R. (2020). This study discusses the increasing adoption of digital payments in India, with a focus on debit and credit card transactions at POS terminals. Key drivers include convenience, trust, and ease of use. The study highlights that demonetization in 2016 significantly boosted card-based transactions. It also analyzes challenges such as cybersecurity and rural penetration.

Khan, N., & Sahoo, D. (2020). This paper conducts a comparative analysis of debit and credit card usage in India. It highlights that debit cards are more commonly used for small transactions, while credit cards are preferred for high-value purchases. The study also identifies transaction fees and financial literacy as key barriers to credit card adoption. Kumar, V., & Gupta, S. (2020). The authors analyze the impact of demonetization on POS transactions in India. The study finds a sharp increase in debit card transactions at POS terminals post-2016, with a gradual rise in credit card use. It discusses challenges such as infrastructure gaps and transaction costs. Recommendations include reducing fees to encourage usage.

Patel, R., & Sharma, P. (2020). The authors analyze trends in debit and credit card transactions in India, focusing on the rise of digital payments. They find that demographic factors such as age, income, and education influence card usage. The study highlights the role of government initiatives in driving cashless transactions at POS terminals.

Das, A., & Agarwal, R. (2019). This paper examines the growth of card-based POS transactions post-demonetization in India. It identifies a sharp rise in debit card usage and a gradual increase in credit card adoption. The study also explores barriers, such as transaction fees and rural infrastructure gaps. The authors conclude that government policies have greatly influenced digital payment trends. Singh, M., & Kaur, R. (2019). This study examines the patterns of debit and credit card usage in India, focusing on POS transactions. The authors identify cashback offers and discounts as key motivators. However, they note that transaction costs and lack of infrastructure in rural areas remain significant barriers. The study concludes with policy recommendations.

Mittal, S., & Pal, D. (2018). This study explores the behavioral dynamics of debit and credit card users in India. It identifies convenience, rewards, and ease of use as primary factors driving card usage. However, the study notes that transaction costs and fraud concerns are major barriers. It concludes by suggesting measures to enhance trust in digital payments.

## **OBJECTIVES OF THE PAPER**

1. To study and compare the Debit Cards & Credit Cards transactions for Point of Sale (PoS) in India.
2. To forecasting Analysis for Debit Cards & Credit Cards Volume (Lakh) for Point of sale (POS) in India (Year 2020 - 2027).
3. To forecasting Analysis for Debit Cards & Credit Cards Value (₹ Crore) for Point of sale (POS) in India (Year 2020 - 2027).
4. To examine ANOVA for POS Debit card volume & value and Credit card volume & value in India.
5. To determined the Regression Analysis for POS Debit card volume & value and Credit

card volume & value in India.

**III.RESEARCH METHODOLOGY**

The present paper is based comparative study on Debit and Credit card for POS in India. In the source of data is secondary data; that the data were collected from RBI Bulletin reports last 5 years (2020 to 2024) and other related publications. The literature was collected from authorized national and international published journals and related websites. The **RBI's Master Directions on Payment Systems** help researchers understand the compliance requirements for PoS operators, ensuring that secondary data derived from these sources accurately reflects the regulatory environment for PoS systems in India. Furthermore, secondary data from **RBI's reports on digital payment growth** offers valuable historical data, tracking the rise of PoS terminals in the country. RBI's publications provide figures on the number of active PoS terminals, transactions volume & value, and the shift towards contactless payments, helping researchers analyze trends over time. These insights, supported by **RBI's periodic updates** on digital payment innovations, also contribute to assessing challenges faced by businesses in PoS adoption, such as technological barriers, security concerns, and integration with existing banking systems. The analysis was used on descriptive statistics, forecasting analysis and hypothesis frame based on ANOVA analysis and regression analysis to the data.

**DATA ANALYSIS TO THE DEBIT CARD AND CREDIT CARD TRANSACTIONS FOR POINT OF SALE (POS) IN INDIA**

A Study on Debit Card and Credit Card transactions for Point of Sale (PoS) (2020 to 2024) in India.

**Table 1 Descriptive Statistics for Point of Sale (POS) in India (2020 to 2024)**

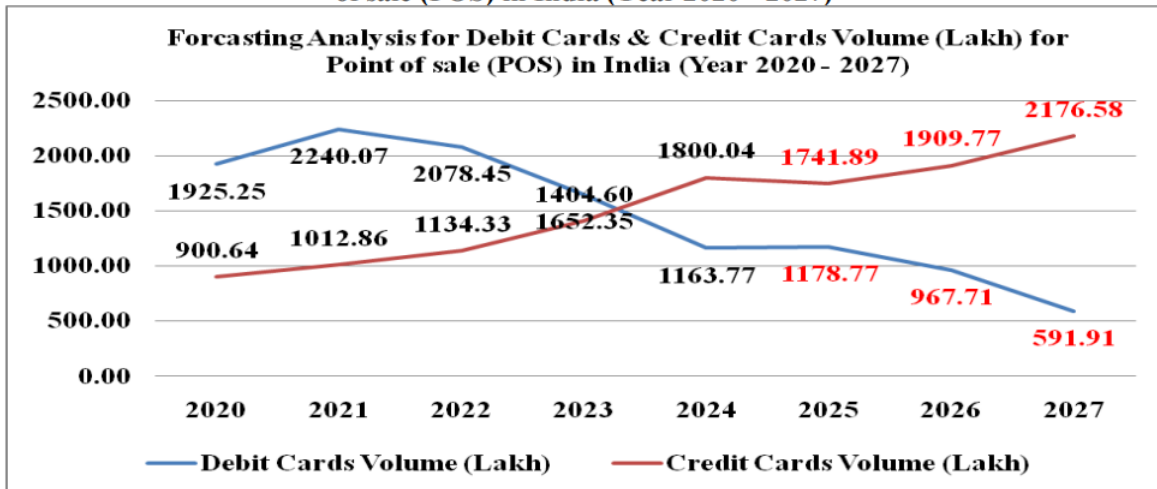
Year	Debit Cards		Credit Cards	
	Volume (Lakh)	Value (₹ Crore)	Volume (Lakh)	Value (₹ Crore)
2020	1925.25	27238	900.64	26656
2021	2240.07	42816	1012.86	33286
2022	2078.45	40770	1134.33	38777
2023	1652.35	35222	1404.60	50920
2024	1163.77	29309	1800.04	60378
<b>Mean</b>	1811.98	35071	1250.49	42003.40
<b>SD</b>	422.12	6838.18	359.90	13592.99
<b>CV</b>	23.30	19.50	28.78	32.36
<b>Skewness</b>	-0.98	-0.03	1.00	0.43
<b>Kurtosis</b>	0.50	-2.56	0.20	-1.35
<b>Growth</b>	2297.06	34867.07	860.68	26663.72
<b>CAGR</b>	-0.12	0.02	0.19	0.23

**Sources:** (RBI Bulletin Report 2020 to 2024)

It is analyzed from table 1 that the Point of Sale (POS) in India processes under Debit Cards volume (Lakh) is (1811.98) and value (₹ Crore) is (35071). In under Credit Cards volume (Lakh) is (1250.49) and value (₹ Crore) is (42003.40) for mean value range. POS it is a good measure of central value because the Std. Deviation (SD) process. Covariance (CV) is a better result. As the Skewness value is good. Which is between -1 or greater than 1, the distribution is highly skewed. If the kurtosis ranges from 0 to 3, there is normal distribution. But the calculated kurtosis results have some items that are not normal distribution. It is

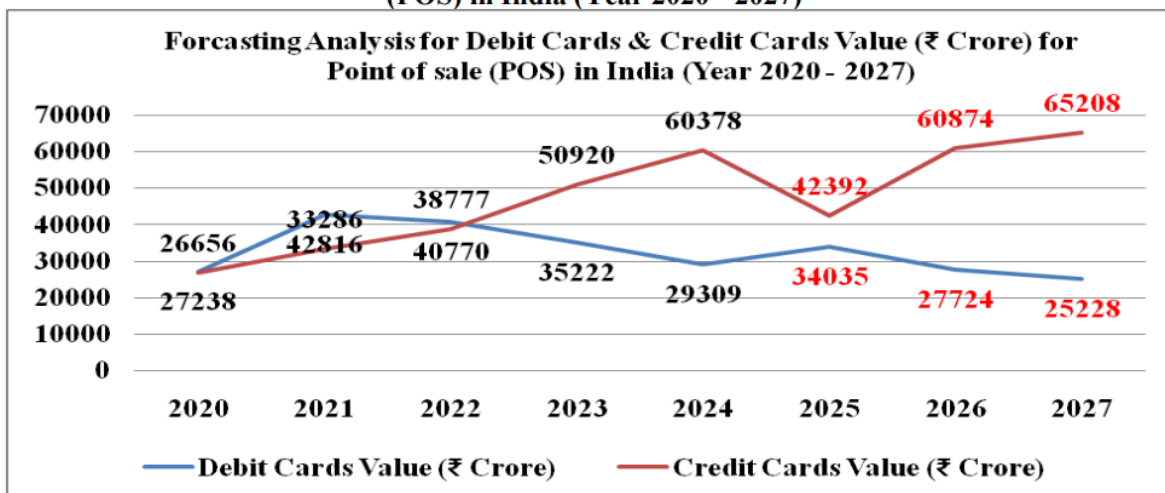
classified as Compound Average Growth Rate (CAGR) Debit Cards value, Credit Cards volume and value are highly, but Debit Cards volume (Lakh) is negatively.

**Chart 1 Forecasting Analysis for Debit Cards & Credit Cards Volume (Lakh) for Point of sale (POS) in India (Year 2020 - 2027)**



In this figure 1 measure of forecasting analysis in three years (2025 to 2027) on progress of POS in India are presented the comparing for Debit and Credit card volumes. In Debit card volumes forecasting range of volume is 1925 (2020) to 592 (2027) that is a negatively. Credit card volumes forecasting range of volume is 901 (2020) to 2177 (2027) that is a positively. So, it has a most uses for Credit cards volume.

**Chart 2 Forecasting Analysis for Debit Cards & Credit Cards Value (₹ Crore) for Point of sale (POS) in India (Year 2020 - 2027)**



In this figure 2 measure of forecasting analysis in three years (2025 to 2027) on progress of POS in India are presented the comparing for Debit and Credit card values. In Debit card volumes forecasting range of volume is 27238 (2020) to 25228 (2027) that is a negatively. Credit card volumes forecasting range of volume is 26656 (2020) to 65208 (2027) that is a positively. So, it has a most uses for Credit cards value.

### HYPOTHESIS FOR ANOVA ANALYSIS

The following hypothesis is framed and tested with ANOVA for POS Debit card volume & value and Credit Card volumes & value in India.

Hypothesis 1: Debit Card Volume vs. Credit Card Volume



**H01:** There is no significant difference between Debit card volume and Credit card volume.

**H02:** There is a significant difference between Debit card volume and Credit card volume.

Hypothesis 2: Debit Card Value vs. Credit Card Value

**H01:** There is no significant difference between Debit card value and Credit card value.

**H02:** There is a significant difference between Debit card value and Credit card value.

**Table 2 ANOVA for POS Debit card volume & value and Credit card volume & value in India (2020 to 2024)**

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>	
Debit Cards Volume (Lakh)	5	9060	1812	178189	
Credit Cards Volume (Lakh)	5	6253	1251	129528	
Debit Cards Value (₹ Crore)	5	175355	35071	46760740	
Credit Cards Value (₹ Crore)	5	210017	42003	184769272	
<b>ANOVA Debit card volume and Credit card volume</b>					
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>
Between Groups	788161	1	788161	5.12	0.053
Within Groups	1230867	8	153858		
<b>Total</b>	<b>2019027</b>	<b>9</b>			
<b>ANOVA Debit card value and Credit card value</b>					
<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>
Between Groups	120145424	1	120145424	1.04	0.34
Within Groups	926120047	8	115765006		
<b>Total</b>	<b>1046265472</b>	<b>9</b>			

It is evaluated from table 2 that the Point of Sale (POS) in India ANOVA analysis for Debit card volume and Credit card volume based on F-value is 5.12 and P-value is 0.053 in result for the Volume is null hypothesis (H01) is accepted, indicating no significant difference between Debit card volume and Credit card volume. Debit card value and Credit card value in India based on F-value is 1.04 and P-value is 0.34 in result for the null hypothesis (H01) is accepted, indicating no significant difference between Debit card value and Credit card value. Based on the ANOVA results, there is no significant difference between the volumes or values of Debit cards and Credit cards in India.

**HYPOTHESIS FOR REGRESSION ANALYSIS**

The following hypothesis is framed and tested with regression analysis for POS Debit card volume & value and Credit Card volumes & value in India.

**Hypothesis 1: Debit Card Volume vs. Credit Card Volume**

**H01:** There is no significant relationship between Debit card volume and Credit card volume.

**H02:** There is a significant relationship between Debit card volume and Credit card volume.

**Hypothesis 2: Debit Card Value vs. Credit Card Value**

**H01:** There is no significant relationship between Debit card value and Credit card value.

**H02:** There is a significant relationship between Debit card value and Credit card value.

**Table 3 Regression Analysis for POS Debit card volume & value and Credit card volume & value in India (2020 to 2024)**

<i>Regression Statistics of Debit Cards Volume (Lakh) &amp; Credit Cards Volume (Lakh) for POS in India</i>					
Multiple R	0.91				
R Square	0.83				
Adjusted R Square	0.77				
Standard Error	201.85				
Observations	5.00				
ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	590520	590520	14.49	0.03
Residual	3	122235	40745		
Total	4	712755			
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	
Intercept	3147	362.11	8.69	0.00	
Credit Cards Volume (Lakh)	-1.07	0.28	-3.81	0.03	
<i>Regression Statistics of Debit Cards Value (₹ Crore) &amp; Credit Cards Value (₹ Crore) for POS in India</i>					
Multiple R	0.19				
R Square	0.04				
Adjusted R Square	-0.29				
Standard Error	7753.97				
Observations	5.00				
ANOVA					
	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	6670750	6670750	0.11	0.76
Residual	3	180372210	60124070		
Total	4	187042960			
	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	
Intercept	39062	12472	3.13	0.05	
Credit Cards Value (₹ Crore)	-0.10	0.29	-0.33	0.76	

It is clear from table 3 that the difference between Debit card value and Credit card value under that the Point of Sale (POS) in India. Regression Analysis for Debit card volume and Credit card volume in R-Square 0.83 (83% of the variation in Debit card volume is explained by Credit card volume), F-value 14.49, and the P-value (0.03) is less than the significance level of 0.05, which indicates that the relationship between Debit card volume and Credit card volume is statistically significant. So, the null hypothesis is rejected. There is a significant relationship between Debit card volume and Credit card volume, though it is negative. The negative coefficient (-1.07) suggests that as Credit card volume increases, Debit card volume decreases and another Regression Analysis for Debit card value and Credit card value in **R-Square** 0.04 (4% of the variation in Debit card value is explained by Credit card value), F-value 0.11, the **P-value (0.76)** is much greater than the significance level of **0.05**, which indicates that the relationship between Debit card value and Credit card value is not statistically significant. So, the null hypothesis is accepted. There is no significant relationship between Debit card value and Credit card value. **Credit Cards Value Coefficient** (-0.10) (indicating a very weak negative relationship).

## **SUGGESTIONS**

1. **Promoting Debit Card Usage:** The declining trend in debit card volumes and values at POS highlights the need for financial institutions and policymakers to promote their usage. Banks could introduce rewards, cashback offers, or discounts on transactions made via debit cards to attract more users.
2. **Educating Consumers:** Public awareness campaigns should focus on educating consumers about the benefits of debit cards, including better budget control and avoidance of interest charges compared to credit cards.
3. **Technology Integration:** To improve the efficiency of debit card transactions, integrating advanced technologies like Near Field Communication (NFC) for contactless payments can enhance the user experience and convenience.
4. **Credit Card Benefits Optimization:** Since credit card volumes and values are growing, banks can optimize their credit card offerings by introducing customizable rewards programs tailored to consumer spending patterns, further increasing credit card adoption.
5. **Balanced Growth Strategies:** Policymakers should focus on achieving balanced growth between debit and credit card usage by incentivizing both payment methods. For example, offering subsidies on merchant fees for debit card transactions could encourage merchants to promote their use.
6. **Data-Driven Decision Making:** Banks and financial institutions should use insights from forecasting and regression analysis to develop targeted marketing strategies and improve card transaction systems, ensuring both debit and credit cards meet the evolving demands of consumers.

## **V.CONCLUSION**

The study analyzes the trends, forecasting, and statistical relationships between debit and credit card transactions at Points of Sale (POS) in India. It was observed that credit cards consistently outperform debit cards in terms of transaction value and forecasted growth, with a positive path for credit card volumes and values from 2020 to 2027. Conversely, debit card transactions show a declining trend, particularly in volume, indicating a shift in consumer preferences. The hypothesis testing via ANOVA indicates no significant difference between debit and credit card volumes or values, suggesting comparable usage patterns at the aggregate level. However, regression analysis reveals a significant but inverse relationship between debit and credit card volumes, with credit card usage increasing as debit card usage declines. Additionally, there is no significant relationship between debit and credit card transaction values, implying independent factors influencing value-based usage. The findings highlight a growing consumer inclination toward credit cards for higher-value transactions and their increasing utility at POS systems. Policymakers and financial institutions should address the declining trend in debit card usage by enhancing their features and promoting financial literacy to sustain balanced growth in the digital payment ecosystem.

## **REFERENCE**

1. Agarwal, S., & Chakrabarti, R. (2020). Digital payments adoption in India: Drivers and challenges. *Economic and Political Weekly*, 55(7), 54–61.
2. Arora, A., & Chakraborty, S. (2021). Consumer preferences for digital payment methods: A study of debit and credit card usage in India. *Journal of Financial Services Marketing*, 26(1), 39–50. <https://doi.org/10.1057/s41264-020-00077-5>



3. Das, A., & Agarwal, R. (2019). The growth and impact of digital payment systems in India. *The Indian Journal of Economics*, 100(394), 345–362.
4. Joshi, H. V., & Parmar, B. P. (2022). Role of POS machines in boosting cashless transactions in India. *Journal of Applied Finance and Banking*, 12(2), 105–122. <https://doi.org/10.47260/jafb/1222>
5. Khan, N., & Sahoo, D. (2020). A comparative study of debit and credit card payment systems in India: Trends and issues. *International Journal of Research in Commerce and Management*, 11(4), 1–8.
6. Kothari, P., & Jha, A. (2021). Factors influencing the usage of credit cards in Indian retail payment systems. *Asia-Pacific Journal of Management Research and Innovation*, 17(2), 99–112. <https://doi.org/10.1177/2319510X211008502>
7. Kumar, V., & Gupta, S. (2020). Impact of demonetization on the use of POS systems in India. *International Journal of Economic Research*, 17(3), 129–142.
8. Mittal, S., & Pal, D. (2018). Understanding the dynamics of debit and credit card usage in India. *South Asian Journal of Business and Management Cases*, 7(1), 65–78. <https://doi.org/10.1177/2277977918762276>
9. Mukherjee, A., & Roy, P. (2022). Analyzing the adoption of POS terminals for card payments in the Indian context. *Journal of Payments Strategy & Systems*, 16(1), 73–85.
10. Patel, R., & Sharma, P. (2020). The rise of digital payments in India: An analysis of debit and credit card transactions. *Global Business Review*, 21(3), 622–638. <https://doi.org/10.1177/0972150918794972>
11. Singh, M., & Kaur, R. (2019). Debit and credit card payment systems: Usage patterns and consumer preferences in India. *Indian Journal of Finance*, 13(6), 40–51. <https://doi.org/10.17010/ijf/2019/v13i6/144513>
12. Verma, S., & Gupta, R. (2021). POS adoption in India: Challenges and opportunities in a cashless economy. *Journal of Emerging Financial Markets*, 9(2), 81–98. <https://doi.org/10.1177/2345678921031185>

## **A STUDY TO DETERMINE THE EFFICIENCY OF AGRICULTURAL CREDIT PROVIDED BY TNSC BANK**

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### **ABSTRACT**

*The agriculture sector in Tamil Nadu receives credit from the Tamil Nadu State Cooperative Bank (TNSCB), which has a crucial role to play in this process. TNSCB is a cooperative bank that is owned and operated by its members—most of whom are rural farmers, artisans, and small-scale business owners—it is possible that political factors may have an indirect impact on the bank and its operations. The study analysis the short-term agriculture credit provided by TNSCB and food grain production in Tamil Nadu since 2003. The results show that agricultural productivity of food grains has not been significantly affected by the availability of agricultural loans from TNSCB.*

**KEYWORDS:** *Agriculture credit, TNSC Bank, Election, food grain production, short term finance, Cooperative banks, Agricultural loan sanctioned, Policy measures.*

### **I.INTRODUCTION**

A cooperative bank is a type of financial institution that its members and customers own and control. A cooperative bank's primary objective is to offer banking and financial services to its members, typically businesses or individuals with shared objectives or interests.

When compared to commercial banks, cooperative banks tend to be smaller and operate on a local or regional scale. Savings and deposit accounts, loans, and payment services are just a few of their many financial offerings. Cooperative banks often tailor their services to meet the specific requirements of their members, who may include artisans, small-scale farmers, and other low-income groups.

Cooperative banks play a significant role in supporting local economic development and providing financial services to underserved communities in many nations, including India and some European nations.

In the Indian banking system, cooperative banks are very important, especially in rural areas where it can be hard to get banking services. The jobs played by agreeable banks in India incorporate Giving credit, preparing reserve funds, Monetary consideration, Advancing business, Execution of government plans. Cooperative banks in India provide credit and other financial services to underserved communities, support rural development, and promote financial inclusion.

State Cooperative Banks (SCBs) are cooperative banks in India that are registered under the State Cooperative Societies Act and operate at the state level. They assume a significant part

in offering monetary types of assistance to the horticultural area and provincial region of the country. SCBs offer different monetary types of assistance to their individuals, including advances for agribusiness and partnered exercises, lodging credits, and reserve funds and store accounts. In addition, for a variety of government programs pertaining to agriculture and rural development, they serve as intermediaries between farmers and the government. The Reserve Bank of India (RBI) oversees SCB regulation and oversight, establishing guidelines for their operation. The National Bank for Agriculture and Rural Development (NABARD) offers SCBs financial support for their lending activities. For their working capital requirements, they can also borrow money from other banks and financial institutions.

The state cooperative bank known as Tamil Nadu State Cooperative Bank (TNSCB) is based in the Indian state of Tamil Nadu. Chennai serves as its headquarters, and it was founded in 1905. The Tamil Nadu Cooperative Societies Act and the Reserve Bank of India (RBI) oversee TNSCB. Loans for housing, loans for agriculture and related activities, and accounts for savings and deposits are just a few of the financial services that TNSCB offers to its members. It also serves as a link between farmers and the government for various agricultural and rural development programs. Crop loans, dairy loans, term loans, housing loans, gold loans, and other credit facilities are among the offerings made available by the TNSCB.

The agriculture sector in Tamil Nadu receives credit from the Tamil Nadu State Cooperative Bank (TNSCB), which has a crucial role to play in this process. Crop loans, dairy loans, term loans, and gold loans are among the various credit facilities that the TNSCB offers to farmers for the purpose of agriculture and related endeavors.

Tamil Nadu State Cooperative Bank (TNSCB) is not directly involved in elections because it is a financial institution. However, given that TNSCB is a cooperative bank that is owned and operated by its members—most of whom are rural farmers, artisans, and small-scale business owners—it is possible that political factors may have an indirect impact on the bank and its operations.

Political parties and candidates may promise to improve access to credit and financial services in order to win over farmers and rural communities during election campaigns, which could have an indirect effect on TNSCB. Additionally, because the Tamil Nadu Cooperative Societies Act governs the TNSCB and is enforced by the state government, alterations in government leadership and policies could have an indirect impact on the bank's operations.

However, it is essential to keep in mind that the Reserve Bank of India (RBI) oversees TNSCB, an independent financial institution. Instead of being influenced by political considerations, the bank's operations are primarily focused on providing its members with financial services and promoting rural development in Tamil Nadu.

A major focus has been given in providing evidence of politically motivated lending cycles in Tamil Nadu's cooperative credit market, with ruling parties lending more in election years. Last but not least, the reason why government ownership of banks can have a negative effect on real economic outcomes will be discussed in this paper. This is because politicians don't use resources well or in a productive way to win elections. The RBI has direct control over the majority of commercial banks, so they have less influence over political bodies. Because it has been demonstrated that cooperative banks have more political influence than commercial banks, this paper will therefore primarily focus on cooperative banks. Using secondary data

from the TNSC annual report and the RBI, we will investigate whether or not the various schemes, increases in credit limits, discounted interest rates, and fiscal allocations made during election years contributed to an increase in agricultural output. In addition, the primary focus of this paper will be on TNSC's effectiveness in relation to agricultural credit and its major drivers.

## **II.LITERATURE REVIEW**

The majority of nations' economies are built on agriculture, and credit is an essential component of that growth and development. Admittance to credit permits ranchers to buy fundamental data sources like seeds, manures, and hardware, and put resources into their homesteads. Concerns about the accessibility and availability of credit for small-scale farmers through state cooperative banks, particularly in developing nations, have grown in recent years.

The literature on agricultural credit focuses on how credit helps increase agricultural productivity, generate income, and reduce poverty. Farmers' ability to invest in their farms, adopt new technologies, and increase productivity is positively impacted by access to credit, according to a number of studies. Additionally, it has been demonstrated that agricultural credit has positive spillover effects on transportation and agro-processing.

The demand and supply of credit, the impact of credit on agricultural productivity, credit delivery mechanisms, and policy interventions are all covered in the extensive literature on agriculture credit. However, despite the abundance of research on this subject, there are still significant knowledge gaps, particularly regarding the impact of credit on various types of farmers and the effectiveness of various credit delivery mechanisms.

**Anwarul hoda and Prerna terway** (June 2015), in their paper discussed cooperative banks' role in providing rural communities with credit, particularly for agricultural endeavours. From 1975 to 1976, cooperative banks held 75% of all outstanding loans, while commercial banks held 25%. However, by 1990 and 1991, when they stood at 48% and 49%, respectively, these percentages had almost reached parity. The paper cites "impairment of management," "impairment of governance," and deteriorating financial performance within cooperative institutions as the causes of this shift. The volume of crop loans in Indian agriculture, including hired labor, is close to exceeding the total input cost for 2012-2013, according to National Accounts Statistics. The paper examines a variety of different variables to assess the success of over-the-year efforts to expand institutional finance for agricultural credit. These include the total amount of loans from cooperative banks and commercial banks that are still unpaid, short-term institutional credit in relation to the cost of agricultural inputs, credit subsidies, and loan recovery rates between financial institutions before and after loan waiver program.

**Umanath malaiarasan and Paramasivam ramasamy's** (November 2018) paper has explained that access to capital is necessary for market-led agricultural production activities in opposition to conventional farming systems. Crop productivity can only be increased with sufficient cash; to utilize high-yielding varieties and modern farm inputs like pesticides and fertilizers; to invest in more effective methods of irrigation and land reclamation; A diverse supply of agricultural raw materials, a sufficient supply of food, numerous employment opportunities, and profitable farm businesses are all potential outcomes that will boost agricultural output. Between 1977 and 1978, the paper says, cooperative banks in India were the primary lender for rural agricultural and related activities, lending Rs. Credit totaling 10.58

billion, followed by Rs. 2.88 billion in commercial bank and rupee loans 044 billion from RRBs, which are regional rural banks. However, while cooperatives only accounted for 818 billion and RRBs 470 billion during the 2011-2012 period, the total amount of credits provided by commercial banks increased significantly to 2178 billion as a result of branch expansion and effective credit policies. Some of the variables used in the study include farm size, ownership of a Kisan Credit Card, access to capital for agricultural production activities, and the state of a bank account.

**Aadil Ummer Zaman, et al.,** (2022), investigate the technical efficiency of rural cooperative banks in India from 2013 to 2019. In order to sustainably boost performance across all states, including Tamil Nadu, the findings highlight the necessity of enhancing these institutions' risk management and lending operations and reveal a significant disparity between states in regard to their estimates of technical efficiency. In addition, the paper discusses the significance of cooperatives in India for reducing rural poverty and providing farmers with low-cost financing. It also mentions that cooperative banks have a wide reach and serve more than 120 million customers. This study found that states like Maharashtra and Tamil Nadu are at the forefront of agricultural credit provision due to their robust rural cooperative systems. In addition, the findings of the paper suggest that these financial institutions' performance could be improved by implementing more efficient risk management strategies, modernizing lending procedures, and incorporating cutting-edge technology. As variables, total deposits, advances, and investments are used for this purpose; outputs like the amount earned in loan interest, net profit after taxes, and operating expenses; financial ratios such as the capital adequacy ratio (CAR), the return on assets ratio (ROA), and the non-performing asset ratio (NPA); in addition to additional control variables like the population density of branch offices.

**Mohammed nabeel K and Sumathy mohan** (April,2022) discussed the role of cooperative banks in India as a whole, as well as the ways in which they can support rural development and financial inclusion. They offer agricultural businesses, small businesses, self-employment opportunities, and so on access to credit, India's financial system is dominated by cooperative banks. which may be difficult or costly for individuals without bank accounts or remittance services. The study concluded that these institutions play a crucial role in boosting regional economic growth through their delivery model by removing psychological barriers between commercial banks and their customers due to their extensive ties to the community and local roots. Cooperative banks' role in providing agricultural credit to rural areas is also discussed in the paper. The variables used in this research paper are financial inclusion and rural development in India, collateral-free lending policies by cooperative banks, professionalization and efficiency introduction for cooperative banks through systematic training programs, the benefits and feasibility of amending existing credit union/cooperative laws, and the use of technology as a facilitator for improved cooperative performance.

**K. Murugan** (July, 2022) in his paper says that SCBs increased their goal for total agricultural credit issued from 2015 to 2016 to Rs.15962 crore, an increase of 29%. However, over the course of two years, the success rate for these loans only increased by 12%, going from Rs 12819 crores in 2015–16 to Rs 14356 crores in 2017–18. This indicates that there are still discrepancies between the goals set and the actual results achieved when it comes to the provision of agricultural credit by cooperative banks within the boundaries of the state of Tamil Nadu. The subjects of the study are factors influencing customer satisfaction with a particular bank, the relationship between determinants, and familiarity with powerful personnel's role in influencing credit demand and access among the sample households studied in this research



paper. Other topics include the percentage of agricultural credit issued by nationalized banks, private banks, and the State Bank of India, as well as the achievement rate for agricultural credits issued by cooperative societies within the boundaries of Tamil Nadu state. The sources of institutional credit, the percentage of agricultural credit issued by nationalized banks are also included,

**P.Kalai Selvi** (January,2020) discusses the ways in which the Tamil Nadu State Apex Cooperative Bank (TNSCB) aids farmers in obtaining agricultural credit. It states that TNSCB receives assistance with refinancing from National Coop, the Small Industries Development Bank of India (SIDBI), and the National Bank for Agriculture and Rural Development (NABARD). Corporation for Economic Growth, through District Central Cooperative Banks/Co-optex, which it uses to offer short-term and medium-term loans for development projects involving physically challenged individuals and agricultural operations. The paper shows that TNSCB is important in mobilizing and lending resources to agriculture by looking at its financial health over a 12-year period, including its share capital, reserves, deposits, borrowings, investments, and working results, among other indicators. Using a variety of variables, the study looks at the financial health and performance of Tamil Nadu State Apex Cooperative Bank from 2006-2007 to 2017-2018. Examples include share capital, reserves, deposits, borrowings, and investments.

**Dr. R. Ravikumar** (September 2021) in his paper examines the growth and pattern of farm loans in Tamil Nadu over a nine-year period. Rural Regional Banks (RRBs), which are similar to cooperatives in that they provide financial services to rural areas, are mentioned, but cooperative banks are not specifically mentioned. The government established RRBs with the intention of obtaining deposits from poor individuals and providing them with loans for their development requirements. According to the study, Tamil Nadu Grama Bank was able to provide crop and non-crop loan assistance successfully during this time period, which has the potential to increase agricultural output. Nevertheless, there was some variation from year to year, primarily as a result of the merger of two regional banks into a single institution at the beginning of 2019. The paper also discusses the significance of rural banking for economic expansion and its contribution to GDP. It states that agriculture accounts for less than 14% of India's GDP, despite the fact that it continues to be the primary source of income for over 64% of rural households. The study used a percentage growth rate to analyze the data. It also looked at various key performance indicators like the number of branches, loans, and advances in order to evaluate the financial performance of Rural Regional Banks (RRBs) from 2006-07 to 2010-11. The study's primary focus was on Tamil Nadu Grama Bank's loan disbursements for both crop and non-crop loans between 2011 and 2019.

**Deepa S. Raj and Edwin prabu A.** (2018) in their paper studied the impact that Tamil Nadu's agricultural loan waiver program had on cooperative banks is examined in A Case Study of Tamil Nadu's Scheme. It examines data from a field survey conducted in seven districts and farm loan transactions from selected primary agricultural co-operative credit societies (PACCS). According to the findings, non-beneficiary farmers were more likely than beneficiary farmers to obtain loans from PACCS close to the eligibility cutoff acreage (5 acres) shortly after the waiver was implemented. However, over time, this distinction diminished as the supply of funds for agriculture loans returned to normal. RDD is an empirical strategy that makes use of discontinuities around certain thresholds like eligibility criteria for programs like welfare benefits or tax credits when there are significant shifts in outcomes across these boundaries as a result of policy interventions. The variables used in this study are loan

transactions data from select primary agricultural co-operative credit societies (PACCS), the probability that beneficiary or non-beneficiary farmers will obtain loans from PACCS, and the availability of funds for agriculture loans. As a forcing variable, acreage, or the size of land holdings, is continuous at the cut-off point.

**Joshua D. Merfeld** (SEPTEMBER 2020) shows evidence from India and suggests that market failures are a household phenomenon rather than a market phenomenon. Despite the fact that smallholders may believe markets are complete, it argues that non-smallholders cannot be excluded from this hypothesis. The paper also builds on previous empirical and theoretical research on the consequences of market failures by examining how households respond when markets are incomplete by utilizing exogenous price shifts between planting and harvest. In addition, it suggests that these households may gain from increased access to financial resources and capital. This suggests that the success of smallholder farmers may be largely determined by their capacity to obtain capital and financial services. By increasing their income, off-farm employment may also contribute to the well-being and productivity of these families. The variables of the study include: During the agricultural season and crop prices, decisions regarding planting, and prior allocation decisions for inputs (such as the use of fertilizer) are demographic aspects of a household.

**Sivasankar. V** (December 2021) discusses the growth of agricultural production in Tamil Nadu from 2000-2001 to 2018-2019 in his paper. It demonstrates that over this time period, the production of both food crops and non-food crops has decreased significantly, resulting in a sharp decline in total agricultural output. Additionally, the analysis reveals that while the production of coarse cereals and pulses has increased, rice cultivation has decreased due to its infeasibility as an economic activity for farmers. Over the same time period, cotton, sugarcane, and oilseed crops all experienced declines. The paper does not specifically discuss agricultural credit. On the other hand, it mentions the crisis that the agrarian economy of Tamil Nadu has been going through as a result of the elimination of subsidies and a reduction in public spending on agriculture. This could be one of the things that makes it harder for farmers to get agricultural credit, which would make it harder for them to buy production-related inputs like seeds and fertilizer. The study's variables include the share of agriculture in GDP and SGDP, agricultural production as measured by food crops, the annual growth rate of agricultural production, and the percentage of the workforce employed in agriculture.

**Shawn Cole** (April,2007) The paper Agricultural Credit in India establishes a connection between elections and cooperative banks by combining theories of political budget cycles and tactical electoral redistribution. This framework is used to test for capture in government-owned banks, which are found to be susceptible to significant capture due to the fact that in election years, more loans are made than in non-election years and target districts where ruling parties have won or lost by a small margin in previous elections. It was also discovered that politically motivated loans were less likely to be repaid, and neither did they significantly affect agricultural output. In contrast to credit, the paper found that agricultural output did not change with the election cycle. In addition, there was insufficient precision in the estimates and there was no evidence to suggest that an increase in the amount of credit provided by public sector banks had any effect on state-level agricultural output. Election cycles also raised default rates, according to a loan-level analysis, without affecting agricultural output in any way that could be measured. Using a variety of variables, the study responds to the research questions. Here are a few: credit, which is determined by the total of all public sector agricultural loans granted by banks; yield and output, both of which are indicators of agricultural productivity at the state

level; electoral factors such as the vote share of the ruling party in the previous election or the victory or defeat margin in the districts where elections were held. Loan-level data was also used in the analysis of repayment default rates over time.

**Diego maiorano and Vani swarupa murali** (January 2019) demonstrated the potential influence that farmer distress can have on elections. It looks at how this was shown in the 2017 Gujarat election, when urban votes saved the BJP's citadel while the Congress won most of the rural seats. The 2018 CSDS-Lokniti Mood of Nation Survey also found farmers dissatisfied with the Modi administration. This led both the BJP and INC to implement various strategies, such as mass contact campaigns by legislators or farm loan waivers, to win over their voters ahead of the 2019 general elections. This research paper provides insight into the support for farmers that we can anticipate from these two major political parties in the lead-up to the elections the following year. This paper looks into the connection between agricultural credit and elections to see how farmer distress can affect election outcomes. It demonstrates the significance of farmers' votes by mentioning that both the BJP and the INC have initiated a variety of mechanisms, such as legislative mass contact campaigns or farm loan waivers, to gain support from their constituents ahead of the 2019 general elections. The authors also point out that long-term factors like a lack of institutional credit and high debt levels make it hard for farmers to pay back loans and meet their daily domestic needs. These factors contribute to farmer distress. In an election year, these issues might be addressed by government policies. The variables in this study include farmer distress, the significance of farmer votes for both major political parties (BJP and INC), strategies employed to win over farmers, restricted access to institutional credit, and high debt levels among rural populations that contribute to their economic hardship.

The research's findings will add to the body of knowledge on agriculture credit, shed light on the efficiency of credit delivery mechanisms, and help policymakers make decisions that will help agriculture grow and develop.

## **OBJECTIVES**

- To examine the relationship between agriculture credit provided by TNSCB and agriculture production in Tamil Nadu, India.
- To study whether the resources allocated to agriculture credit by TNSCB are effectively and efficiently utilized to maximize the agriculture production.
- To understand how political interventions impact the allocation of credit of TNSCB in the agricultural sector.

## **III.METHODOLOGY**

The official website of the Tamil Nadu state cooperative bank and Statista provided the study's data. The Tamil Nadu state cooperative bank delivers a yearly report about the different exercises directed throughout the years including credits and advances. The trends and patterns in agricultural credit disbursement as well as its impact on agricultural production in Tamil Nadu can be better understood with the assistance of data on credit from the TNSC Bank. The paper can ascertain the efficacy of various government programs and policies aimed at encouraging agricultural growth and development by analyzing the data. In addition, the data aids in the identification of any difficulties or roadblocks in the credit delivery system and



serves as the basis for suggestions for enhancement. Overall, the goal is to use the data to support sustainable agricultural development in the region and make decisions about policies based on evidence. On the other hand, Statista is a web-based portal for statistics, market research, and business intelligence that offers a wide range of agricultural industry data. The purpose of utilizing Statista's data on agricultural production is to acquire trustworthy and comprehensive information regarding the patterns, dynamics, and trends of agricultural production in Tamil Nadu. Analyzing the relationship between agricultural credit and production and determining the factors that influence production can benefit from this data. Additionally, the data can be used to make educated decisions regarding investments, strategies, and agricultural policies.

**Table 1: Data review for the years 2003-2022**

<b>TYPE OF VARIABLE</b>	<b>VARIABLES</b>	<b>UNITS</b>	<b>SOURCE</b>
Dependent	Food grain production	Metric tonnes	Statista
Independent	Short term agricultural credit provided by TNSCB through DCCBs	Crores	TNSC Bank yearly report

Source: Author's compilation using secondary data.

The characteristics of the sample are summarized using descriptive statistics. A comparison is made between the averages of agricultural credit and foodgrain production during election years and non-election years. Information from 2003 to 2021 was remembered for the investigation. In order to examine how agricultural credit has changed over the past two decades, a trend line has been constructed. Reference charts have been introduced to show the distinction in the farming credit and foodgrain production given during the political race and non-political race years. The agricultural credit fluctuations have been identified using moving averages. Production of foodgrains is able to identify the change in both the sanctioned and allocated growth rates of agricultural credit over time. A table with the various policy measures that the government of Tamil Nadu implemented to the agricultural credit provided by state cooperative banks over a period of time has been constructed to examine the study better.

In order to safeguard the participants' privacy, the data are made available to the public and de-identified. For this study, no additional ethical approval was required.

### **DEFINITION OF TERMS USED IN THE STUDY**

The foodgrain production in Tamil Nadu since 2000, the short-term agricultural loans made by TNSCB through DCCBs since 2000, and the various fiscal measures implemented in Tamil Nadu during the Lok sabha and Rajya sabha election cycles are all shown in the master table that is included with this research paper.

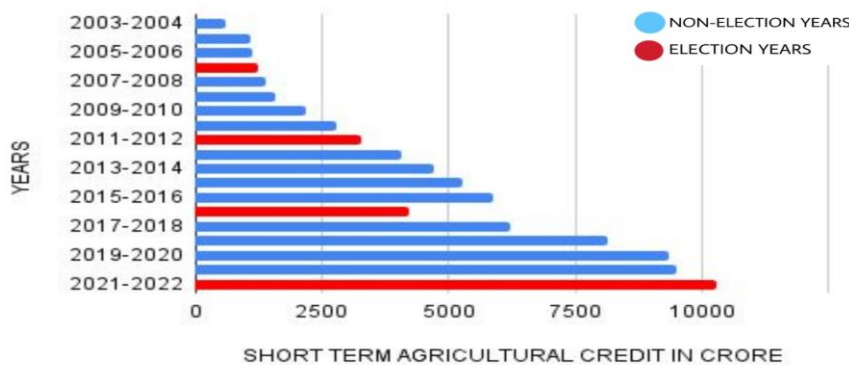
The total production of food grains has been chosen because it is essential to the state's economy and food security. The economy of Tamil Nadu, one of India's most important agricultural states, is heavily dependent on agriculture. In Tamil Nadu, foodgrain yields like rice, wheat, maize, and heartbeats are typically filled. Rice is the primary crop grown in the state, and Tamil Nadu is one of the largest rice-producing states in India. In Tamil Nadu, the

production of food grains plays a crucial role in meeting the population's food requirements. The state government has been implementing various plans and programs to promote agriculture and increase food production. The government has been focusing on a variety of strategies to increase agricultural productivity in recent years, including the construction of irrigation systems, the application of cutting-edge farming practices, and the cultivation of cultivars with high yields. Overall, the agricultural sector in Tamil Nadu relies heavily on the production of food grains, and the state's economic development and food security depend on its success.

Short-term credit can be a successful method for changing the credit structure for various reasons, which is the reason it has been thought of Cost-effectiveness, lower risk, quick turnaround, and flexibility The government can make short-term credit more accessible in order to encourage farmers to take out loans that are smaller and easier to manage. Borrowers' credit profiles can be improved, the overall level of debt can be reduced, and the credit structure can ultimately be improved.

#### IV.ANALYSIS

**FIGURE 1: Short term agricultural credit provided by TNSCB in election and non-election years**

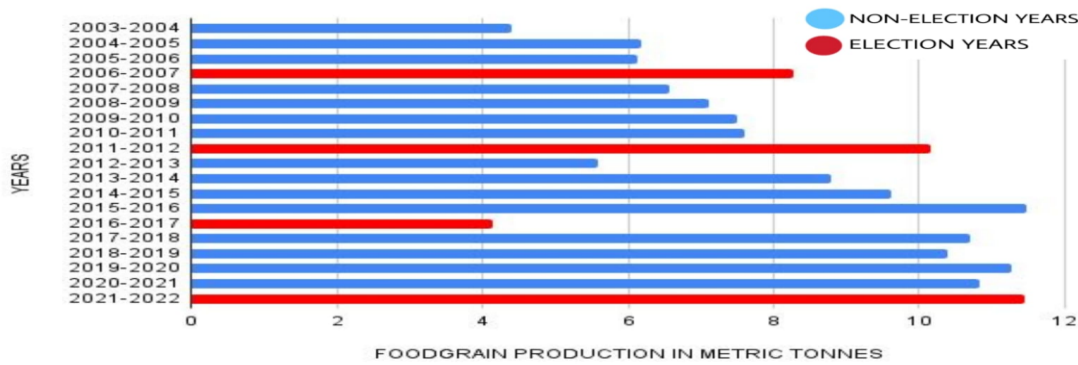


SOURCE: Computed from secondary data in TNSCB yearly report

The above chart shows the transient rural credit given by TNSCB during the political decision and non-political decision years where blue represents non-election years and red represents election years. This graph clearly demonstrates that the loan provided during non-election years has not changed significantly. However, it has been negative in 2016 to 2017—more on this later. Due to a variety of factors, the amount of loans provided reached an all-time high in 2021 and 2022. The state government's increased focus on the agricultural sector, which has resulted in an increase in the demand for agricultural credit, is one of the primary causes. A bumper crop and increased agricultural production have also been helped along by favorable weather and the prompt availability of inputs like seeds, fertilizers, and irrigation facilities.

In addition, the TNSCB has implemented a number of measures to facilitate farmers' access to credit, such as streamlining loan application procedures, expediting loan disbursements, and introducing new loan products tailored to farmers' particular requirements. The TNSCB's distribution of agricultural credit has reached an all-time high in 2021 and 2022 as a result of all of these factors.

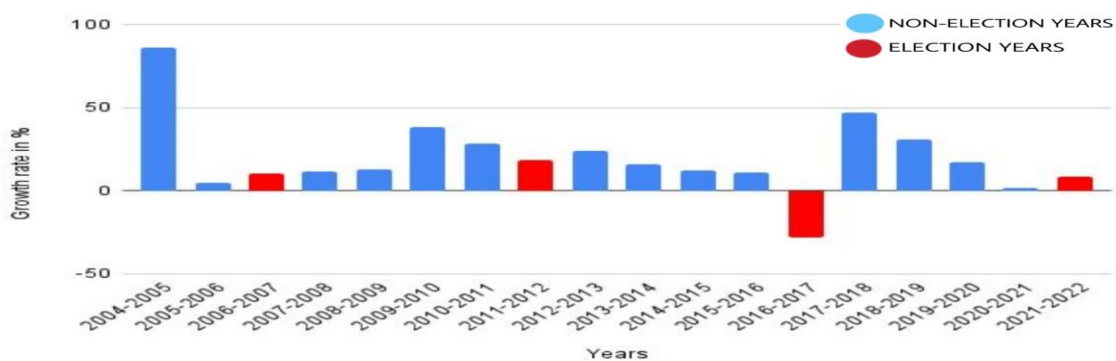
**FIGURE 2: Foodgrain production in Tamil Nadu in election and non-election years**



SOURCE: Computed from secondary data in STATISTA

The graph above demonstrates that food grain production in Tamil Nadu is significantly higher during election years than during non-election years where blue represents the non-election years and red represents the election years. In 2011-12 the food grain had an extreme contrast with its adjoining years. This could be because of a number of things, like favorable weather, a rise in the use of cutting-edge farming methods, a rise in the use of high-yielding seed varieties, improved irrigation facilities, and the prompt availability of agricultural credit and inputs. Also, it's possible that the state government put in place plans and policies that gave farmers incentives and help, which made more foodgrains produced. Even though 2016–17 was an election year, the graph above also shows that foodgrain production is relatively lower.

**FIGURE 3: Growth rate of short-term agricultural loan sanctioned by TNSCB**



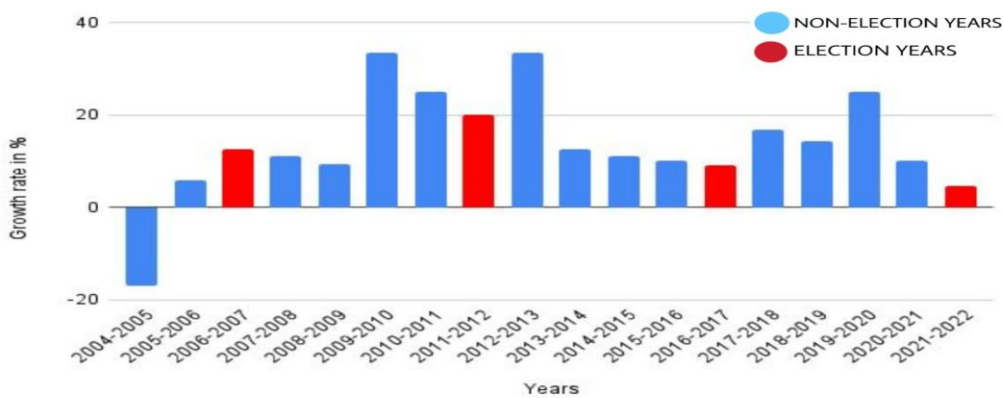
SOURCE: Computed from secondary data in TNSCB yearly report.

The growth rate of short-term agricultural loans granted by the government of Tamil Nadu through state cooperative banks in Tamil Nadu is depicted in the diagram above where blue represents the non-election years and red represents the election years. The graph portrays that the development of the horticultural credit in the political decision years is nearly less when contrasted with the non-political decision years. the 2016-17 shows a negative development in the rural credit by - 27.95%. This is a direct result of demonetization, The costs of a few harvests, like cotton and sugarcane, were low in 2016-17, which might have impacted the pay of ranchers. This could have decreased the demand for short-term agricultural credit, and the government could also have tightened credit standards or changed policy during this time,

which could have made short-term agricultural credit less available. This demonstrates that there has been no connection between election and non-election years and the agricultural credit. However, it is likewise clear that the quick one year from now after races has seen an expansion in the horticulture advance authorized.

Therefore, it is evident that the agriculture credit in Tamil Nadu has nothing to do with the elections because the agriculture credit in election years is significantly lower than in non-election years, even going negative in 2016-17.

**FIGURE 4: Growth rate of short term agricultural loan targeted by TNSCB**



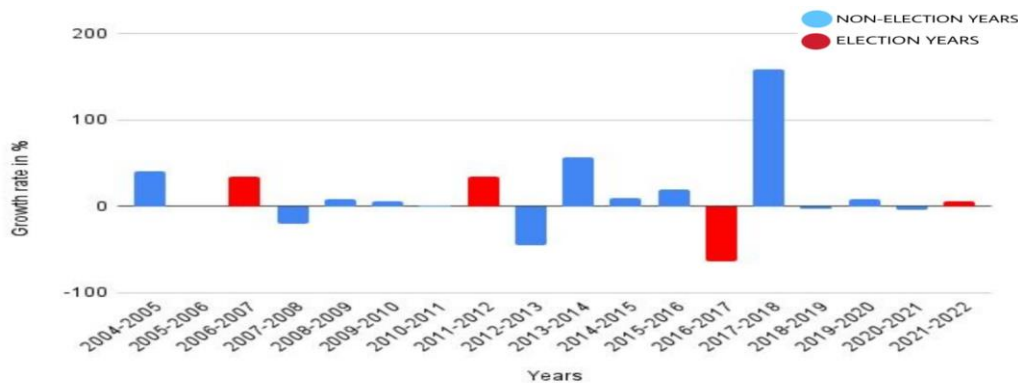
SOURCE: Computed from secondary data in TNSCB yearly report

The above graph shows the growth rate of credit targeted by TNSCB over the years where blue represents the non-election years and red represents the election years. When the government sets a credit amount target for the agricultural sector, it means that it wants to give farmers, agricultural cooperatives, and other agricultural sector participants a certain amount of money. These goals may be set by the government as part of its agricultural policy objectives, which may include reducing rural poverty, promoting agricultural growth, and increasing farm productivity.

The government's goal is to ensure that the agricultural sector has access to sufficient credit to meet its financing requirements, such as investing in infrastructure and other long-term projects and purchasing inputs like seeds, fertilizers, and equipment. Reaching credit goals can support the growth and development of the agriculture industry as well as the overall economic growth and development of rural areas.

The graph shows that the amount of agricultural credit that was targeted in 2011–12 was significantly lower. This could be due to a variety of factors, including economic conditions, government policies, weather, and so on. The graph also shows that the amount that was targeted was at its lowest point in 2021–22. This could be because of factors like lower crop yields, a shift to other income sources, a decrease in the number of farmers seeking credit, tighter credit policies, and other economic factors. Other possibilities include a decrease in demand for short-term agricultural credit. As a result, the agriculture credit that the government wants to target is relatively high in election years and even negative in non-election years like 2004-2005.

**FIGURE 5: Growth rate of Food grain production in Tamil Nadu**



SOURCE: COMPUTED FROM SECONDARY DATA IN STATISTA

The graph shows the growth rate of food grain production in Tamil Nadu over the years where blue represents the non-election years and red represents the election years. The graph indicates that agricultural production has decreased in 2007-2008. This could be because of pests like the fall armyworm and sugarcane woolly aphid that were reported in various parts of the state during the 2007-08 season, which may have affected crop yields. In addition, Tamil Nadu experienced rainfall that was lower than normal in the 2007-08 season, which may have resulted in a decline in agricultural production.

The graph also shows that agriculture production declined in 2012-2013 as a result of changes in weather patterns, such as droughts and irregular rainfall, which could have harmed agricultural production in the state. Pest and disease outbreaks can cause significant damage to crops and reduce yields.

Cyclone Vardah struck Tamil Nadu in December 2016, causing widespread damage to crops, particularly in the coastal areas. Outbreaks of pests and diseases can have a significant impact on crop yields. As a result, the growth in foodgrain production decreased significantly between 2016 and 2017 due to Tamil Nadu's severe drought in 2016 and 2017. In some areas of Tamil Nadu, pest attacks on crops like cotton and sugarcane were reported from 2016 to 2017; a reduction in cultivation area can result in a reduction in production. There have been reports that farmers in Tamil Nadu switched from food crops to cash crops like cotton and sugarcane between 2016 and 2017. This could have resulted in a decrease in foodgrain production. Other factors like the fertility of the soil, the availability of irrigation facilities, and the adoption of modern farming methods could also have contributed to the negative growth in foodgrain production between 2016 and 2017.

As a result, agricultural production is satisfactory in the majority of election years, with the exception of 2016–17, for which the reasons have already been discussed. Though in the greater part of the non-political decision years the farming creation.i.e., foodgrain creation has been less and furthermore has been negative in 2007-08 and 2012-13.

**Table 2: Policy measures taken by government of Tamil Nadu**

YEARS	POLICY MEASURES TAKEN BY GOVERNMENT OF TAMIL NADU
2003-2004	Conversion of short-term loans to medium term loans for loans issued from April 1, 2002 to September 30, 2002
2004-2005	Interest waiver for prompt payment within due date for crop loans taken from April 1, 2003 to March 31, 2004;Rescheduling of crop loans as on March 2004.
2005-2006	Implemented an agriculture loan waiver scheme to alleviate the financial burden on farmers. The government allocated Rs. 1,500 crores for the scheme, which benefited around 12 lakh farmers.
2006-2007	Waiver of principal and interest/penal interest on all agricultural loans taken by farmers from co-operative banks/ societies as on March 31, 2006
2007-2008	The government waived off 100% of the loans of small and marginal farmers who had taken loans up to Rs. 25,000. Farmers who had taken loans between Rs. 25,000 and Rs. 50,000 were provided with a 50% waiver. The government allocated Rs. 2,737 crores for the scheme, which benefited around 22 lakh farmers in the state.
2008-2009	The government waived off 100% of the loans of small and marginal farmers who had taken loans up to Rs. 25,000. Farmers who had taken loans between Rs. 25,000 and Rs. 50,000 were provided with a 50% waiver. The government allocated Rs. 2,030 crores for the scheme, which benefited around 19.6 lakh farmers in the state.
2009-2010	Full interest waiver for prompt payment of all crop loans
2010-2011	The government waived off 100% of the loans of small and marginal farmers who had taken loans up to Rs. 25,000. Farmers who had taken loans between Rs. 25,000 and Rs. 50,000 were provided with a 50% waiver.The government allocated Rs. 3,155 crores for the scheme, which benefited around 20 lakh farmers in the state.
2011-2012	The government waived off 100% of the loans of small and marginal farmers who had taken loans up to Rs. 25,000. Farmers who had taken loans between Rs. 25,000 and Rs. 50,000 were provided with a 50% waiver.The government allocated Rs. 5,780 crores for the scheme, which benefited around 20 lakh farmers in the state.
2012-2013	The government waived off all outstanding crop loans of small and marginal farmers with land holdings of up to 2.5 acres. Farmers who repaid their loans within the due date were provided with an interest subsidy of 1%.

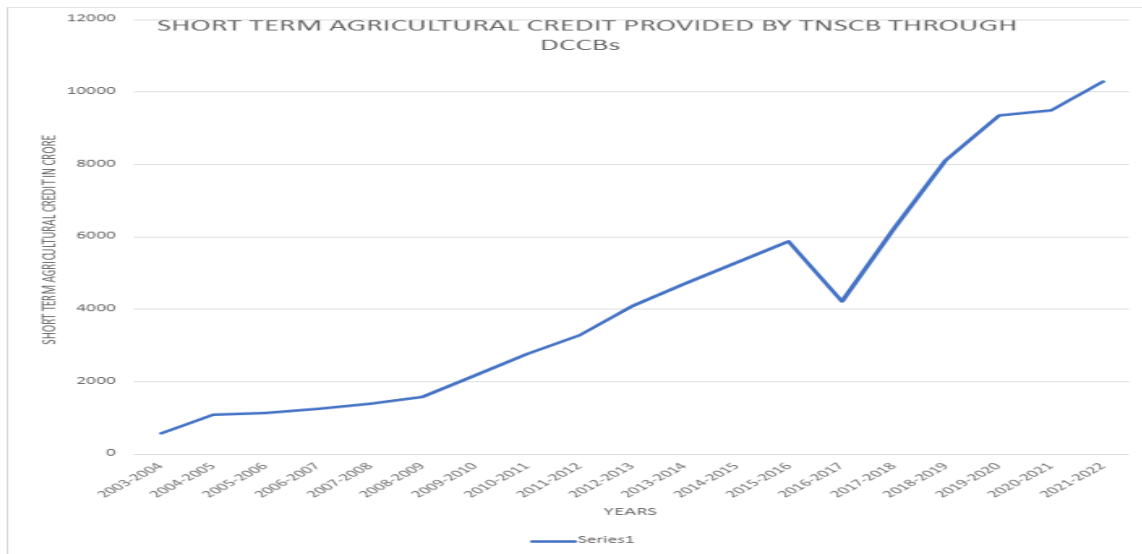


2013-2014	The government waived off all outstanding crop loans of small and marginal farmers with land holdings of up to 2.5 acres. Farmers who repaid their loans within the due date were provided with an interest subsidy of 1%.
2014-2015	The government waived off all outstanding crop loans of small and marginal farmers with land holdings of up to 2.5 acres. Farmers who repaid their loans within the due date were provided with an interest subsidy of 3%.
2015-2016	The government waived off all outstanding crop loans of small and marginal farmers with land holdings of up to 5 acres. Farmers who repaid their loans within the due date were provided with an interest subsidy of 3%.
2016-2017	Waiver of principal and interest/penal interest on all outstanding agricultural loans as on March 31, 2016 taken by marginal and small farmers from co-operative banks/societies
2017-2018	The government waived off all outstanding crop loans of farmers in cooperative banks. Farmers who repaid their loans within the due date were provided with an interest subsidy of 7%.
2018-2019	The government waived off 25% of the outstanding crop loans of all farmers in cooperative banks, up to a maximum of Rs. 25,000. Farmers who repaid their loans within the due date were provided with an interest subsidy of 7%.
2019-2020	The government waived off 25% of the outstanding crop loans of all farmers in cooperative banks, up to a maximum of Rs. 25,000.
2020-2021	waiver of <b>Rs 12110.74 crore crop</b> loans availed by 16,43347 farmers from cooperative banks.
2021-2022	Waiver of Rs.2531 for agricultural loans.

SOURCE: COMPILED BY THE AUTHOR USING SECONDARY DATA.

The various policy measures the government of Tamil Nadu has taken regarding agricultural credit since 2003 are displayed in the table above. Throughout the years, it has been obvious that the government of Tamil Nadu has implemented a variety of programs and policies to alleviate farmers' burdens in every way possible. There has been a great deal of interest deferred all through the years on agricultural credit. However, in election years, the amount allotted for such schemes and the amount of interest waived have been relatively high. For instance, the sum apportioned for the plan in 2010-11 is Rs. 3,155 crores, which are allocated for a non-election year and Rs. in 2011-12, an election year. Rs.5,780 crores. As a result, this demonstrates that there is a significant distinction between the two.

**FIGURE 6: TREND LINE OF SHORT-TERM CREDIT PROVIDED BY TNSCB THROUGH DCCBs**



SOURCE: Computed from secondary data in TNSCB yearly report.

The graph above depicts the TNSCB's short-term agricultural credit trend line since 2003. The Tamil Nadu government implemented a number of programs and policies to support farmers and encourage agricultural growth, which resulted in a slight increase in agricultural credit between 2004 and 2005. For instance, the government introduced the Chief Minister's Comprehensive Crop Insurance Scheme, which offered farmers crop insurance and shielded them from crop losses. Additionally, institutional credit became more readily available in Tamil Nadu during this time. Banks and cooperatives gave more credit to ranchers, which assisted them with putting resources into horticulture and work on their farming efficiency.

The diagram likewise shows that there has been a slight fall in the farming credit during 2008-09 due to The worldwide monetary stoppage in 2008-09 affected the Indian economy, including the rural area. In addition to the fact that Tamil Nadu experienced below-average rainfall during the monsoon season in 2008, which resulted in crop failures and decreased agricultural production, the slowdown had an effect on the availability of credit, causing a decrease in the disbursement of agricultural loans. The demand for agricultural credit decreased as a result.

Again the agriculture credit arrived at its top in 2015-16 in light of the fact that The Tamil Nadu government sent off a few plans and strategies to help ranchers and advance rural development during this period. The Crop Loan Waiver Scheme, for instance, was launched by the government to eliminate loans for marginal and small farmers. During this time, there was an increase in demand for agricultural products, which resulted in an increase in the price of agricultural produce. Additionally, this relieved farmers and encouraged them to invest in agriculture. This encouraged farmers to seek credit for their increased agricultural investments.

The Indian government's demonetization policy, which was implemented in November 2016, had a significant impact on the agricultural sector, resulting in a sharp decline in agricultural credit between 2016 and 2017. Ranchers were vigorously subject to cash exchanges for purchasing agrarian data sources, and demonetization upset the income, making it hard for



ranchers to reimburse their credits and furthermore on the grounds that Banks in Tamil Nadu were wrestling with the issue of rising non-performing resources (NPAs), especially in the farming area. They became more wary of lending to farmers as a result, which resulted in a decrease in agricultural loan disbursement.

Again, the COVID-19 pandemic, which had a significant impact on the agricultural sector, particularly during the initial phase of the pandemic-induced lockdown, is to blame for the decrease in agricultural loan disbursement in Tamil Nadu in 2020 and 21. Numerous ranchers confronted disturbances in the store network, bringing about diminished interest for horticultural credit and furthermore in light of the fact that The Tamil Nadu government reported a waiver plans for ranchers during this period. As a result, there was less demand for agricultural credit and less debt for farmers.

The government of Tamil Nadu has launched a number of programs to help farmers, including the interest subvention scheme, which offers farmers interest rate subsidies on agricultural loans. The graph again shows that agricultural credit will reach an all-time high in 2021 and 2022. Since Tamil Nadu had a good monsoon season in 2021, which resulted in good agricultural production, this may have increased demand for agricultural credit. The agricultural sector, like many other sectors, was hard hit by the COVID-19 pandemic. This may have increased demand for agricultural credit to finance the increased production. The industry, on the other hand, has shown signs of recovery with the gradual lifting of lockdowns and the resumption of economic activities. The government and banks may have conducted awareness campaigns to encourage farmers to utilize the available credit facilities, which may have resulted in an increase in demand for agricultural credit. There may have been a rise in demand for agricultural credit as a result of this.

**Table 3: Regression table**

INDEPENDENT VARIABLE	MODEL R <sup>2</sup> = 0.582873 F= (23.754925616909)**
Agricultural credit	0.000588 (0.000143)** S.E.= 0.000121

Source: Computed from secondary data

\*\*\* significant at a 1 percent level of significance.

\*\* significant at a 5 percent level of significance.

\* Significant at a 10 percent level of significance.

The following section does a regression analysis of the variables included from the years 2003 to 2022, where the data will be analyzed and interpreted. The results of the same have been presented below.

## **Model**

The dependent variable considered in this model is agriculture production of foodgrains which is measured in metric tons and the independent variable considered is short-term agriculture credit provided by TNSCB through DCCBs which is measured in crore.

## **Regression Model**

Agriculture production =  $\alpha + \beta_1(X_1)$  (Agricultural credit)

$$Y = \alpha + 0.000588 (X_1)$$

Each individual coefficient is interpreted as the average increase in the dependent variable for each unit increase in a given independent variable, assuming that all other independent variables are held constant. As agricultural credit increases by 1 then the value of production of foodgrains is 0.000588.

From the regression output we can interpret the  $R^2$  value, gives the explanatory power of the model, which is also the summary measure of the model. In this case,  $R^2$  is equal to 0.582873 which means there is a 58 percent of explained variation, in other words, the production of foodgrains is explained by 58 percent changes in the agricultural credit.

To determine the significance of the model we have to interpret the F value of the model, and in this case, F is 23.7549. The model is statistically significant at 5% since the calculated value(23.7549) is greater than the table value(8.29) and hence we can reject the null hypothesis.

The standard error of the regression is the average distance that the observed values fall from the regression line. The standard error for the independent variable considered is 0.000121. To check whether the dependent variable (foodgrain production) has a significant impact on the agriculture credit, we have to check the P value. The P value is 0.000143. Since the P value is less than 1, it is significant at 1, 5, or 10% levels of significance.

A line's slope is a way to tell how steep it is. The change rate of the line as it moves along the horizontal axis is referred to as this rate. The ratio of the change in the vertical direction (y-coordinate) to the change in the horizontal direction (x-coordinate) is the definition of the slope. For this situation, the slant demonstrates the rate at which agriculture production changes as for changes in agricultural credit. As a result, the slope has the potential to provide insights into the efficiency with which agriculture credit supports and encourages agricultural production. For this situation the slant is 991.9401106 which demonstrates that as agricultural credit expands, the amount of agriculture production also increases.

When the independent variable (x) is zero, the value on the y-axis where the regression line intersects the axis is referred to as the intercept in the context of linear regression.

With regards to agriculture credit and agriculture production, the block addresses the anticipated worth of agriculture production when the agriculture credit is zero. In any case, in actuality, agriculture production can't be zero regardless of whether agriculture credit isn't accessible. As a result, the focus may be on the slope of the regression line, which represents the relationship between the two variables, rather than the intercept, which in this instance is -3894.25831.

**Table 4: Moving averages of short-term agricultural credit sanctioned by TNSCB through DCCBs in crore.**

<b>YEARS</b>	<b>Short Term Agricultural Credit Sanctioned By TNSCB Through DCCBs In Crore</b>	<b>Moving Averages Of Short-Term Agricultural Credit Sanctioned By TNSCB Through DCCBs In Crore</b>			
2003-2004	581.27				
2004-2005	1080.58				
2005-2006	1132.18	1087.724			
2006-2007	1250.62	1285.668			
2007-2008	1393.97	1503.448	1589.648		
2008-2009	1570.99	1832.72	1926.858		
2009-2010	2169.48	2238.68	2350.286	2427.5936	
2010-2011	2778.54	2773.774	2854.5752	2896.73136	
2011-2012	3280.42	3402.808	3416.6008	3397.9772	3416.299456
2012-2013	4069.44	4024.894	3935.3368	3916.21832	3924.991552
2013-2014	4716.16	4642.848	4433.0872	4442.9768	4455.654416
2014-2015	5279.91	4832.36	4941.4916	4971.05408	
2015-2016	5868.31	5262.526	5488.3676	5550.04568	
2016-2017	4227.98	5944.83	6056.9872		
2017-2018	6220.27	6759.274	6830.2948		
2018-2019	8127.68	7485.946			
2019-2020	9352.13	8698.898			
2020-2021	9501.67				
2021-2022	10292.74				

SOURCE: Compiled by the author using secondary data in TNSCB yearly report.

The above table shows that the 5-yearly moving averages of agricultural credit provided since 2003. By selecting a 5-year moving average, one can get a better idea of long-term trends and smooth out short-term fluctuations in the data. It may be less prone to random fluctuations and useful for identifying data patterns or trends over time. It is possible to observe changes in the data over a longer period of time and gain a deeper comprehension of the overall trend by employing a moving average. Moreover, utilizing a 5-year moving normal can assist with lessening the effect of occasional or recurrent examples in the information.

The agricultural credit trend over time is better depicted by the agricultural credit moving average over five years. A moving average is calculated by taking the average of a group of values over a predetermined time period, moving the time period forward by one year, and then recalculating the average. Deciphering the 5-year moving average of agricultural credit includes checking out at the pattern of the qualities over the long run. The fact that the moving average is going up tells us that agricultural credit is trending in the right direction overall and that the amount of credit given to the agricultural sector is going up over time. The TNSCB's agricultural credit has increased over time, as evidenced by a rising trend in moving averages. This indicates that there has been a gradual increase in the availability of credit to farmers, which can help them invest in better seeds, fertilizers, and equipment, resulting in increased productivity and income. This can be interpreted as a positive sign for the agriculture sector. It could also be a sign of the state government's efforts to prioritize agriculture sector development. To get a full picture, it's important to look at other things like how well credit delivery mechanisms work and how credit affects overall agricultural productivity and income levels.

Overall, the 5-year moving average of agricultural credit has been helpful in identifying patterns and shifts in the trend of credit given to the agricultural sector over time.

## **SUMMARY FINDINGS**

- The above examination shows that the decisions for elections have not impacted the agriculture credit and have been in a consistent pattern aside from 2016-17.
- The preceding analysis demonstrates that, with the exception of the years 2016–17, when the state was confronted with a lot of drought, pests, and diseases, agriculture's production of foodgrains increased significantly during election years despite having no more significant changes in agriculture credit.
- With the exception of 2016–17, which was an election year, the TNSCB has also approved positive growth rates for agriculture loans. This demonstrates that the TNSCB's approval of agricultural credit has nothing to do with elections.
- In each election year, the TNSCB has seen a positive growth rate in the agriculture loans it targets. It was only negative in the non-election year of 2004-05 between 2003 and 2022.
- The majority of election years, with the exception of 2016–17, have seen positive growth rates in the agricultural production of food grains. However, it has never come close to matching the production level of the non-election year of 2017-18. As a result, this demonstrates that there is no significant connection between elections and agricultural production.
- The moving averages of short term agricultural credit indicates the increasing trend in the agricultural credit provided by TNSCB.
- The analysis shows that there has been a ton of credit waivers gave during the election years. This demonstrates that, rather than increasing agricultural credit during the election years, the government focused on waiving loans and implementing numerous schemes. However, it is also evident that loan waivers have occurred even in non-election years; the amount, however, is higher in election years.
- Finally, it has become abundantly clear that the farmers' use of the TNSC Bank's short-term credit has not maximized the agricultural productivity of food grains.

## **SUGGESTIONS**

There are a number of options to think about. The initial step is to survey the TNSC credit program to distinguish the potential elements adding to the absence of effect. The terms and conditions of the loans, as well as the sufficiency of the credit support services provided to farmers, should all be taken into account in this evaluation. Due to limited outreach or insufficient collateral, farmers may not have access to credit. Expanding outreach and easing collateral requirements or implementing alternative financing models like group lending, contract farming, or leasing could be used to improve credit access. Technical assistance may also be required by farmers in order to improve their farming abilities and knowledge, implement cutting-edge farming practices, and maximize resource utilization. Extension services, agribusiness support organizations, and training programs all provide technical assistance. Crop diversification could assist in lowering the likelihood of crop failure and increasing agricultural production. Farmers' incomes and productivity could rise by encouraging them to grow various crops, including high-value crops. Farmers can benefit from market connections, technical assistance, and credit access provided by FPOs. FPOs' bargaining power can be strengthened, resulting in better prices for their produce.

The issue of low agricultural productivity necessitates a comprehensive strategy that takes into account the institutional, socioeconomic, and technical factors that influence agricultural production.

## **V.CONCLUSION**

The study demonstrates that the agricultural productivity of food grains has not been significantly affected by the availability of agricultural loans from TNSCB, despite the widespread belief that agriculture credit has a significant impact on agricultural production. The absence of a proper correlation between the two has been demonstrated.

Therefore, in order to make a significant difference in the agricultural production of food grains, the study recommends bringing about a growth in agricultural credit that is more inclusive rather than simply removing credit. The study has made it abundantly clear that election has no effect on Tamil Nadu's food grain production or the agriculture credit provided by TNSCB.

The study also opens the door to additional research into the various other uses of the agriculture credit provided by TNSCB to better understand the weak connection between agriculture production and agriculture credit.

## **RESEARCH QUESTION**

The question of "What is the impact of short-term and long-term credit provided by TNSCB on agricultural production in Tamil Nadu?" could be posed as an additional research question given that this paper has extensively examined the short-term finances provided by TNSCB.

## **REFERENCES**

Anwarul Hoda and Purna Terway (June 2015) Credit Policy for Agriculture in India - An Evaluation,  
Indian council for research on international economic relations.

Sivasankar V (December, 20220) Agricultural production in tamil nadu, Journal of critical reviews, ISSN- 2394-5125 vol 7.

Deepa S. Raj and Edwin Prabu A.(2018), Agricultural Loan Waiver: A Case Study of Tamil Nadu's Scheme, Reserve Bank of India Occasional Papers Vol. 39, No. 1&2.

L.Krishnan and Dr.R.Ravikumar (September, 2021), Growth and Pattern of Farm Loans in Tamil Nadu with Reference to Tamil Nadu Grama Bank, Journal of Xi'an University of Architecture & Technology, ISSN No : 1006-7930.

Aadil Ummar Zaman , Mohammad Shahid Zaman , Nisar Ahmad Khan (2022), Analysing the Technical Efficiency of Rural Cooperative Banks in India, Asian Economics Letters, Vol. 3, Issue 4.

Mohammed Nabeel K and Sumathy Mohan (April,2022), Augmenting Financial Inclusion: The topic of discussion in "Role of Cooperative Banks in India, THE JOURNAL FOR GOVERNANCE PROFESSIONALS, VOL 52.

K. Murugan (July,2020), Agricultural Credit and Banking Sector in Tamil Nadu, Indian Journal of Applied Economics and Business, Vol. 2, No. 2, 2020, pp. 157-176.

Dr.P.Kalai Selvi (January, 2020), A study on the working performance of the Tamil Nadu state apex co-operative bank ltd (TNSCB), Journal of Interdisciplinary Cycle Research, Volume XII, Issue I, January/ 2020, ISSN NO: 0022-1945.

Diego Maiorano and Vani Swarupa Murali (January, 2019), The Indian Elections and the Rural Sector, ISAS Insights, No. 533 – 19.

Joshua D. Merfeld (September, 2020), Smallholders, Market Failures, and Agricultural Production: Evidence from India, IZA Institute of labour economics, IZA DP No. 13682.

M. Umanath , R. Paramasivam, V. Kavitha and T. Thangadurai (November, 2018), Determinants of Demand for Formal Agricultural Credit in Rural India, Asian Journal of Agricultural Extension, Economics & Sociology 28(1): 1-7, 2018; Article no.AJAEES.32150, ISSN: 2320-7027.

Shawn Cole (April, 2007), Fixing Market Failures or Fixing Elections? Agricultural Credit in India.



## **A DESCRIPTIVE STUDY ON KNOWLEDGE MANAGEMENT AMONG EMPLOYEES IN INFORMATION TECHNOLOGY SECTORS**

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### **Abstract:**

*Knowledge and knowledge management are multifarious and multi-faceted concepts. The escalation of knowledge management practices in India has been limited mainly in the service industries like information technology, consultancy, and communication industries where innovation and redesigning of business processes are frequently practiced to gain competitive advantage. Client contentment, retaining vital talents, developing new modes of services are some major reasons of launching knowledge management programme. This study examined the Knowledge Management Ie,Common Knowledge, Knowledge on IT and Knowledge on Organization of the IT employees. The level of Knowledge Management in IT Industries was found to be moderate.*

**Keywords:** *Information technology, Knowledge management.*

### **I. INTRODUCTION**

The ability to manage knowledge is crucial in today's knowledge economy. The creation and diffusion of knowledge have become increasingly important factors in competitiveness. More and more, knowledge is being thought of as a valuable commodity that is embedded in products (especially high-technology products) and embedded in the tacit knowledge of highly mobile employees. While knowledge is increasingly being viewed as a commodity or intellectual asset, there are radically different from other variable commodities.

The advent of the internet, the worldwide web, has made unlimited sources of knowledge available to us all. In order to be successful in today's challenging organizational environment, companies need to learn from their past errors and not reinvent the wheel. Organizational knowledge is not intended to replace individual knowledge but to complement it by making it a deliberate and systematic approach to ensure the full utilization of the organization's knowledge base, coupled with the potential of individuals skills, competencies, thoughts, innovations, and ideas to create a more efficient and effective organization.

### **THE ROLE OF INFORMATION TECHNOLOGY:**

Information technologies such as the World Wide Web and Lotus Notes offer a potentially useful environment within which to build a multimedia repository for rich, explicit knowledge. Effective use of information technology to communicate knowledge requires an organization to share an interpretive context.

The more that communicators share similar knowledge, background, and experience, the more effectively knowledge can be communicated via electronically mediated channels. At one extreme, the dissemination of explicit, factual knowledge within a stable community having a high degree of shared contextual knowledge can be accomplished through access to a central electronic repository.

However, when interpretive context is moderately shared, or the knowledge exchanged is less explicit, or the community is loosely affiliated, then more interactive modes such as electronic mail or discussion databases are appropriate. When context is not well shared and knowledge is primarily tacit, communication and narrated experience is best supported with the richest and most interactive modes such as video conferencing or face-to-face conversation.

#### **WHY KNOWLEDGE MANAGEMENT IS IMPORTANT IN CURRENT SCENARIO:**

The major business driver behind today's increased interest and application of KM lie in four key areas:

- ❖ **Globalization of business: Organization** today are more global-multisite, multi-lingual, and multicultural in nature.
- ❖ **Leaner Organizations:** We are doing more and we are doing it faster, but we also need to work smarter as knowledge workers-increased pace and workload.
- ❖ **Corporate Amnesia:** We are more mobile as a workforce, who creates problems of knowledge continuity for the organization, and places continuous learning demands on the knowledge worker-we no longer expect to work for the same organization for our entire career.
- ❖ **Technological Advances :** We are more connected-information technology advances made connectivity not only ubiquitous but has radically changed expectations: we are expected to be on at all times and the turnaround time in responding is now measured in minutes, not weeks.

#### **Objectives of the study**

- To identify the socio-demographic background of the respondents.
- To study the level of knowledge management in IT Professionals
- To Assess the level of knowledge on information technology and utilized the knowledge on organization.

## **II. REVIEW OF LITERATURE**

Becerra Fernandez and Sabherwal (2001) investigated the link between knowledge processes and an outcome of knowledge management, specifically knowledge management satisfaction among users. Their research suggests that task characteristics moderate the relationship between these two variables, with task orientation comprising internalization, externalization, combination, or socialization. Their research finds either focused or broad knowledge content task-orientation positively moderates the relationship between knowledge processes and knowledge management satisfaction.

**Koskinen (2001)** examined the tacit knowledge as a promoter of success in technology firms by studying ten small technology firms. Key to the success of a knowledge management system was the ability to identify, capture, and transfer critical tacit knowledge. A significant finding was that new members take a long time to learn critical tacit knowledge and a good knowledge management system facilitates the transference of this tacit knowledge to new members.

**Tanriverdi (2005)** conducted a study and found that IT relatedness of business units enhances the cross-unit knowledge management capability of the firm, which then has a direct impact on corporate performance. Tanriverdi's model theorizes that knowledge management capability creates and exploits cross-unit synergies from the product, customer, and managerial knowledge resources of the firm. These synergies increase the financial performance of the



firm. IT relatedness also indirectly influences corporate performance through the mediation of knowledge management capability.

**Okujava and Remus (2007)** in their research determined six risk factors as the most important issues which could affect the success of knowledge management system

**Al Taher (2008)** in his study “innovation and knowledge transfer in Jordan pharmaceutical industry” tried to develop and test a model of the determinants of knowledge transfer and innovation in Jordanian pharmaceutical industry. The study had shown significant relationships between knowledge transfer and innovation. Also, there is a positive relationship between reflection and knowledge transfer, there is a positive retaliation between dialogue and knowledge transfer and there is a positive relationship between double loop learning and knowledge transfer.

**Asiyeh Nasiripour (2012)** analyzed the effects of employee’s knowledge management on organizational intelligence in banking industry and found a significant relationship between knowledge management deployment with alignment and congruence and performance pressure at 1% error level. Results revealed that knowledge management deployment may develop (optimum implementation of information system and tools), (consonant goals between business units), (clear perception of employees from their responsibilities) and (justice feeling in organization).

**Colin Ting Si Xue (2017)** conducted a literature review on knowledge Management in Organizations. The methods used for completing the study were collecting data from published journals, conference papers and books. The result shows that knowledge management is the main key for the organizations to stay competitive. Further, it was found that the knowledge management also creates innovation and ideas that are unique from others.

### **III. RESEARCH METHODOLOGY**

#### **Research Design:**

The research design adopted for this study is descriptive research design. It is a fact-finding investigation with adequate interpretation. It is the simple type of research. It is more specific, it has focus on particular aspects or dimensions of the problem studied. It is designed to gather descriptive information and provides information for formulating more sophisticated studies. The main characteristic of this method is that the researcher has no control of variables researcher can report only what has happened or what is happening. Here the researcher describes the nature of knowledge management.

#### **Sampling Design:**

A sampling design is a definite plan for obtaining a sample. Here researcher has used snow ball sampling method for collecting data. The sample size of the study is 223. The researcher used Snowball Sampling method (or chain sampling, chain referral sampling, referral sampling) which is a non-probability sampling technique of building up a list or a sample of a special population by using an initial set of its members as informants.

#### **Hypothesis:**

- H1: There is an association between the Gender and Knowledge Management
- H2: There is an association between the Age and Knowledge Management
- H3: There is an association between the Designation and Knowledge Management
- H4: There is an association between the Experience and Knowledge Management
- H5: There is an association between the Educational Qualification and Knowledge Management

**Tools of data collection:**

The tool used for data collection is structured questionnaire. The questionnaire consists of two parts. Part A consists of socio demographic profile and part B consists of statements relating to knowledge management. The employee has to give opinion by rating their organization on each 8 point scale.

**IV. DATA ANALYSIS & INTERPRETATION**

The researcher analyzed the data by coding the collected data. The simple percentage analysis, chi-square test and one way ANOVA was used for the analysis.

**CHI Square Test**

**A) Association between gender and knowledge management::**

**Null hypothesis (H0):** There is no association between Gender and Knowledge Management

**Researcher hypothesis (H1):** There is an association between Gender and Knowledge Management.

The Chi-Square is tested at 5 percent level of significance. It is noted from the above table that p value is greater than the level of significance (0.05). Hence, the null hypothesis is accepted. So there is no degree of dependence between the two variables (i.e.) Knowledge management is not associated to Gender.

**B) Association between age and knowledge management:**

**Null hypothesis (H0):** There is no association between Age and Knowledge Management

**Researcher hypothesis (H1):** There is an association between Age and Knowledge Management.

The Chi-Square is tested at 5 percent level of significance. It is noted from the above table that p value is less than the level of significance (0.05). Hence, the researcher hypothesis is accepted. So there is a degree of dependence between the two variables (i.e.) Knowledge management is associated to Age.

**C) Association between designation and knowledge management:**

**Null hypothesis (H0):** There is no association between Designation and Knowledge Management

**Researcher hypothesis (H1):** There is an association between Designation and Knowledge Management

The Chi-Square is tested at 5 percent level of significance. It is noted from the above table that p value is less than the level of significance (0.05). Hence, the researcher hypothesis is accepted. So there is a degree of dependence between the two variables (i.e.) Knowledge management is associated to Designation.

**D) Association between experience and knowledge management:**

**Null hypothesis (H0):** There is no association between Experience and Knowledge Management

**Researcher hypothesis (H1):** There is an association between Experience and Knowledge Management.

The Chi-Square is tested at 5 percent level of significance. It is noted from the above table that p value is greater than the level of significance (0.05). Hence, the null hypothesis is accepted. So there is no degree of dependence between the two variables (i.e.) Knowledge management is not associated to Experience.

**MAJOR FINDINGS:**

- Majority of the respondents (53.8%) were Male

- Most of the respondents (65.9%) are between the age group of 26-30.
- Majority of the respondents (35.9%) are Executives
- Most of the respondents (31.4%) are working in HR department.
- Majority of the respondents (85.2%) are having 3 to 6 years of experience.
- Majority of the respondents (50.2%) completed their PG in Arts.
- Majority of the respondents (62.3%) is getting salary of 3 lakhs to 6 lakhs.
- Most of the respondents (51.1%) are married.
- Majority of the respondents (80.7%) are from TamilNadu.
- Majority of the respondents (30.5%) are working in CTS Company.

#### **SUGGESTIONS DERIVED FROM FINDINGS:**

- The IT companies can use proper knowledge management technique while hiring the employees
- To improve the knowledge management of the executives, the management can use some motivational techniques
- To enhance the knowledge management of the employees, the IT companies can provide training and support.
- The IT companies can take steps to update the knowledge of the employees from external sources like news, current issues. Seminars, conferences, business magazines.
- The IT organizations can find a few possible means to develop and manage the knowledge of employees on IT tools.
- Rewarding at right time and giving chances to implement the innovative practices can enhance the level of knowledge management among IT professionals

#### **V.CONCLUSION**

It is the constant challenge to identify, rescue, create, access, develop, preserve, disseminate, promote, use and reuse knowledge in order to answer to our audiences delivering an excellent service. The study examined the Knowledge Management ie, Commons Knowledge, Knowledge on IT and Knowledge on Organization of the IT employees. The level of Knowledge Management in IT Industries was found to be moderate. So, the IT Industries can implement certain motivational techniques and training to improve the knowledge management of the IT employees.

#### **REFERENCES**

- [1] AL- Taher, A. (2008). *Innovation and Knowledge Transfer in Jordan Pharmaceutical Industry, The Arab Academy 11 IBIMA Business Review for Banking and Financial Sciences Faculty of Information Systems and Technology.*
- [2] Barton-Leonard, D. 1995. *Wellsprings of knowledge-Building and sustaining sources of innovation. Boston, MS: Harvard Business School Press.*
- [3] Becerra-Fernandez, I. (2001). "Organizational Knowledge Management: A Contingency Perspective." 18(1): 23-55.
- [4] Blumentitt.R and Johnston.R (1999) :*Towards a strategy for knowledge Management “, Technology Analysis and strategic Mangement, 11 : 287 – 300.*
- [5] Cross, R. and Baird, L. (2000), *Technology Is Not Enough: Improving Performance by Building Organizational Memory. Sloan Management Review, 41(3), 41-54.*
- [6] Davenport, T. H., DeLong, D. W & Beers, M.C. (1998), *Successful knowledge management projects, Sloan Management Review, 39(2), 43-57.*

- [7] Davenport TH and Prusak L (1998) *Working Knowledge: How Organizations Manage What They Know*. Harvard Business School Press, Cambridge, MA.
- [8] Gold, A. H. (2001). "Knowledge Management: An Organizational Capabilities Perspective." 18(1): 185-214.
- [9] Koskinen, K.U. (2001), *Tacit Knowledge as a Promoter of Success in Technology Firms*, 34th Hawaii International Conference on System Sciences, IEEE Computer Society.
- [10] Kraft, I., & Donoso, R.(2012). *Defining Effective Knowledge Management to Empower Citizens and Members of Parliament*. Paper presented at the IFLA World Library and Information Congress, Helsinki, Finland.

## **A STUDY ON SUSTAINABLE HUMAN RESOURCE PRACTICES IN AN AUTOMOBILE MANUFACTURING COMPANY AT CHENNAI**

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### **ABSTRACT**

*In light of increasing global awareness of environmental sustainability and corporate social responsibility, organizations are under mounting pressure to integrate sustainable practices into their operations, including HR functions. This study endeavors to dissect the nuanced interplay between sustainable HR practices and organizational dynamics within Automobile Manufacturing Company at Chennai, aiming to unravel their multifaceted impacts on employee well-being, organizational performance, and environmental sustainability. Employing a comprehensive mixed-methods research approach encompassing qualitative interviews, quantitative surveys, and document analysis, the study meticulously evaluates various dimensions of the company's HR practices. This includes an in-depth exploration of recruitment strategies, employee training and development initiatives, diversity and inclusion policies, as well as mechanisms for fostering employee engagement and satisfaction. The report not only clarifies the specific sustainable HR initiatives undertaken by Automobile Manufacturing Company at Chennai but also clarify their broader implications for organizational sustainability and competitiveness in the contemporary business landscape. Moreover, the findings of this study hold significant implications for other organizations aspiring to emulate similar sustainable HR practices, offering actionable insights and recommendations for enhancing HR sustainability across diverse industry sectors.*

### **Key Words**

*Automobile Manufacturing , Competitiveness, Human resource , Sustainable HR Practices*

## **I INTRODUCTION**

In the ever-evolving business landscape, sustainability has become a key priority for organizations across the globe. Companies are moving beyond traditional profitability metrics and increasingly acknowledging the significance of incorporating environmental, social, and governance (ESG) principles into their operations. Within this paradigm, Human Resources (HR) departments play a pivotal role in driving sustainable practices, ensuring the well-being of employees, fostering diversity and inclusion, and contributing to broader societal and environmental objectives.

Automobile Manufacturing Company at Chennai is a leading automotive supplier, specializing in the design, manufacture, and distribution of automotive mirrors and vision systems. In the context of sustainable HR practices are instrumental in achieving the company's overarching objectives of growth, competitiveness, and responsible corporate citizenship. By prioritizing sustainability in HR initiatives, the company seeks to enhance employee engagement, attract top talent, mitigate operational risks, and contribute positively to the environment and society. As an automotive manufacturer, at Chennai acknowledges its responsibility to minimize its

environmental footprint and promote sustainable practices across its operations. In collaboration with other departments, the HR team spearheads initiatives to reduce energy consumption, waste generation, and greenhouse gas emissions.

### **STATEMENT OF THE PROBLEM:**

The automobile industry struggles to integrate sustainable HR practices amidst mounting pressure to mitigate environmental impact, enhance social responsibility, and ensure operational efficiency. Key challenges include minimizing carbon emissions while retaining skilled labor, navigating evolving regulatory landscapes, fostering sustainability across the supply chain, engaging employees in green initiatives, and preparing the workforce for technological advancements. Addressing these issues demands a strategic overhaul of HR policies and practices to embed sustainability principles into organizational culture, enhance compliance, and drive long-term competitiveness in the rapidly evolving automotive landscape.

### **OBJECTIVES OF THE STUDY**

- To examine relation and effect of sustainable HR practices with organization effectiveness.
- To understand the quality circle is beneficial for solving the employee problems.
- To examine the effectiveness of onboarding programs and benefits administration in enhancing employee satisfaction and retention.
- To enhance employee health, safety, and welfare by adhering to standard policies and providing improved facilities.
- Evaluate the effectiveness of recruitment strategies in attracting and selecting qualified candidates.

## **II REVIEW OF LITERATURE**

**Robin Kramar (2013)** Over the past 30 years, strategic human resource management (SHRM) has become a leading approach to HRM policy. However, in the last decade, a new paradigm has emerged, referred to as sustainable human resource management (sustainable HRM). This approach aims to integrate HRM with sustainability, though the concept of sustainability itself is complex and often subject to varying interpretations, making its connection to HRM challenging to define. As a result, sustainable HRM is understood in multiple ways. This paper explores the key features of SHRM, different interpretations of sustainability, and how sustainability relates to HRM. It then delves into the defining characteristics of sustainable HRM, which distinguish it from SHRM. Unlike SHRM, sustainable HRM emphasizes broader organizational outcomes beyond just financial results, with a particular focus on human and social outcomes. Moreover, it acknowledges both the positive and negative impacts of HRM practices on various stakeholders and gives greater attention to the processes involved in HRM implementation. Additionally, sustainable HRM recognizes the tensions between competing organizational demands and takes a moral stance on the desired short- and long-term outcomes of organizational practices. Sustainable HRM can be understood through several complementary frameworks.

**Arulrajah, et al.(2015)** This review aims to investigate green human resource management (GHRM) practices in organizations, drawing insights from existing literature. In this emerging domain, it is



evident that the current body of research needs further expansion, particularly from the perspective of various human resource management (HRM) functions. Previous studies have predominantly focused on a limited set of HRM functions—such as recruitment, training and development, performance evaluation, and reward management—in their integration with environmental management. However, HRM offers broader potential to enhance an organization's environmental performance. To address this gap, this review examines diverse HRM functions to identify and explore GHRM practices within these areas. The findings highlight several GHRM practices across 12 HRM functions: job design, job analysis, human resource planning, recruitment, selection, induction, performance evaluation, training and development, reward management, discipline management, health and safety management, and employee relations. By broadening the scope of GHRM, this paper contributes to advancing the understanding of its role in fostering sustainable environmental performance in organizations.

**Shoeb Ahmad, (2015)** In recent times, there has been a growing awareness among business communities regarding the importance of adopting sustainable practices and environmental management techniques. As the global business landscape evolves, companies are transitioning from traditional financial models to a modern, capacity-driven economy that embraces green business strategies. Today, Green Human Resource Management (GHRM) has become a crucial component of organizational strategy, with HR departments playing an active role in promoting sustainability within the workplace. This paper primarily examines various Green Human Resource Practices implemented by organizations worldwide and provides a simplified explanation of GHRM. It also contributes to the existing literature by exploring the future direction of certain GHRM functions and offering recommendations for impactful HR initiatives in green organizations.

**Ahmed A. Zaid, et al, (2018)** This study aims to explore the relationship between green human resource management (GHRM) practices and green supply chain management (GSCM) practices—both external and internal—and their impact on the Triple Bottom Line (TBL) of sustainability performance, which includes environmental, social, and economic performance. A quantitative approach was used, collecting data through a customized survey from 121 firms operating in the most polluting manufacturing sectors in Palestine (food, chemical, and pharmaceutical industries). The data was analyzed using partial least squares structural equation modeling (PLS-SEM). The findings indicate that both GHRM and GSCM practices positively influence sustainable performance in an integrated manner. Specifically, GHRM practices have a direct impact on sustainable performance, with GSCM practices acting as a mediator. Internal GSCM practices were found to positively mediate the relationship between GHRM and sustainable performance, while external GSCM practices only mediate the link between GHRM and the environmental dimension of sustainability performance. This suggests that manufacturers may lack awareness of the potential benefits of external GSCM practices for improving economic and social sustainability outcomes, highlighting the need for enhanced green training programs. This study is the first empirical investigation into the impact of GHRM and GSCM on sustainability performance components in Palestine, contributing valuable insights to the existing literature. It responds to recent calls for research into the combined effects of GHRM and GSCM practices on TBL sustainability performance. The paper concludes by discussing the theoretical and managerial implications, study limitations, and suggestions for future research.



**Chiara Pellegrini et al (2018)**, This article explores and empirically examines the link between employee perceptions of human resource practices and their inclination to engage in sustainable behavior (SB) to facilitate organizational change for sustainability. Drawing from corporate greening and organizational behavior literature, we developed a structural equation model that connects frontline employee perceptions of internal sustainability orientation, supervisory support, and training and reward systems to their likelihood of adopting in-role and extra-role SB. Additionally, we analyzed the mediating role of "affective commitment to change" in the relationship between human resource practices and SB. The findings indicate that when sustainability is prioritized and encouraged by the organization and managers, employees are more likely to embrace and internalize sustainability, leading to a stronger commitment to adopt SB. While we anticipated that training and rewards would enhance commitment and the willingness to adopt both in-role and extra-role SB, our results showed that rewards had no significant effect, and training influenced the willingness to adopt in-role sustainable behavior only through the mediation of affective commitment. These insights offer valuable, evidence-based guidance for scholars of corporate sustainability and managers seeking to design HR practices and strategies that foster employees' commitment and behaviors in support of organizational sustainability initiatives.

**Janaina Macke, Denise Genari, (2019)** examined the current state of sustainable human resource management, identifying key elements, emerging trends, and research gaps. A systematic literature review was conducted using the Scopus database, covering publications from 2001 to 2018, yielding a collection of 115 scientific articles. The data analysis was performed through content analysis tools and statistical processing of article abstracts using Alceste software (version 2015). The findings revealed four main categories that together represent 74% of the key units in the analyzed corpus. The first category focused on sustainable leadership, emphasizing individual and group power while integrating principles, processes, practices, and organizational values. The second category explored the relationship between human resource management, environmental sustainability, and organizational performance. The third category highlighted the tensions and paradoxes within human resource management practices and sustainability, where human resource management must balance short-term cost reduction and corporate profitability with long-term sustainability of organizational performance. The final category addressed the link between human resource management and the social dimension of sustainability, particularly in terms of corporate social responsibility and the company's interactions with its stakeholders. In conclusion, this paper aims to enrich the ongoing discourse on sustainable human resource management by analyzing its current state and suggesting future research directions.

### **III RESEARCH METHODOLOGY**

Research design is a blue print or a planned procedure for conducting research program. The research design of this study is descriptive in nature. A descriptive survey design was used to ascertain employees on job stress with workplace incivility.

The study made use of both primary data and secondary data. Survey method is used to collect the data. Primary data collecting was obtained through questionnaires distribution give to the employees. The sample design encompasses all aspects of how to group units on the frame, determine the sample size, allocate the sample to the various classifications of frame units, and finally, select the sample. Here "Convenient sampling" is used for the study. The size of the sample considered in this study is 98.

**IV DATA ANALYSIS AND DISCUSSION**

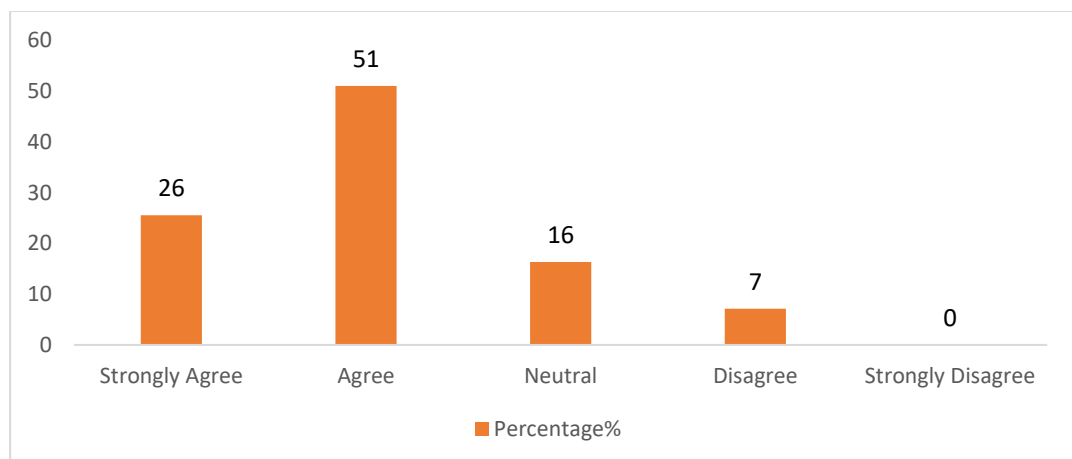
**Table 4.1.1 -Sustainable HR Practices is Essential For Long Term Organisational Success Of The Company**

Sustainable hr practices is essential for long term organizational success	No Of Respondent	Percentage%
Strongly Agree	40	41
Agree	40	41
Neutral	16	16
Disagree	2	2
Strongly Disagree	0	0
Total	98	100

**INTERPRETATION**

From the above Tablet, it is clear that 41% of the respondents strongly agree to the statement, 41% of the respondents agree to the statement, 16% of the respondents shown neutral response towards it, 2% of the respondents disagreed to the statement and 0% of the respondents strongly disagreed to the statement.

**CHART 4.2.1 SHOWS SUSTAINABLE HR PRACTICES LEAD TO COST SAVINGS IN LONG RUN**



**INTERPRETATION**

From the above chart, it is clear that 26% of the respondents strongly agree to the statement, 51% of the respondents agree to the statement, 16% of the respondents shown neutral response towards it, 7% of the respondents disagreed to the statement and 0% of the respondents strongly disagreed to the statement.

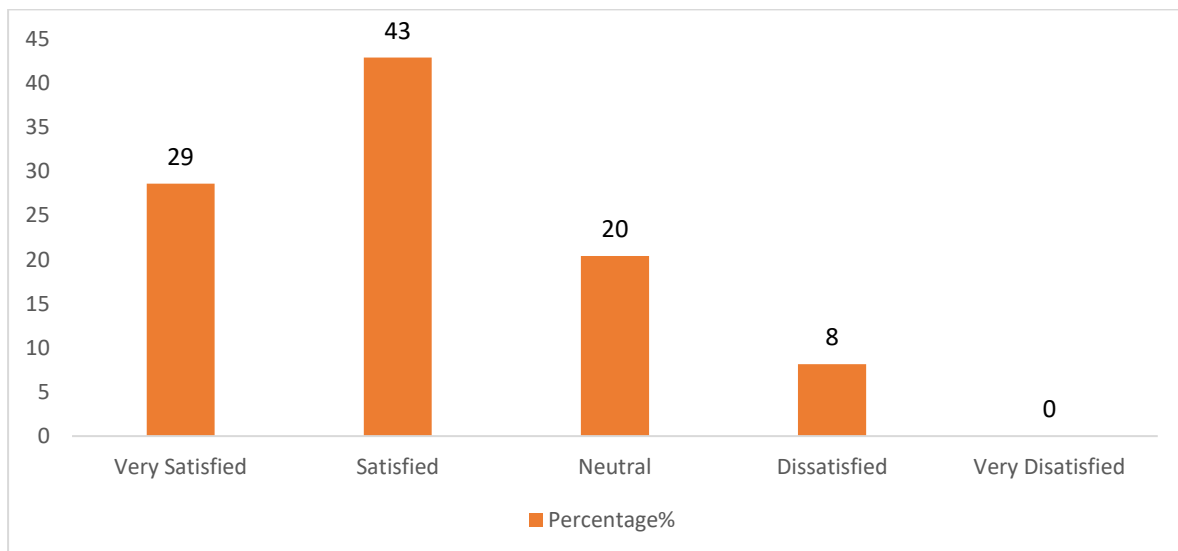
**TABLE 4.1.2 SHOWS HR PRACTICES POSITIVELY IMPACT EMPLOYEE ENGAGEMENT**

Sustainability initiatives within HR positively impact employee morale and engagement	No Of Respondent	Percentage%
Strongly Agree	23	23
Agree	50	51
Neutral	17	17
Disagree	8	8
Strongly Disagree	0	0
Total	98	100

**INTERPRETATION**

From the above Table, it is clear that 23% of the respondents strongly agree to the statement, 51% of the respondents agree to the statement, 17% of the respondents shown neutral response towards it, 8% of the respondents disagreed to the statement and 0% of the respondents strongly disagreed to the statement.

**CHART4.2.2 SHOWS SATISFIED WITH CURRENT LEVEL HR POLICY AND PROCEDURE**



**INTERPRETATION**

From the above chart, it is clear that 29% of the respondents very satisfied to the statement, 43% of the respondents satisfied to the statement, 20% of the respondents shown neutral response towards it, 8% of the respondents dissatisfied to the statement and 0% of the respondents very dissatisfied to the statement.

**TABLE4.1.3 SHOWS HR PRACTICES IMPROVE FINANCIAL PERFORMANCE**

Sustainable HR practices can lead to improved financial performance	No Of Respondent	Percentage%
Strongly Agree	27	28
Agree	42	43
Neutral	16	16
Disagree	10	10
Strongly Disagree	3	3
Total	98	100

**INTERPRETATION**

From the above table, it is clear that 28% of the respondents strongly agree to the statement, 43% of the respondents agree to the statement, 16% of the respondents shown neutral response towards it, 10% of the respondents disagreed to the statement and 3% of the respondents strongly disagreed to the statement.

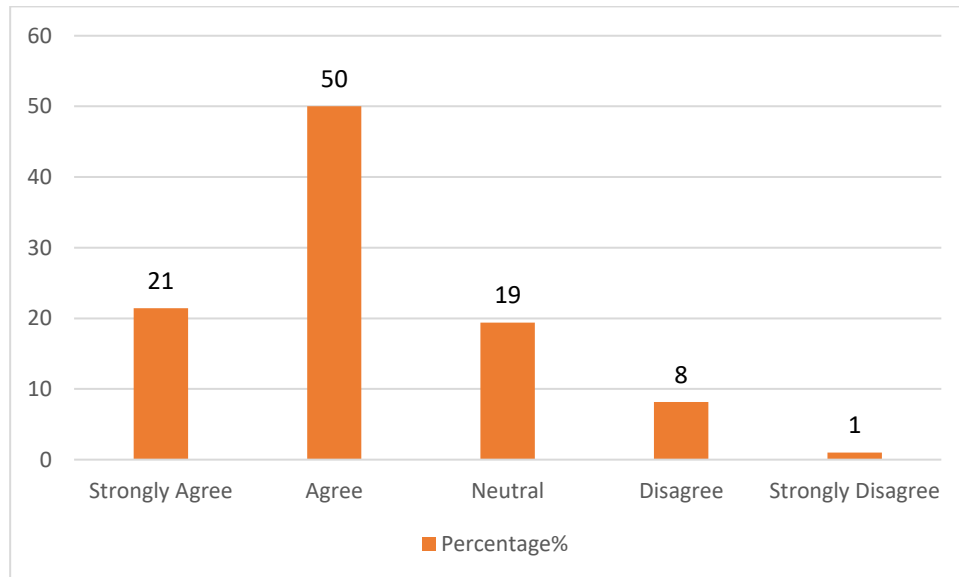
**TABLE 4.1.4 SHOWS SUSTAINABLE HR PRACTICES FOR FUTURE WORKFORCE**

Sustainable HR practices are essential for future of workforce	No Of Respondent	Percentage%
Strongly Agree	22	22
Agree	53	54
Neutral	14	14
Disagree	6	6
Strongly Disagree	3	3
Total	98	100

**INTERPRETATION**

From the above Table, it is clear that 22% of the respondents strongly agree to the statement, 54% of the respondents agree to the statement, 14% of the respondents shown neutral response towards it, 6% of the respondents disagreed to the statement and 3% of the respondents strongly disagreed to the statement.

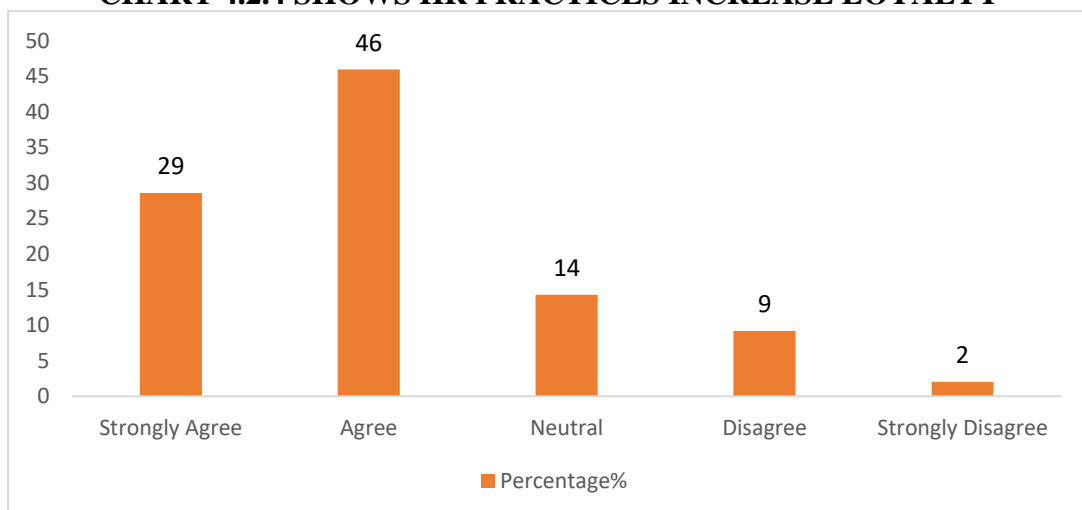
**CHART4.2.3 SHOWS IMPLEMENT HR PRACTICES OVERALL REPUTATION OF THE ORGANIZATION**



**INTERPRETATION**

From the above chart, it is clear that 21% of the respondents strongly agree to the statement, 50% of the respondents agree to the statement, 19% of the respondents shown neutral response towards it, 8% of the respondents disagreed to the statement and 1% of the respondents strongly disagreed to the statement

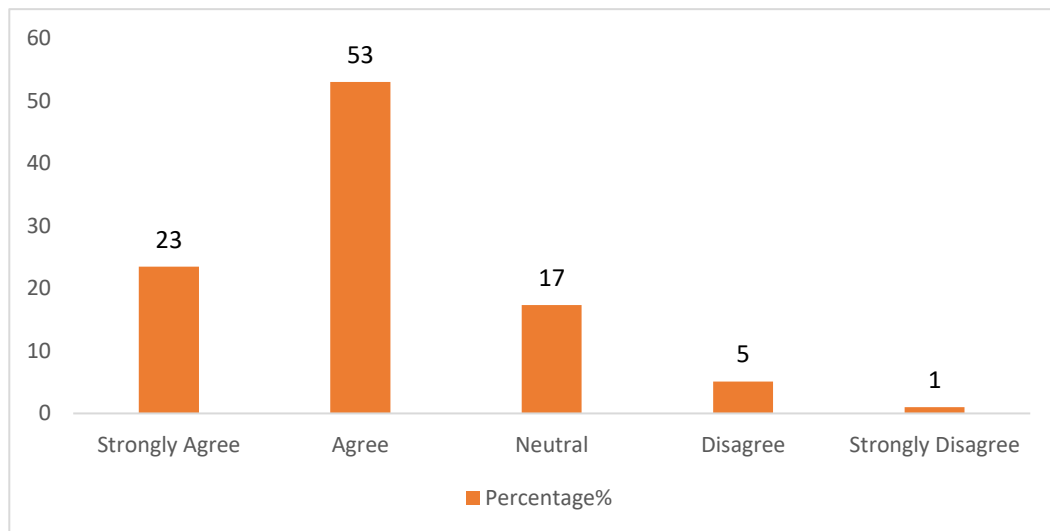
**CHART 4.2.4 SHOWS HR PRACTICES INCREASE LOYALTY**



**INTERPRETATION**

From the above chart, it is clear that 29% of the respondents strongly agree to the statement, 46% of the respondents agree to the statement, 14% of the respondents shown neutral response towards it, 9% of the respondents disagreed to the statement and 2% of the

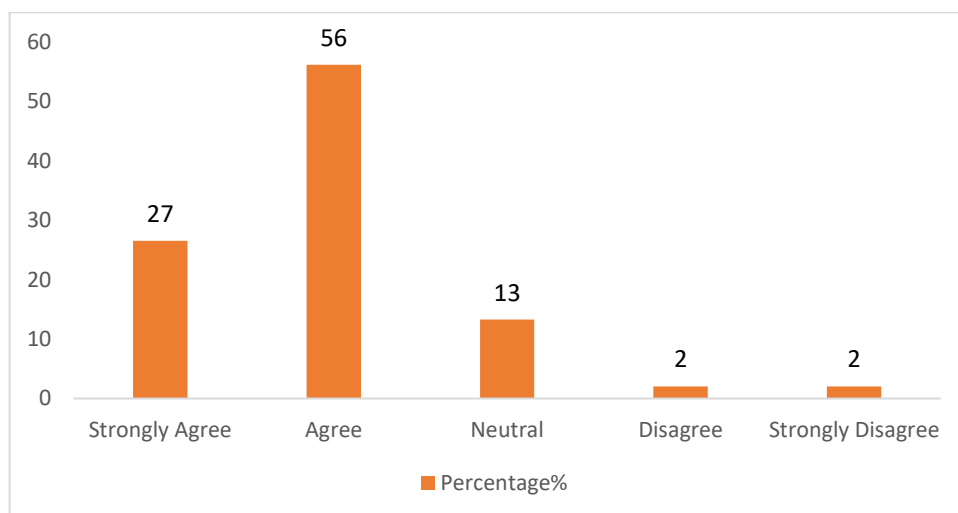
**CHART 4.2.5 SHOWS SUSTAINABLE HR PRACTICES HELP IN MITIGATING RISK**



**INTERPRETATION**

From the above chart, it is clear that 23% of the respondents strongly agree to the statement, 53% of the respondents agree to the statement, 17% of the respondents shown neutral response towards it, 5% of the respondents disagreed to the statement and 1% of the respondents strongly disagreed to the statement.

**CHART 4.2.6 SHOWS SUSTAIN HR PRACTICES ENHANCE EMPLOYEE MOTIVATION**



**INTERPRETATION**

From the above chart, it is clear that 27% of the respondents strongly agree to the statement, 56% of the respondents agree to the statement, 13% of the respondents shown neutral response towards it, 2% of the respondents disagreed to the statement and 2% of the respondents strongly disagreed to the statement.

**TABLE 4.1.5 SHOWS SUSTAINBLE HR PRACTICES CONTRIBUTE OVERALL SUCCESS OF THE RESPONDENTS**

Sustainable HR practices can contribute to the overall success of a company	No Of Respondent	Percentage%
Strongly Agree	27	28
Agree	49	50
Neutral	17	17
Disagree	5	5
Strongly Disagree	0	0
Total	98	100

**INTERPRETATION**

From the above Table, it is clear that 28% of the respondents strongly agree to the statement, 50% of the respondents agree to the statement, 17% of the respondents shown neutral response towards it, 5% of the respondents disagreed to the statement and 0% of the respondents strongly disagreed to the statement.

**TABLE 4.1.6 SHOWS SUSTAINABLE HR PRACTICES REDUCING EMPLOYEE TURNOVER**

Sustainable HR practices help in reducing employee turnover rates	No Of Respondent	Percentage%
Strongly Agree	20	20
Agree	47	48
Neutral	19	19
Disagree	11	11
Strongly Disagree	1	1
Total	98	100

**INTERPRETATION**

From the above Table and it is clear that 20% of the respondents strongly agree to the statement, 48% of the respondents agree to the statement, 19% of the respondents shown neutral response towards it, 11% of the respondents disagreed to the statement and 1% of the respondents strongly disagreed to the statement.



**TABLE 4.1.7 SHOWS HR PRACTICES ALIGN WITH THE VALUES OF A SOCIALLY RESPONSIBLE ORGANIZATION**

Sustainable HR practices align with the values of a socially responsible organization	No Of Respondent	Percentage%
Strongly Agree	22	22
Agree	50	51
Neutral	18	18
Disagree	7	7
Strongly Disagree	1	1
Total	98	100

**INTERPRETATION**

From the above Table, it is clear that 22% of the respondents strongly agree to the statement, 51% of the respondents agree to the statement, 18% of the respondents shown neutral response towards it, 7% of the respondents disagreed to the statement and 1% of the respondents strongly disagreed to the statement.

**FINDINGS**

- 41% of the respondents strongly agreed that sustainable HR practices is essential for long term organizational success.
- maximum of the respondents are yes that their company benefits are meet the employee needs.
- 53% of the respondents are agreed that sustainable HR practices is contribute to attracting top talent employees.
- maximum of the respondents is agreed that sustainable HR practices lead to cost savings in long term.
- Maximum of the respondents are agreed that sustainable imitative is impact on employee morale and employee engagement.
- maximum of the respondent is agreed that sustainable HR practices lead to improve their financial performance.
- 54% of the respondents are agreed that sustainable HR practices is essential for future work.
- Maximum of the respondents agreed that sustainable HR practices to foster a culture of environmental and social responsibility.
- 85% of the respondents agreed that aware of specific sustainable HR practices implement with your organization.

- Maximum of the respondents agreed that sustainable HR practices mitigating the risks associated with climate change.
- Results in the correlation between gender and employee motivation shows that there is significance relationship between gender and employee motivation
- Results in the regression test shows that there is a significant effect of employee engagement on employee wellbeing.

## **SUGGESTIONS**

- The company can use some technic to understand the employee desire and activities in the organization
- The company can ensure that times are adhered to properly.
- The company should foster positive industrial relations.
- They may offer flexible working options and remote working
- Creating a healthy environment where employees can communicate their concern.
- Suggesting to Provide regular feedback to their performance

## **V CONCLUSION**

In conclusion, this study emphasizes the critical role of sustainable human resource (HR) practices within the context of the Automobile Manufacturing Company in Chennai and the broader automotive manufacturing sector. Through a thorough analysis, it is clear that sustainable HR practices not only promote environmental sustainability but also enhance organizational resilience, employee well-being, and long-term competitiveness. The findings highlight the importance of aligning HR policies with the company's sustainability objectives and values. By incorporating sustainability into recruitment, training, performance management, and employee engagement, the Automobile Manufacturing Company in Chennai can strengthen its reputation as a socially responsible employer and attract top talent in a competitive market. The project also identifies challenges in implementing sustainable HR practices, such as resource limitations, resistance to change, and complex supply chain dynamics. Overcoming these obstacles requires strong leadership commitment, stakeholder involvement, and a culture of continuous improvement. By prioritizing sustainability in its HR strategies, the company can foster innovation and collaboration, positioning itself as a leader in sustainable HR practices. Addressing the challenges and building on existing strengths will enable the company to generate positive outcomes for its workforce, the organization, and the environment.

## **REFERENCES**

1. Smith, W.K.; Besharov, M.L.; Wessels, A.K.; Chertok, M. A Paradoxical Leadership Model for Social Entrepreneurs: Challenges, Leadership Skills, and Pedagogical Tools for Managing Social and Commercial Demands. *Acad. Manag. Learn. Educ.* **2012**, *11*, 463–478.
2. Ferraro, F.; Etzion, D.; Gehman, J. Tackling Grand Challenges Pragmatically: Robust Action Revisited. *Organ. Stud.* **2015**, *36*, 363–390.
3. United Nations. *Transforming Our World: The 2030 Agenda for Sustainable Development*; United Nations: Geneva, Switzerland, 2015.
4. Yong, J.Y.; Yusliza, M.Y.; Fawehinmi, O.O. Green Human Resource Management: A Systematic Literature Review from 2007 to 2019. *Benchmarking* **2020**, *27*, 2005–2027.

5. Kim, S.; Vaiman, V.; Sanders, K. Strategic Human Resource Management in the Era of Environmental Disruptions. *Hum. Resour. Manag.* **2022**, *61*, 283–293.
6. Dyllick, T.; Muff, K. Clarifying the Meaning of Sustainable Business: Introducing a Typology From Business-as-Usual to True Business Sustainability. *Organ. Environ.* **2016**, *29*, 156–174.
7. Ehnert, I.; Parsa, S.; Roper, I.; Wagner, M.; Muller-Camen, M. Reporting on Sustainability and HRM: A Comparative Study of Sustainability Reporting Practices by the World's Largest Companies. *Int. J. Hum. Resour. Manag.* **2016**, *27*, 88–108.
8. Macke, J.; Genari, D. Systematic Literature Review on Sustainable Human Resource Management. *J. Clean. Prod.* **2019**, *208*, 806–815.
9. Luu, T.T. Green Human Resource Practices and Organizational Citizenship Behavior for the Environment: The Roles of Collective Green Crafting and Environmentally Specific Servant Leadership. *J. Sustain. Tour.* **2019**, *27*, 1167–1196.
10. Leidner, S.; Baden, D.; Ashleigh, M.J. Green (Environmental) HRM: Aligning Ideals with Appropriate Practices. *Pers. Rev.* **2019**, *48*, 1169–1185.
11. Khamdamov, A.; Tang, Z.; Hussain, M.A. Unpacking Parallel Mediation Processes between Green HRM Practices and Sustainable Environmental Performance: Evidence from Uzbekistan. *Sustainability* **2023**, *15*, 1434.
12. Kara, E.; Akbaba, M.; Yakut, E.; Çetinel, M.H.; Pasli, M.M. The Mediating Effect of Green Human Resources Management on the Relationship between Organizational Sustainability and Innovative Behavior: An Application in Turkey. *Sustainability* **2023**, *15*, 2068.
13. Arulrajah, A. A.; Opatha, H.H.D.N.P.; Nawaratne, N.N.J.(2015), Green Human Resource Management Practices: A Review, USJP - Academic Journals Sri Lankan Journal of Human Resource Management, Vol. 5 No. 1 (2015)
14. Robin Kramar (2013), Beyond strategic human resource management: is sustainable human resource management the next approach?, Pages 1069-1089 | Published online: 16 Jul 2013, The International Journal of Human Resource Management Volume 25, 2014 - Issue 8
15. Shoeb Ahmad, (2015), Green Human Resource Management: Policies and practices, Published online: 02 Apr 2015, Cogent Business & Management Volume 2, 2015 - Issue 1
16. Ahmed A. Zaid, Ayham A.M. Jaaron, Abdul Talib Bon, (2018), The impact of green human resource management and green supply chain management practices on sustainable performance: An empirical study, Journal of Cleaner Production Volume 204, 10 December 2018, Pages 965-979
17. Janaina Macke, Denise Genari, (2019), Systematic literature review on sustainable human resource management, Journal of Cleaner Production, Volume 208, 20 January 2019, Pages 806-815
18. Chiara Pellegrini, Francesco Rizzi, Marco Frey, (2018), The role of sustainable human resource practices in influencing employee behavior for corporate sustainability, Wiley Online Library, Volume 27, Issue 8, December 2018, Pages 1221-1232

## **EXAMINING THE INFLUENCE OF LEADERSHIP STYLE ON ENTREPRENEUR ORIENTATION AND FIRM PERFORMANCE: MEDIATING ROLE OF ENTREPRENEUR NETWORKING CAPABILITY**

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### **Abstract**

The study of leadership style and its influence on entrepreneurial orientation and firm performance is important in understanding the dynamics of firm performance. Central to this study is the mediating role of entrepreneurial networking capability. Leadership styles, ranging from transformational to transactional, greatly influence an entrepreneur's ability to network, innovate, and plan for the complexities of the market. These networking capabilities, in turn, strengthen the firm's entrepreneurial orientation—a set of behaviors that includes innovation, proactiveness, and risk-taking—thereby directly impacting organization performance. This research aims to investigate the influence of leadership style on entrepreneur orientation and firm performance with the mediating role of entrepreneur networking capability. The study was conducted among 98 entrepreneurs using structured questionnaire. This study utilized a quantitative research approach to investigate the relationship between leadership style, entrepreneurial orientation, and firm performance among entrepreneurs, employing survey research and purposive sampling to select participants from the population of entrepreneurs running their ventures. The data was analyzed using SPSS AMOS. The findings of this study underscore the significance of transformational leadership in shaping aggregate firm performance. Specifically, the analysis revealed that transformational leadership style exhibits a stronger and positively correlated relationship with both entrepreneurial orientation and firm performance compared to transactional leadership style. Notably, the nature of the relationship indicates that higher levels of transformational leadership are associated with increased entrepreneurial orientation and enhanced firm performance. This study provides actionable guidance for leaders to foster entrepreneurship and underscores the critical role of entrepreneurial networking capability for sustained organizational success. It offers a novel framework, enriching understanding of organizational dynamics and offering practical insights for enhancing entrepreneurial competitiveness.

*Keywords:* Business Performance, Entrepreneur, Entrepreneurial orientation Leadership, Networks

### **I.INTRODUCTION**

Leaders exhibit certain leadership skills to influence followers and to lead the organization in the changing business environment. Leadership plays a vital role in the development of the team to develop a successful organization (Ruiz-Palomino et al., 2021). It serves as a guiding force for effectively managing and organizing human efforts, ensuring coordination so that skills and traits are utilized properly (Khalili, 2023). Leadership is not a new phenomenon, and

different authors have tried to contextualize the different meaning of leadership. According to Zogjani et al., (2014), leadership is a process to influence followers and an ability to lead others to achieve organizational goals. Bass (1985) developed three leadership styles namely; transactional, transformational, and laissez-faire. Transformational leaders satisfy employee's needs, provide mentoring, coaching, and engage them in the goal achievement process. They inspire followers, create a corporate culture of accountability, provide ownership to the employee, and encourage them to take lead whereas transactional leaders use formal authority, and use the achievement of goals as an indicator of reward or punishment. Some study suggested that transformational leadership is more effective than transactional leadership (Gardner & Stough, 2002) but, they are not the opposite type of leadership style (Bass, 1984). Thus, the performance and growth of the organization also depends upon the leadership style of entrepreneurs.

Entrepreneurship is a widely discussed topic in Nepal and the government is increasingly recognising the potential of private business and entrepreneurship to fuel socio-economic transformation (Khanal & Prajapati, 2023). Entrepreneurship is an engine for taking a company or a sector forward (Dhanabagiyam et al., 2024). And an entrepreneur is someone who organizes, manages and accepts the risks of a venture. An entrepreneur that can be characterized as a leader works on the innovative idea to solve the problem, to manage the risk, and become proactive by exercising effective leadership skills to responds uncertainty in the changing business environment, which has direct effects on firm performance (Miller, 1983). In the past, some of the researchers analyzed leadership and entrepreneurship as the same construct by defining entrepreneurship leadership and explained the relationship with organizational performance however in a dynamic and uncertain competitive environment, behavioral leadership has a great impact on developing an entrepreneurial orientation to improve firm performance (Cohen, 2004).

Entrepreneur explores the opportunity, and opt for the growth through the mobilization of resources (Autio et al., 2014). Thus, a leader should build a strategic relationship with its stakeholders (De Klerk & Kroon, 2008). Building a community, which supports potential entrepreneur idea, product, and services are essential for success. Further, network capabilities help to identify opportunities and to get essential support to run busines (Anis & Mohamed, 2012). A leader inspires, empower, transform themselves, and also followers (Kouzes & Power, 2012); networking ability provides them more confidence in building a mutual relationship (De Klerk, 2010) to gain resources. Thus, depending upon the entrepreneur leadership style they build a network to get those resources.

Bruggemann (2014) concluded that early startup leaders are focused on developing employee's skills and knowledge but in the strategy level leadership style is not clear. Leadership style (Ensley et al., 2006) and a strategic framework to adopt the right entrepreneurial orientation (Awang et al., 2010) define success or failure of a new venture. However, it has received too little attention studying leadership style in a new venture, especially in relationship with entrepreneurial orientation and network capabilities (Akonkwa et al., 2021; Paudel, 2020). Prior studies (e.g., Pittaway et al., 2004; Yang, 2008) have accordingly shown the relationship between leadership and entrepreneurship orientation; social media impact on entrepreneurial orientation and performance (Chen et al., 2015). However, there is a lack of literature that explains how networking capabilities of entrepreneur affect entrepreneurship orientation.

Peprah, (2011) argued that entrepreneurs should use their networking skills to build social capital and to grow the venture.

In Nepal, various accelerators and business incubators such as Nepal entrepreneurship hub, Antarprena, Safal partners, Yunus social business centers are working with entrepreneurs to strengthen the relationship between players of the entrepreneurial ecosystem to improve firm performance (Prajapati & Khanal, 2023). This research will add knowledge to understand entrepreneurial orientation and firm performance of Nepali startups. This research outcome can help business incubation center and entrepreneurship promotion organization to develop appropriate mentorship and incubation program. The leadership skills and networking capabilities impact on firm performance will be explained. Thus, the outcome of the results will provide some direction to entrepreneurs on what they need to consider to improve their entrepreneurial behavior. The literature on entrepreneurship research focusing on entrepreneur orientation and firm performance, especially in the Nepali environment is not much (Gautam, 2016; Bhandari & Amponstira, 2021). Thus, the outcome will explain the relevance of networking to improve entrepreneurial orientation and firm performance.

## **II.LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT**

### *Entrepreneurial Orientation*

Entrepreneurial orientation is one of the most popular and widely studied construct in entrepreneurial research (Clark et al., 2023; Wales et al., 2021). According to Miller (2011), entrepreneurial orientation is referred to firm's capabilities to become proactive to identified underline opportunity and guts to undertake a risky project and ability to introduce an innovative product to add value in the market. A lot of research was conducted in the field of entrepreneurship and more than 600 scholarly journals already published in the entrepreneurship orientation (Linton, 2016). According to Lumpkin and Dess (1996) entrepreneur create a new venture through a dynamic process which included different practices, activity, and decision. The innovativeness, proactiveness, and risk-taking are three factors considered for the research.

### *Transformational and Transactional Leadership Style*

According to Keller (2006), an appropriate leadership style of leaders enables an organization to formulate well define goals and effective process through motivation and developing skills and knowledge of followers to achieve it. A leader inspires the organization to become innovative and can help to develop an entrepreneurial orientation culture. According to Smith and Lohrke (2007), networking abilities play an important role in the acquisition of resources which is important in new venture creation and growth process. The following literature review explained the theoretical support of the relationship between leadership style (transformational and transactional leadership style), networking capabilities, entrepreneurial orientation and firm performance (growth and employee satisfaction).

Many leadership theories have been developed and researched in the past but literature suggested the most important leadership styles are transformational and transactional leadership (e.g., Avolio et al., 1999; Bass, 1990; Judge & Piccols, 2004) and it has been widely researched with relations to other entrepreneurial variables. Transformational leadership styles emphasize on developing followers competencies and motivate team member to accomplish organizational goals relying on individual consideration ( respect followers and listen to their



needs and concern and address it), intellectual stimulation (take risk and challenge assumption to induce creativity and innovation), idealized influence (influence behavior of leader which motivate followers to follow it) and inspirational motivation (role model and create a common vision to inspire followers) (Judge & Piccols, 2004). Kouzes and Power (2012) concluded transformational leaders practice five perspectives, i.e., model the way, inspire a shared vision, challenge the process, enables other act and encourage the heart whereas transactional leadership tries to motivate followers through contingent reward and management by exception (Northouse, 2015). Transformational leadership focuses on individual growth to achieve organizational goals and leaders maintain a good relationship with followers. Whereas transactional leadership is influenced by exchange and takes place under the control environment. There is a close relationship between transformational leadership style and transactional leadership style, it's distinct but not a mutually exclusive relationship (Keskes, 2014).

### *Networking Capability*

According to entrepreneurship theories, networks are organization resource (Coviello, 2006) and are used for gathering other resources for startup development and growth. Organizations need this capability to benefit from the resources and knowledge flows from outside the organization (Sakhdari et al., 2014). Walter et al., (2006) defined network capabilities as organization abilities to maintain the relationship with others to acquire resources and considered its four dimensions i.e. coordination, relational skills, market knowledge, and internal communication. Entrepreneurial networking helps entrepreneurs establish formal and informal connections with various players to get necessary support for business (Sendawula et al., 2021). Lee et al., (2001) explained that new venture collaborating with internal and external partners to access those resources and network has a significant relationship with firm performance. An entrepreneur's network, source of social capital, help increase organization performance (Cho & Lee, 2018). Another study by Rubino & Vitolla (2018) demonstrated that network characteristics like geography and diversity also influence firm's performance.

### *Business Performance*

Business performance explains the current status of an organization. How well it is achieving its stated objective and goals determine the current performance of an organization. Different authors implemented different measure to analyze firm performance. This research considered two components i.e. financial growth and investment in employee's growth as suggested by Santos & Brito (2012) to measure venture performance.

According to Arham et al., (2013) leadership style and entrepreneurial orientation should be aligned to improve business performance. In a changing dynamic business environment, an entrepreneur who can adjust their entrepreneurial orientation able to perform well (Covin & Slevin, 1989). Yang (2008) studied the effect of leadership styles on entrepreneurial orientation, and business performance among top-level managers of small and medium enterprises using Multifactor Leadership Questionnaire in Taiwan and this research used correlation and regression analysis to conclude transformational leadership leads to higher entrepreneurial orientation and encourage creativity and innovation, helps to become proactive and risk-taking while making decision than transactional leadership (Bass, 1990). Ekiyor & Dapper (2019) analyzed the relationship between five different types of leadership style i.e. Autocratic, democratic, laissez-faire, transactional and transformational leadership styles with



entrepreneurial orientation and concluded transformational leadership encourages all the entrepreneurial orientation. Transformational leadership has been found to positively impact various aspects of firm performance, including perceptions of leader effectiveness, leader performance, sales, and profit (Jensen et al., 2020). Another study by Leite & Rua (2022) found that transformational leadership and entrepreneurial orientation both significantly and positively affect firm performance.

Networking capabilities of entrepreneurs is positively linked to entrepreneurial orientation. Walter et al., (2006) concluded network abilities have a significant moderate relationship between entrepreneurial orientation and performance and suggested to utilize existing networks. Networking is one of the critical factors that positively contributed to the success of entrepreneurial ventures (McAdam & McAdam, 2006). Felzensztein et al., (2015) finding suggested that entrepreneur with a having high network relationship can be able to proactively forecast the changing business environment and expand their business. Asad et al., (2016) analyzed the moderation effect of entrepreneurial networking among the relationship between entrepreneurial orientation and business performance among the owner of 384 MSEs and concluded statistically significant relationship between EO and performance and explained a moderation effect of networking among MSE. Research conducted by Ajayi (2016) analyze the impact of entrepreneurial orientation, i.e., risk-taking, proactiveness, innovation and networking capabilities, network characteristics, network resources among 500 agriculture small and medium enterprises and concluded that owner who have higher entrepreneurial orientation and ability to manage its networking capabilities have a direct impact on performance. Networking capabilities and network structure help improve how well products are sold. These capabilities also help organizations bring new products successfully and this in turn increases firm's overall performance (Maghsoudi-Ganjeh et al., 2021).

Social network theory and the need for achievement theory are foundation for the research study. According to social network theory, entrepreneurs seek an opportunity within a society and used the social network to acquire resources to start up business and to improve performance (Stuart & Sorenson, 2005). Thus, to acquire resources and to increase an opportunity of success in the dynamic environment, an entrepreneur should be proactive, risk-taking and innovative. A need for achievement theory discusses on individual willingness to excel in the entrepreneurial journey. Thus, an entrepreneur uses a different leadership style to make a social connection.

Based on the literature review and theoretical framework following hypothesis has been formulated:

**H1:** Transformational leadership style has a significant positive effect on entrepreneurial orientation than transactional leadership.

**H1a:** Transformational leadership style has a significant positive effect on firm performance than transactional leadership.

**H2:** Entrepreneurial orientation is positively corelated with firm performance.

**H3:** Network capabilities will mediate the relationship between leadership style and entrepreneurial orientation.

**H4:** Network capabilities will mediate the relationship between leadership style and firm performance.

**H5:** Entrepreneurial orientation will mediate the relationship between leadership style and firm performance.

### **III. RESEARCH METHODS**

The quantitative research approach was used to examine the relationship between leadership style and entrepreneurial orientation and firm performance. This study has been examined among entrepreneur who is running their venture through survey research. The quantitative research approach was chosen to examine the relationship between leadership style, entrepreneurial orientation, and firm performance due to its ability to provide objective measurement and statistical analysis, facilitating the exploration of complex relationships. This method also enables researchers to enhance the generalizability and replicability of their findings across diverse contexts, contributing to a deeper understanding of the dynamics within the entrepreneurial landscape.

#### *Research procedure*

The population for the study is entrepreneurs who are running their venture. Purposive sampling is implemented in the research to contact an entrepreneur. Purposive sampling was chosen due to the absence of an exhaustive list of entrepreneurs, making probability sampling impractical. Additionally, focusing on firms in operation for 3-5 years allows for a meaningful measurement of startup performance, as firms beyond this range are considered mature (European start-up Network, 2015) while those below three years might lack sufficient operational history for accurate assessment.

For the research purpose, the questionnaire was developed in the google form and its link was emailed to an entrepreneur. A follow-up email was sent. A total of 350 entrepreneurs were contacted through email and through some personal contact. Among them, only 103 (29.42%) questionnaire was returned and among them 5 responses were incomplete. Thus, a total of 98 responses were included in the analysis. The SPSS AMOS was used to perform statistical analysis.

#### *Instrumentation*

##### *Leadership style scale*

The leadership style was measured with transformational and transactional leadership scale. The short version of the Multifactor Leadership Questionnaire (MLQ) 6S items were used to measure the leadership style of an entrepreneur (Vinger & Cilliers, 2006). A total of 12 items and 6 items measures transformation and transaction leadership style respectively. A 5-point Likert scale is ranging from 1 = Not at all to 5 = frequently. "I make others feel good to be around me" and "I provide recognition/rewards when others reach their goals" are the sample items to measure transformational and transactional leadership accordingly.

##### *Entrepreneurial orientation Scale*

The measurement for leadership styles are 11 items, 5 points Likert scale adapted from Lumpkin & Dess (1996). A total of 11 items were used. Risk-taking is measured by 5 items,

innovativeness by 4 items and proactiveness by 2 items. A 5-point Likert scale is ranging from 1= strongly disagree and 5= strongly agree. The sample item to measure entrepreneurial orientation is “Our firm acts assertively in order to achieve objectives”.

*Network Capabilities*

The four dimension of network capabilities i.e. coordination capabilities (6 items), Relational skills (4 items), partner knowledge (4 items) and internal communication (6 items), 5-point Likert scales is adopted from (Walter et al., 2006). A 5-point Likert scale is ranging from 1= Statement does not apply at all and 5= Statement applies completely. The sample item to measure network capabilities is “We have the ability to build good personal relationships with business partners”.

*Firm Performance*

Firm performance has been measured through growth and employee satisfaction. A total of 4 items of growth and 4 items of employee satisfaction was considered from Santos & Brito (2012). Due to the sensitivity of data, we used perceived information as compare to the average competitors. A 5-point Likert scale is ranging from 1= very poor and 5 = excellent. Market share, revenue growth, and career opportunities are some measured parameters.

**IV.RESULTS AND DISCUSSIONS**

The following table 1, briefly explained the demographic profile of the respondents. Out of 98 respondents, 55 (56.1%) respondents were male and 43 (43.9%) respondents were female. 49.0 % of 24-30 years of entrepreneurs and only 4.1% of 45- above year’s entrepreneur participated in the research. Participants were from different sectors, a total of 14 industries were recorded among them 15.3% respondents were in the software company, 14.3% were in the manufacturing industry and 8.2% were in a restaurant and retailing business.

**Table 1**  
*Demographic profile of respondents*

		Frequency	Percent	Cumulative Percent
Gender	Male	55	56.1	56.1
	Female	43	43.9	100.0
	Total	98	100.0	
Age Group	Less than 24 years	16	16.3	16.3
	24-30 years	48	49.0	65.3
	31-45 years	30	30.6	95.9
	45- above years	4	4.1	100.0
	Total	98	100.0	
	Undergraduate	47	48.0	48.0

Qualification	Postgraduate	51	52.0	100.0
	Total	98	100.0	
Sector	Restaurant	8	8.2	8.2
	Retailing	8	8.2	16.3
	Consulting service	9	9.2	25.5
	Manufacturing	14	14.3	39.8
	Software company	15	15.3	55.1
	Other	44	44.9	100
	Total	98	100.0	

The Cronbach alpha value was explained in the following table 2. Cronbach value for entrepreneurial orientation is 0.936. All the Cronbach values except for transaction leadership (.680) is greater than 0.7. However, it is a widely accepted instrument and validated at a different context, it was accepted as it is without deletion of any items.

**Table 2**  
*Reliability Statistics*

Construct	Cronbach's Alpha	N of Items
Transformational Leadership	.810	12
Transactional Leadership	.680	6
Entrepreneurial Orientation	.936	11
Networking Capability	.914	19
Firm Performance	.882	8

The structural equation modeling (SEM) was used to estimate the direct and indirect effects by using the AMOS. SEM allows researchers to consider multiple dependent variables in a single model. The maximum likelihood process was run to analyze and to calculate estimates. The SEM analysis used to display direct and indirect paths among considered construct. The bootstrap (500) test was used to examine mediation effects. The mediation effects of both network capability and entrepreneurial orientation were tested at a different level through the indirect effect of transformational and transactional leadership on firm financial and employee growth. Following figure 1 explained the variance and structural coefficients among construct.

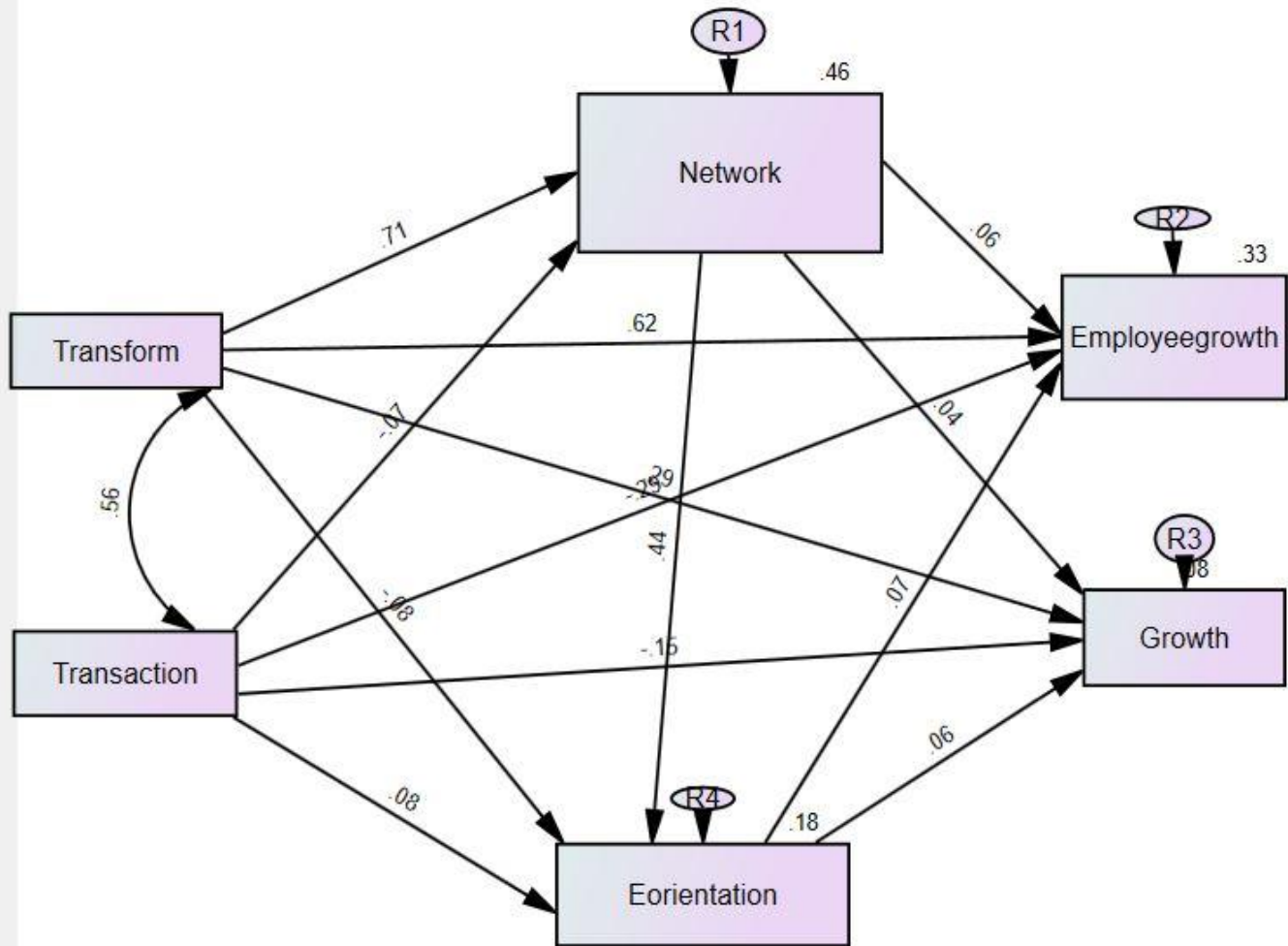


Figure 2: Standardized regression coefficients

Table 3 explained standardized estimate, standard error, and significant value among transformational, transactional, network capability and financial and employee growth. It signifies that the direct relationship between transformational leadership with network capabilities and employee growth is statistically significant at 0.001 value. Network capabilities have a significant relationship with an entrepreneurial orientation at the 0.001 level. Transactional leadership has a significant negative relationship with employee growth at the 0.01 level. Transactional leadership has a negative relationship with networking capabilities, financial growth and employee growth whereas transformation leadership shows a positive relationship with networking capabilities, financial growth and employee growth and negative with entrepreneurial orientation. Thus, result signifies that in the context of research, transformational and transactional have opposite influences.

**Table 3**

*Standardized estimates of the construct*

			<b>Estimate</b>	<b>E</b>	<b>P-Value</b>
Network Capabilities	<---	Transformational Leadership	.713	0.117	***
Network Capabilities	<---	Transactional leadership	-.070	0.094	0.434
Entrepreneurial orientation	<---	Transformational Leadership	-.080	0.3	0.572
Entrepreneurial orientation	<---	Transactional leadership	.083	0.189	0.453
Entrepreneurial orientation	<---	Network Capabilities	.444	0.203	***
Employee growth	<---	Network Capabilities	.061	0.158	0.612
Employee growth	<---	Entrepreneurial orientation	.072	0.074	0.431
Employee growth	<---	Transformational Leadership	.616	0.22	***
Financial Growth	<---	Transactional leadership	-.147	0.136	0.214
Employee growth	<---	Transactional leadership	-.294	0.139	**
Financial Growth	<---	Entrepreneurial orientation	.056	0.073	0.604
Financial Growth	<---	Network Capabilities	.036	0.155	0.8
Growth	<---	Transformational Leadership	.287	0.217	0.057

The direct relationship between transformational leadership and entrepreneurial orientation is  $\beta = -0.80$ ,  $P > 0.05$ ; transactional leadership and entrepreneurial orientation is  $\beta = .083$ ,  $P > 0.05$ . It shows that transformational leadership has a positive influence on entrepreneurial orientation than transactional leadership. However, there was no significant relationship between leadership style and entrepreneurial orientation. Thus, hypothesis 1 was not supported. Once the networking capability was considered as a mediator the value changes to  $\beta = .316$ ,  $P < 0.05$  and  $\beta = -.031$   $P > 0.05$  respectively. As a consequence of two-tailed significance result of bootstrapping, it can conclude that networking capability has partial mediation effect on the relationship between transformational leadership and entrepreneurial orientation but does not have any mediation effect between transactional leadership and entrepreneurial orientation. Thus, hypothesis 3 was partially supported.

The direct relationship between transformational leadership and financial growth is  $\beta = 1.05$ ,  $P > 0.05$ ; transactional leadership and financial growth is  $\beta = -.147$ ,  $P > 0.05$ . It shows that transformational leadership style has a positive impact on financial growth and transactional has a negative impact on financial growth. Network capability was considered as a mediator and it reduces path coefficient to  $\beta = .43$ ,  $P > 0.05$  and  $\beta = -.004$ ,  $P > 0.05$  respectively. As a consequence of two-tailed significance result of bootstrapping, it can conclude that networking



capability does not have any mediation effect on the relationship between transformational leadership, transactional leadership, and financial growth.

The direct relationship between transformational leadership and employee growth is  $\beta = .610$ ,  $P < 0.05$ ; transactional leadership and employee growth is  $\beta = -.288$ ,  $P > 0.05$ . It shows that transformational leadership style has a significant positive impact on employee growth and transactional has a negative impact on employee growth. Network capability was considered as a mediator and it reduces path coefficient to  $\beta = .066$ ,  $P > 0.05$  and  $\beta = -.007$ ,  $P > 0.05$  respectively. As a consequence of two-tailed significance result of bootstrapping, it can be concluded that networking capability has mediation effect on the relationship between transformational leadership and employee growth but no mediation effect on the relationship between transactional leadership and employee growth. Thus, hypothesis 1a is supported and hypothesis 4 was partially supported.

When entrepreneurial orientation is considered as a mediation effect between leadership style and firm performance, it resulted that there is no mediation effect between transformational and transactional leadership with financial and employee growth. Thus, hypothesis 5 was not supported. When entrepreneurial orientation and networking capabilities were considered as a mediation variable between leadership style and firm performance, the combine results explained the presence of partial mediation between transformational leadership with financial and employee growth whereas results do not show a mediation effect between transactional leadership and growth but it resulted in partial mediation between transactional leadership and employee growth.

## **V.CONCLUSION**

This study aimed to investigate the relationship between transformational and transactional leadership styles with network capabilities, entrepreneurial orientation, firm financial performance, and employee growth performance. Results revealed that transformational leadership positively influenced employee growth through network development, while transactional leadership had a negative impact on financial and employee growth. Additionally, transformational leadership exhibited a stronger relationship with entrepreneurial orientation and firm performance compared to transactional leadership. Networking capabilities were found to support entrepreneurial orientation, emphasizing its importance for resource acquisition and firm performance optimization. These findings underscore the significance of aligning leadership styles with organizational goals and environments, with transactional leadership notably influencing entrepreneurial orientation and networking positively impacting firm performance.

## **IMPLICATIONS**

The implications of this research are twofold, offering insights for both entrepreneurs and organizational leaders. Firstly, for entrepreneurs, the study sheds light on the importance of developing effective networking capabilities as a strategic tool for enhancing entrepreneurial orientation and ultimately, firm performance. Entrepreneurs should actively engage in networking activities to build relationships, access resources, and cultivate opportunities for innovation and growth (Abbas et al., 2019). Secondly, for organizational leaders, particularly those in positions of authority, the findings highlight the significance of adopting transformational leadership styles to foster a culture of entrepreneurship within the firm.



Transformational leaders, characterized by their ability to inspire and empower followers, are more likely to cultivate an environment conducive to innovation, proactiveness, and risk-taking—the core components of entrepreneurial orientation. By embracing transformational leadership practices, leaders can nurture the entrepreneurial mindset among employees, driving organizational agility, adaptability, and competitive advantage in dynamic market environments. In summary, this study underscores the critical interplay between leadership style, entrepreneurial orientation, and firm performance, offering actionable insights for entrepreneurs and organizational leaders seeking to navigate and thrive in today's competitive business landscape.

## **REFERENCES**

- Abbas, J., Raza, S., Nurunnabi, M., Minai, M. S., & Bano, S. (2019). The Impact of Entrepreneurial Business Networks on Firms' Performance Through a Mediating Role of Dynamic Capabilities. *Sustainability*, 11(1), 1-28.
- Ajayi, B. (2016). The impact of entrepreneurial orientation and networking capabilities on the export performance of Nigerian agricultural SMEs. *Journal of Entrepreneurship and Innovation in Emerging Economies*, 2(1), 1-23. <https://doi.org/10.1177/2393957515619720>
- Akonkwa, D. B. M., Lunanga, E., Mukulu, J. B., Bugandwa, T. C., & Mwaza, E. F. (2022). Leadership Styles and Small Enterprises' Performance: Is Gender an Issue? Empirical Study from Democratic Republic of Congo. *Journal of Entrepreneurship and Innovation in Emerging Economies*, 8(1), 60-82. <https://doi.org/10.1177/23939575211044318>
- Anis, O., & Mohamed, F. (2012). How entrepreneurs identify opportunities and access to external financing in Tunisian's micro-enterprises? *African Journal of Business Management*, 6(12), 4635-4647.
- Asad, M., Sharif, M. N., & ALekam, J. M. (2016). Moderating effect of entrepreneurial networking on the relationship between entrepreneurial orientation and performance of Micro and Small enterprises. *Sci.Int. (Lahore)*, 28(2), 1551-1556.
- Autio, E., Kenney, M., Mustar, P., Siegel, D., & Wright, M. (2014). Entrepreneurial innovation: The importance of context. *Research Policy*, 43, 1097-1108. DOI:10.1016/j.respol.2014.01.015
- Avolio, B. J., Bass, B. M., & Jung, D. I. (1999). Re-examining the components of transformational and transactional leadership using the Multi-factor Leadership Questionnaire. *Journal of Occupational and Organizational Psychology*, 72(4), 441-462.
- Awang, A., Ahmad, Z. A., Asghar, A. R., & Subari, K. A. (2010). Entrepreneurial Orientation among Bumiputera Small and Medium Agro-Based Enterprises (BSMAEs) in West Malaysia: Policy Implication in Malaysia. *International Journal of Business and Management*, 5(5), 130-142. DOI:10.5539/ijbm.v5n5p130

- Bass, B. M. (1985). *Leadership and Performance Beyond*. New York: The Free Press.
- Bhandari, P., & Amponstira, F. (2021). Model of Entrepreneurial Orientation, Competitive Advantage and Performance of Women-Owned Enterprises in Gandaki Province, Nepal. *Open Journal of Business and Management*, 9, 2854-2865. <https://doi.org/10.4236/ojbm.2021.96159>
- Cho, Y. H., & Lee, J.-H. (2018). Entrepreneurial orientation, entrepreneurial education and performance. *Asia Pacific Journal of Innovation and Entrepreneurship*, 12(2), 124–134
- Clark, D. R., Pidduck, R. J., Lumpkin, G. T., & Covin, J. G. (2023). Is It Okay to Study Entrepreneurial Orientation (EO) at the Individual Level? Yes! *Entrepreneurship Theory and Practice*, 1-43.
- Cohen, A. R. (2004). Building a company of leaders, Leader to Leader. pp. 16-20. DOI:10.1002/ltl.96
- Coviello, N. E. (2006). The Network Dynamics of International New Ventures. *Journal of International Business Studies*, 37(5), 713-731.
- De Klerk, S., & Kroon, J. (2008). Business networking relationships for business success. *South African Journal of Business Management*, 39(2).
- De Klerk, S. (2018). The importance of networking as a management skill. *South African Journal of Business Management*, 41(1), Article a512. <https://doi.org/10.4102/sajbm.v41i1.512>
- Dhanabagiyam, S., Doe, M. B., Thamizhselvi, M., Irfan, M., Thalari, S. K., & Libeesh, P. C. (2024). Factors influencing growth of micro entrepreneurship in the hospitality industry: An empirical study in India. *Cogent Business & Management*, 11, 1-14. <https://doi.org/10.1080/23311975.2023.2285260>
- Ensley, M. D., Hmieleski, K. M., & Pearce, C. L. (2006). The importance of vertical and shared leadership within new venture top management teams: Implications for the performance of startups. *The Leadership Quarterly*, 17(3), 217-231. DOI:10.1016/j.leaqua.2006.02.002
- European Start-up Network. (2021). Available online: <https://europeanstartupnetwork.eu/vision/> (accessed on 2 March 2024)
- Felzensztein, C., Ciravegna, L., Robson, P., & Amoros, J. E. (2015). Networks, Entrepreneurial Orientation, and Internationalization Scope: Evidence from Chilean Small and Medium Enterprises. *Journal of Small Business Management*, 53(S1), 145-160. DOI:10.1111/jsbm.12188
- Gardner, L., & Stough, C. (2002). Examining the relationship between leadership and emotional intelligence in senior level managers. *Leadership & Organization Development Journal*, 23(2), 68-78. <https://doi.org/10.1108/01437730210419198>
- Gautam, P. R. (2016). Entrepreneurial Orientation and Business Performance of Handicraft Industry: A Study of Nepalese Handicraft Enterprises. *International Journal of Small Business and Entrepreneurship Research*, 4(2), 48-63.

- Jensen, M., Potocnik, K., & Chaudhry, S. (2020). A mixed-methods study of CEO transformational leadership and firm performance. *European Management Journal*, 38, 836-845.
- Judge, T. A., & Piccolo, R. F. (2004). Transformational and Transactional Leadership: A Meta-Analytic Test of Their Relative Validity. *Journal of Applied Psychology*, 59(5), 755-768. DOI:10.1037/0021-9010.89.5.755
- Keskes, I. (2014). Relationship between leadership styles and dimensions of employee organizational commitment: A critical review and discussion of future directions. *Intangible Capital*, 10(1), 26-51. DOI:10.3926/ic.476
- Khalili, N. (2023). Leaders' leadership theory in a management perspective. *American Journal of Multidisciplinary Innovation (AJMRI)*, 2(5), 89-95.
- Lee, C., Lee, K., & Pennings, J. M. (2001). Internal capabilities, external networks, and performance: A study on technology-based. *Ventures. Strategic Management Journal*, 22(6-7), 615-640. DOI:10.1002/smj.181
- Leite, C. and Rua, O. (2022) Linking Transformational Leadership and Firm Performance: The Role of Entrepreneurial Orientation. *Open Journal of Business and Management*, 10, 1900-1922. doi: 10.4236/ojbm.2022.104098.
- Linton, G. (2016). *Entrepreneurial orientation: reflections from a contingency perspective*. Orebro University: Orebro. Retrieved from <http://urn.kb.se/resolve?urn=urn:nbn:se:oru:diva-46894>
- Lumpkin, G. T., & Dess, G. G. (1996). Clarifying the entrepreneurial orientation construct and linking it to performance. *The Academy of Management Review*, 22(1), 135-172. DOI:10.2307/258632
- Maghsoudi-Ganjeh, Y., Khani, N., & Alem-Tabriz, A. (2021). Networking capability and commercialization performance: The role of network structure. *Journal of Business-to-Business Marketing*, 28(1), 51-68. <https://doi.org/10.1080/1051712X.2021.1893033>
- McAdam, M., & McAdam, R. (2006). The Networked Incubator: The Role and Operation of Entrepreneurial Networking with the University Science Park Incubator (USI). *International Journal of Entrepreneurship and Innovation*, 7(2), 87-97. DOI:10.5367/000000006776928663
- McCall, M. W. (1976). Leadership research: choosing gods and devils on the run. *Journal of Occupational Psychology*, 49, 139-153. DOI:10.1111/j.2044-8325.1976.tb00339.x
- Miller, D. (2011). Miller (1983) Revisited: A Reflection on EO Research and Some Suggestions for the Future. *Entrepreneurship Theory and Practice*, 35(5), 873-864. DOI:10.1111/j.1540-6520.2011.00457.x
- Northouse, P. G. (2015). *Leadership: Theory and Practice*. Thousand Oaks, CA: Sage Publication Inc.
- Paudel, S. (2020). Leadership Style and Business Performance in Nepali SMEs: The Mediating Role of Entrepreneurship Orientation. *Journal of Business and Management Research*, 3(1), 1-17.

- Peprah, J. A. (2011). *Sustainable entrepreneurship: The role of networking*. Retrieved from [https://pdfs.semanticscholar.org/05d0/77868cbdf623a3970b1907315745a446aaac.pdf?\\_ga=2.73273179.970940129.1561195661-1959513880.1561195661](https://pdfs.semanticscholar.org/05d0/77868cbdf623a3970b1907315745a446aaac.pdf?_ga=2.73273179.970940129.1561195661-1959513880.1561195661)
- Pittaway, L., Robertson, M., Munir, K., & Denyer, D. (2004). Networking and innovation: A systematic review of the evidence. *International Journal of Management Reviews*, 5(3-4), 137-168. DOI:10.1111/j.1460-8545.2004.00101.x
- Prajapati, B., & Khanal, K. (2023). Perception of entrepreneurial ecosystem factors: Comparison among students and entrepreneurs. *Asian Journal of Management Studies*, 3(1), 79-102.
- Rubino, M., & Vitolla, F. (2018). Implications of network structure on small firms' performance: Evidence from Italy. *International Journal of Business and Management*, 13(4), 46–56.
- Ruiz-Palomino, P., Linuesa-Langreo, J., & Elche, D. (2021). Team-level servant leadership and team performance: The mediating roles of organizational citizenship behavior and internal social capital. *Business Ethics, the Environment & Responsibility*, 30(4), e12390. <https://doi.org/10.1111/beer.12390>
- Santos, J. B., & Brito, L. A. (2012). Toward a Subjective Measurement Model for Firm Performance. *Brazilian Administration Review*, 9(6), 95-117. DOI:10.1590/S1807-76922012000500007
- Sakhdari, K., Burgers, H., & Davidsson, P. (2014). Unpacking the networking capabilities and corporate entrepreneurship relationship. *Academy of Management Proceedings*, 2014(1), 13260. <https://doi.org/10.5465/ambpp.2014.13260abstract>
- Sendawula, K., Ngoma, M., Bananuka, J., Kimuli, S.N.L., & Kabuye, F. (2021). Business networking and internationalization: Testing the mediation role of organizational learning. *World Journal of Entrepreneurship, Management and Sustainable Development*, 17(2), 246-259.
- Vinger, G., & Cilliers, F. (2006). Effective Transformational Leadership Behaviours for Managing Change. *Journal of Human Resources Management*, 4(2), 1-9. DOI:10.4102/sajhrm.v4i2.87
- Wales, W., Monsen, E., & McKelvie, A. (2011). The organizational pervasiveness of entrepreneurial orientation. *Entrepreneurship Theory and Practice*, 35(5), 895–923.
- Walter, A., Auer, M., & Ritter, T. (2006). The impact of network capabilities and entrepreneurial orientation on university spin-off performance. *Journal of Business Venturing*, 21(4), 541-597. DOI:10.1016/j.jbusvent.2005.02.005
- Zogjani, A., Llaci, S., & Elmazi, E. (2014). The role of power in effective leadership and followership: The Albanian case. *Romanian Economic and Business Review*, 9(1), 89-102. Retrieved from <http://www.rebe.rau.ro/RePEc/rau/journal/SP14/REBE-SP14-A8.pdf>