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on 23<sup>rd</sup> and 24<sup>th</sup> of March, 2018**

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**SUMEDHA**  
Journal of Management

## ***Guest Editor Message***

The 21st century poses various challenges to businesses in the complex environmental set-up where business have to take strategic decisions about uncertainty of the future, financial management, monitoring performance, regulation and compliance, competencies and recruiting the right talent, technology, exploding data, customer service, maintaining business reputation and knowing when to embrace change.

Consequently, in a single generation, businesses have to adapt to diverse new channels so that they can ably compete on a global stage.

In such a perplexing atmosphere, three broad areas emerge as saviours to the modern businesses namely, STRATEGY, SYSTEM and SERVICE. This three-fold strategy ensures the SUSTAINABILITY & SCALABILITY of business, the bloodline of 21st century enterprise.

Against the backdrop of this emerging scenario, we have arranged a **Two-day International conferenceon "Strategy, System and Service for Sustainability and Scalability of Business"**, Department of Management studies, **Pondicherry University**, on 23rd and 24th of March, 2018. The conference shall deliberate in detail, various issues pertaining to opportunities, issues and challenges in the domain of business strategy, service and system and the means and ways by which businesses can sustain and progress in the ever-evolving 21st century business environment.

More than 300 abstracts were received for the conference and about 250 full papers were received. All the papers were subject to plagiarism test in the first instance and some 180 papers emerged successful at this stage.

All the 180 papers were sent for review to eminent Professors and 135 papers passed this test. Twenty five of the best papers from these lot were selected on a peer review basis and published in this journal. Thank for **Dr. A Kotishwar**, Chief Editor, **SUMEDHA Journal of Management** for accepting collaboration with this conference to publish best papers in Journal.

**Dr.R.Kasilingam, Associate Professor**  
**Dr.G.Madan Mohan, Assistant Professor**  
Department of Management studies  
Pondicherry University

## Functional Strategy Implementation - Experimental Study on Agile KANBAN

– Vasu Padmanabhan\*

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### Abstract

*Functional strategies are designed to achieve organizational business strategy and create competitive advantage. In a continuously changing business environment, functional strategies have to be implemented with precision, speed and by maximizing resource productivity. Many researchers argue that, with a simple probability assumption, a strategy may not succeed in 75% of cases. Implementation is the difficult step in the strategy management. Key factors that impact the strategy implementation are leadership, communication, organization structure and culture. Most of the documented tools and methods of strategy management mainly focus on the strategy formulation. This paper explains about the usage of KANBAN boards for strategy implementation at functional level and how it can positively contribute to the key success factors of implementation with an experimental study.*

### Introduction

Successful execution is a key step in strategy management. Many organizations could not maintain their competitive advantages, in spite of the existing process of drafting a strong strategy, due to lack of achievement in the implementation stage. Leaders and top management of organizations need to pay more attention to strategy implementation due to the higher failure rates that occur at this stage. (Abdullah H. Alharthy et al., 2017) Literature reviews show that the implementation aspects have been overlooked and most of the research had been carried out in the formulation of strategy (Abdullah, Patrick and Hamad 2016).

The implementation of the strategy happens at multiple levels and functional strategy implementation is the lowest level of strategy implementation. While strategy deployment methods may have to be improved in all levels of organization, this paper in particular, details the functional strategy implementation using digitized KANBAN methodology.

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## Literature Survey and Discussions

Literature study was done from four aspects: a) The levels of strategy management b) Tools / Methods used for strategy implementation c) Factors affecting strategy implementation d) The success / failure of strategy implementation.

- a. Levels of strategy management:** The process of strategy formulation, implementation and evaluation is critical to any organization. The steps of strategy management process may vary. However, the environmental appraisal, strategy formulation, strategy implementation and measuring the outcomes are quoted by many authors as key strategy steps (Jofre, Sergio, 2011). While the formal strategic management process is parsimoniously accepted in four sequential steps, the strategies are analyzed in three distinct levels: Corporate Level, Business Level and Functional Level.

At the highest level of function and structure, corporate strategies regard broad decisions about the scope, direction and position of the organization in the long-term. In general, this level of strategy formulation defines the organizational growth objectives and the actions to achieve them. Vertical integration, Horizontal integration, Strategic alliances, mergers and acquisitions are some examples of corporate strategies.

The formulation of strategies at the business level instead, broadly focuses on competition. At this level, the main objective is to develop and sustain competitiveness in all the lines of business the organization has decided to participate in (Reuben Maino Daniel, 2015). The key focus is crafting responses to market circumstances and initiating actions to strengthen market position, building competitive advantage and developing strong competitive capabilities. This level of strategy is for the manager in charge of the business (Julius Tapera, 2014).

The formulation of strategies at the functional level (commonly but erroneously restricted to the term 'operational strategies') focuses on tactical goals & actions (commonly plans) to support the implementation of corporate and business strategies. Although each functional unit commonly have a certain degree of independence over strategic choices, each functional strategy must be aligned with the general long-term strategy of the firm. They will commonly regard functional aspects of strategic relevance such as productivity, pricing, logistics, cost-effectiveness, efficiency, product design, product branding and image, product-life cycle, etc.

- b. Tools / Methods used for strategy Implementation:** Strategic management can be conceptualized as a set of theories and frameworks, supported by tools and techniques, designed to assist the managers of organizations in thinking, planning and acting strategically. Strategy tool is a generic name for any method, model, technique, tool, technology, framework, methodology or approach used to facilitate strategy work. These tools are mainly developed by consultants for large international companies (Stenfors et al., 2007).

Many empirical studies have been conducted to analyze the various tools used for strategy management. According to Darrell Rigby and Bilodeau, 2015, regional variation in tool use is significant. China and India used the highest average number of tools in 2014 (8.0) compared with North America (7.2), Europe (6.6) and Latin America (6.2). In terms of sectors, the industries with the highest tool use are transportation and tourism, manufacturing and technology and telecommunications. According to Tassabehji and Isherwood, 2014, the top 10 tools used are : SWOT analysis, Financial forecasting, Vision and mission statements, Scenario planning, Value chain analysis, Porter's five forces analysis, PEST, BCG matrix, ANSOFF analysis, BOS and Game theory. However Darrell Rigby and Bilodeau (2015), differ with another top 10 list: CRM, Benchmarking, Employee engagement surveys, Strategic planning, Outsourcing, Balanced scorecard, Vision and mission statements, SCM, Change management and Customer segmentation. Most of the tools are analyzing data and developing strategic goals and imperatives. From the strategy implementation point of view, a set of required interventions are identified towards developing the Implementation Plan through value stream map or structured brainstorming. The implementation plan is a collection of Programs that will take a year or more to complete or project that can be completed in typically 1 to 12 months or Kaizen Event (taking 2 to 5 days) or "JDI" (Just Do It) that can be corrected immediately.

Another technique called Hoshin Kanri is an implementation method originally developed in Toyota that aims to integrate the company's strategy work and core activities as manufacturing and product development. Hoshin Kanri is widely adopted in Japanese companies but less spread in Western companies. Even though a few companies in the West that have applied Hoshin Kanri have won many reputable awards, Hoshin Kanri has not gained widespread popularity (Tennant and Roberts (2001), Maschek, Thomas & Thurer, Matthias & Deuse, Jochen (2013), Witcher, Barry & Chau, Vinh (2007)).

- c. **Factors affecting the strategy implementation:** The survey study done by Dr. James Rajasekaran, 2014, shows that Leadership is the highest influencing factor in the strategy implementation. In the absence of effective leadership, conflicting priorities will result in poor coordination because employees will suspect that top management prefers to avoid potentially threatening and embarrassing circumstances. Leadership actions are also important to ensure employees' buy-in and directing their capabilities and business understanding toward the new strategy. Another aspect of leadership involves enhancing communication within the organization. Coordination of activities, streamlining of processes, aligning the organizational structure, and keeping employees motivated and committed to strategy implementation are key responsibilities of the leadership. The leadership style in a given organization influences how the chosen strategies will be implemented. Organizational structure, delegation of responsibilities, freedom of managers to make decisions and the incentives and rewards systems will all be influenced by the leadership style in a particular organization.

The second aspect of the factor influencing strategy implementation is Organizational culture. Functional strategy implementation is positively influenced by organizational culture along the dimensions **of learning and development, participative decision making, power sharing, support and collaboration and tolerance for risks and conflicts**, which all form part of an organization's cultural environment.

The third aspect of the factors influencing strategy implementation is organizational structure. Many studies have established the link between organizational strategy and structure by pointing out that one of the challenges in strategy implementation is weak coordination of activities.

**Table 1: Factors Impacting Strategy Implementation**

Factor	Impact	Factor	Impact
Organization culture	28%	Leadership	37%
Systems	9%	Organizational structure	26%

- d. **State of strategy Implementation:** The strategy formulation is prone to the wrong identification of internal and external factors. Even if developed correctly, a strategy is not considered effective until it is implemented and creates value for its organization.

Mas Bambang Baroto, Nader Arvand, Fauziah Sh. Ahmad (2014) point out that, with a simple probability assumption, a strategy may not succeed in 75% of cases. The high percentage of strategy failures is contended by others (Cândido, C.J.F. and S.P. Santos 2015) stating this percentage has decreased in the last two decades and the failures are very context specific.

Mas Bambang et al. (2014) further state from reviews that the problem often occurs during the implementation. The challenging nature of the strategy implementation is studied by few researchers

- 66% of corporate strategies are never implemented
- 95% of staff do not realize their organization's strategy
- Only 63% of financial objectives envisioned by companies' strategies are achieved
- Consequences show that 70 to 90 percent of organizations fail to realize the success of implementing their strategies
- Strategies most often fail due to ineffective execution

A strategy can be well developed but failed to be implemented. Indeed, the strategy implementation is the most challenging and difficult stage in strategic management. Thus, the frequent research problem is: How to execute strategy implementation more effectively.

**Table 2 : Interaction of Strategy Formulation and Implementation**

		Strategic Goal / Plan Implementation	
		Appropriate	Inappropriate
Strategic Implementation	Excellent	Success	Rescue or Ruin
	Poor	Trouble	Failure

It is also important to understand what the typical causes of failure in strategy implementation are. Valentina Ivan<sup>2</sup>?, mag.oec. 2013, quotes from the personal work done, many causes of strategy implementation failures in the areas of time management, organizational structure, organizational culture, resources, leadership and uncontrollable external factors. Some of the causes meaningful to this paper's context:

- Took more time than originally allocated; Inconsistencies in translating long range plans into short term objectives
- Lack in communication, coordination, monitoring and incentive systems
- Activities and tasks not sufficiently defined (inefficient operation planning)
- Poor coordination across functions or divisions
- Lack in measuring performance
- Too few people involved in implementation
- Leaders consider their job is done when they finished with the planning
- Implementation tasks and activities not defined thoroughly detailed

## Discussion

From the above review, the following aspects were derived:

- In Strategy Management, the implementation is the most difficult stage
- The distinction of Corporate, business and functional aspects of strategy formulation and implementation is prevalent and seen as critical to organizational success, specifically in large scale organizations
- While corporate and business strategies focus on competitive edge, the functional strategy focuses on departmental level implementation of the strategy

- The leadership, organizational culture and structure are the key factors that impact the strategy implementation
- The tools and methods focus mainly on strategy formation. Both for the implementation tools set and methods, the research and literature are limited; typically the project management and balance score cards are used to deploy the strategic actions and monitor the impact of actions on the goals. Hosin Kari is used in Japan and in limited fashion in other geographies
- Significant number of strategies are poorly executed. Since the strategy formulation is continuously improved, it is also important to tune the implementation plans
- For successful implementation of strategies, goal alignment between various levels of strategy management, strategy communication, employee buy-in, learning and development, participative decision making, power sharing, support and collaboration and tolerance for risks and conflicts are some of key success factors
- Research and literature is further required for tools, systems and methods that will increase the success rate of strategy implementation
- Kanban (literally signboard or billboard in Chinese and Japanese) is a scheduling system for lean manufacturing and just-in-time manufacturing (JIT). Kanban is an inventory-control system to control the supply chain. Taiichi Ohno, an industrial engineer at Toyota, developed kanban to improve manufacturing efficiency. Much of research on Kanban is in manufacturing area. (Sumitkumar Singh et al., 2017). Recently Kanban is applied in Software development and services. According to Anderson, David J. et.al, Kanban is a method for defining, managing, and improving services that deliver knowledge work, such as professional services, creative endeavors, and the design of both physical and software products. It may be characterized as a "start from what you do now" method - a catalyst for rapid and focused change within organizations - that reduces resistance to beneficial change in line with the organization's goals. No literature could be found in Kanban's use in strategy implementation.

### **About Current Study**

This paper provides an experimental case study on the functional strategy implementation using a digitized Kanban board. The practices around the Kanban based functional strategy implementation is tuned for addressing the issues such as communication, collaboration, manager buy-in, action privatization, continuous tuning and maximizing efficiency of the teams.

The experimental case study is demonstrated with typical Quality Function of a large organization that executes projects for multiple customers. The projects need to be completed on time, within budget and meeting / exceeding customer specifications on functions and quality factors such as performance and reliability of deliverables.

The quality function ensures the project processes are derived from organizational processes for the given project type and provides status visibility to the management. The organization has defined strategic goals and corresponding functional goals. One of the goals is considered for this discussion and given below.

The top priority organizational strategic goals for the given year are

**Corporate Goal:** Build excellence in delivery by reducing high severity project issues to near zero when the scale of delivery in terms of number of projects, the size, the type and geographical spread is expanded further to meet the revenue targets of the organization.

**The aligned strategic goals of the quality function:** Bring project status visibility through open and digitally enabled communication & reporting to all levels of management to address the risks and issues on delivery in time.

**Key Performance measures at functional level:** Eliminate the instances of projects with schedule or cost slippage, poor quality of deliverables (in testing or deployment) and missed service levels that will have an impact for the customers

## Experimental Research Setup

The Strategic goal implementation through the Kanban system is set up with the following key steps:

1. The strategic actions are identified through various techniques such as SWOT analysis, business and organizational strategies. Set of yearly business plan meetings are conducted with the functional leadership team both at business units and corporate level to get the buy-in. The communication is kept open through the short messaging system and mails.
2. The business plan is prepared by the corporate functional team at the first instance and the Kanban Board is prepared on that basis.
3. A web based Kanban system is established with the functional team as user set. A customized Kanboard is used for this experimental study. (Kanboard is an open source software running in Apache, PHP and PostgreSQL database, distributed under the permissive MIT License. The software is mainly developed by Frédéric Guillot. The software website is <https://kanboard.org/>)
4. Each of the strategic goals is developed with a Kanban Board (aka Program) and run-the-function activities (day-to-day to keep the operations running) of the team is created with sub team level Kanban Boards
5. Each strategic action is added to backlog with the expected end date as tiles (aka Projects or Kaizen or Just-do-it). Each strategic action is given an index of priority and an index for ease of implementation. Assignment is done based on the competency of the functional team members or pulled by them based on available bandwidth / competency

6. The tasks for a given action and the team specific assignments are elaborated in the tiles by assignees. The actions move across lanes from design through implementation to completion as it progresses and is updated by the assignees
7. Thumb rules are fixed (for example, effort ratio of strategic actions vs run-the-function activities) for balancing activities as well as maximizing the outcomes. The team works with the Kanban boards on a regular basis with the progress percentage and effort spent
8. The weekly team meeting along with the functional head covers the progress, intra team collaboration and addressing of impediments
9. Through continuous strategic analysis, more strategic actions are added to the backlog
10. Through performance measurements, the number of projects having high severity issues, high exposure residual risks are measured, to find the impact of the strategic actions on the achievement of the goal.

## Research Design

The features of the Kanban Board for functional strategy implementation is illustrated (FIGURE 1) in the following picture with blue circled indicators,

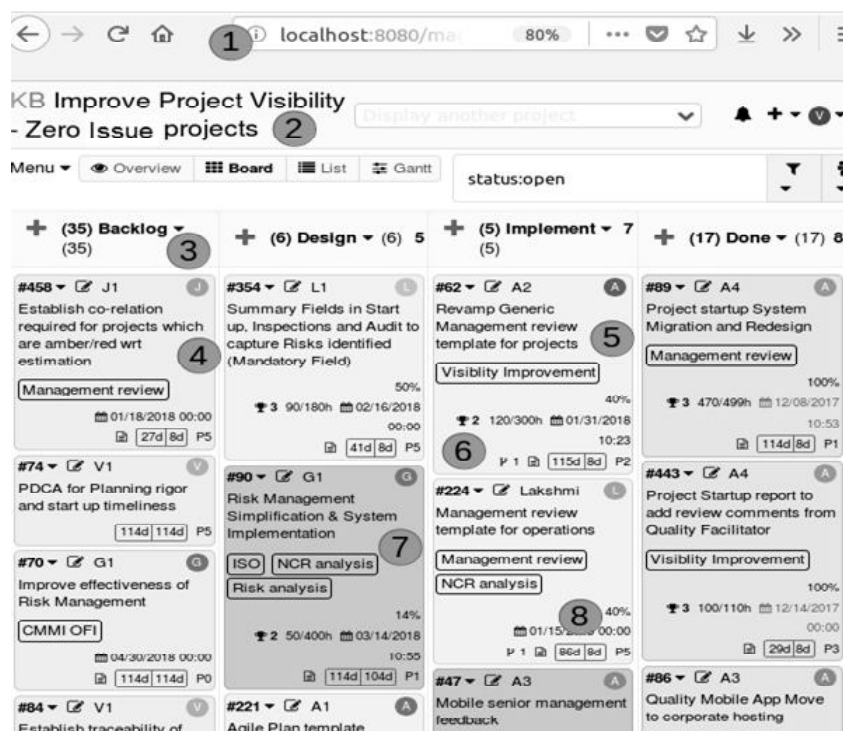
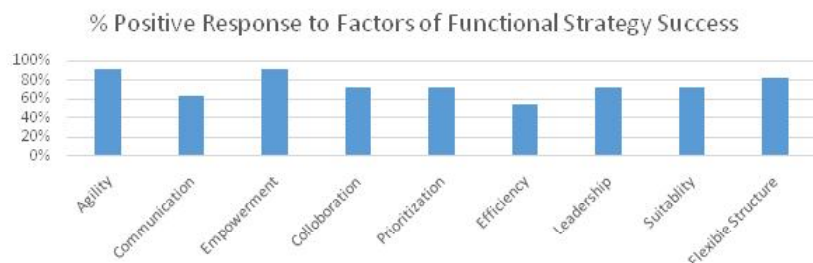


Figure 1: Features of Kanban Board

1. ->Web based and hence can be viewed in any browser and used by all the team leads and members.
2. ->Each board is a program. Here the example is for the strategic functional goal
3. -> Tiles are actions and arranged by Lanes; actions move across lanes.
- 4., 5. -> Each action described in tiles has / expected to have a direct impact on the achievement of goals. These actions are expected to be closed in 3-6 months of time. Actions are further broken down to tasks for assignment and tracking. The Work-in-progress limitations are manually managed by analyzing the number of actions handled by any person. The actions are not expected to have uniform rate of load or progress, as many unknowns hit the way of progress.
- 6., 7., 8. -> The board provides capability to prioritize actions; date lines can be maintained. The tile color changes automatically if the action slips

## Results and Discussions

The Kanban board is implemented with a pilot and full implementation for one year and a survey is done with the functional leads on the effectiveness of the method on strategy implementation. Also the results from the implementation database are analyzed. In general, all factors that contribute to success of strategy is positively influenced by flow based and open management system as Kanban board

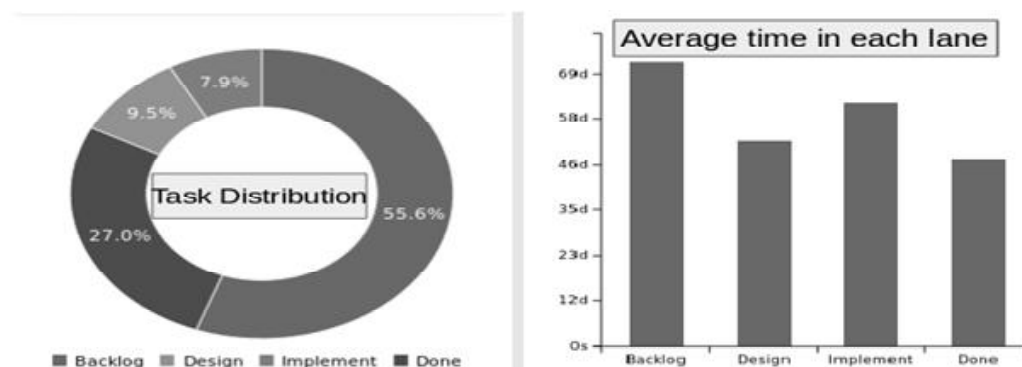


**Figure 2: Summary of Survey Results**

1. An overwhelming 91% of the participants are seeing that Kanban is one of the best agile mechanisms to track the actions (both strategic and run-the-function) in a seamless way. They also feel empowered due to the full visibility of backlog and the ability to pull the actions to design stage by themselves
2. 38% of the respondents still feel that the goal fulfillment cannot be tracked by simple Kanban Board without bringing the performance measures into the board
3. 54% of the respondents feel that their time is better spent than waiting for intra or inter group progress on various dependencies



4. 72% of the respondents feel that internal team collaboration, ability to prioritize the tasks, leadership support to remove impediments have improved. "No one wants to see a red item in their bucket" drives actions
5. 28% of the respondents feel that there are still improvements to be done such as the ability to see full Gantt for large set of actions and executive dashboards that are essential for using the Kanban for business strategy management
6. 81% of the respondents are in favor of Kanban board's capability to have a flexible team structure that accommodates quick changes to actions and goals. The team structure is also maintained as a Kanban board
7. The impact of the completion of strategic actions on the performance target of the strategic goals is measurable. For example over six months of implementation, a reduction of 20% in the projects having high severity issue(s) was noticed
8. The flow of the actions become evident as the time spent on various lanes are more or less uniform as seen in the graph below (FIGURE 3)
9. At least twice the actions which are in design or implementation may be required to keep a good backlog allowing to choose the alternate actions based on the team's capability and priority



**Figure 3: Sample Analytics on Ensuring the Effective Implementation of the Kanban**

As part of computing the cost of a goal the following formula can be used to compute the ROI and NPV values. The board can be augmented to provide the effort spent on the goals on each day.

Net Present Value = Cumulative Discounted tax adjusted cash flow over time of benefit realization  
 - Cost of effort spent on the goal - Cost of non-human capital spent

$$\text{Cost of the effort spent on goal} = \sum_1^{\text{span of day spent}} \left( \sum_1^{\text{persons}} \text{Hoursspentonthegoals} * \text{cost of pereffort} \right)$$

## Conclusions and Further Study

The literature survey clearly indicates the need to improve implementation methods for a higher success rate of strategy. The functional strategy is aligned to corporate and business strategies and implemented as a set of supporting goals. The experimental set of Kanban boards for functional strategy implementation is aimed at bringing participative leadership to strategic implementation with high level of collaboration.

The Kanban system provides a good visibility to the status of strategic actions through multiple boards, color codes, lanes and resource level reports. It is able to increase the team coordination and collaboration. The waiting times for actions are reduced.

Further study can be done on the applicability of Kanban board for business strategy implementation and in association with tweet like communication systems. The automated feed on the real time performance measures can support continuous measurement to achieve departmental goals or business goals or both.

## References

1. Abdullah H. Alharthy, Hamad Rashid, Romano Pagliari, Faisal Khan, (2017), Identification of Strategy Implementation Influencing Factors and Their Effects on the Performance, International Journal of Business and Social Science Vol. 8, No. 1
2. Abdullah H. Alharthy, Patrick McLaughlin, Hamad Rashid, (2016). A comprehensive literature review on the strategy planning, and implementation in large service industry and cultural effects on strategy implementation in Middle East region, The European Business & Management Conference
3. Albana Berisha Qehaja, Enver Kutllovci, Justina Shiroka Pula (2017) Strategic Management Tools and Techniques: A Comparative Analysis of Empirical Studies. Croatian Economic Survey : Vol. 19 : No. 1
4. Cândido, C.J.F. and S.P. Santos, (2015). Strategy implementation: What is the failure rate? Journal of Management & Organization, 21(2), 237-262. DOI: <http://dx.doi.org/10.1017/jmo.2014.77>
5. Darrell Rigby, Barbara Bilodeau (2015), Management Tools & Trends, Bain & Company
6. Dr. James Rajasekaran, (2014) Factors affecting Effective Strategy Implementation in a Service Industry: A Study of Electricity Distribution Companies in the Sultanate of Oman, International Journal of Business and Social Science Vol. 5, No. 9(1);
7. Julius Tapera, (2014) The Importance of Strategic Management to Business Organizations, [www.theinternationaljournal.org](http://www.theinternationaljournal.org) > RJSSM: Volume: 03, Number: 11,
8. Jofre, S, 2011 Strategic Management: The theory and practice of strategy in (business) organizations. Kgs. Lyngby: DTU Management
9. Mas Bambang Baroto, Nader Arvand, Fauziah Sh. Ahmad (2014), Effective Strategy Implementation, Journal of Advanced Management Science Vol. 2, No. 1 Maschek, Thomas & Thurer, Matthias & Deuse, Jochen. (2013). A Structured Approach for the Operationalization of Strategy Deployment (Hoshin Management). Conference: Integrating Practice in POM Research and Teaching

10. Reuben Maino Daniel, (2015). ASIAN JOURNAL OF MANAGEMENT RESEARCH, Revisiting the strategic management process through the levels of strategy analysis Volume 6 Issue 1
11. Stenfors et al., (2007) , Executive views concerning decision support tools, European Journal of Operational Research , 181(2): 929 - 938.
12. Sumitkumar Singh, Ronak Soni. Shriyansh Singh, Swapnil Patil, Manojkumar pal, (2017) A REVIEW ON PRODUCTIVITY IMPROVEMENT OF PROCESS INDUSTRIES BY LEAN MANUFACTURING TOOL, International Journal of Scientific & Engineering Research, Volume 8, Issue 4, ISSN 2229-551)
13. Tassabehji R and Isherwood A (2014) Management Use of Strategic Tools for Innovating During Turbulent Times. Strategic Change. 23(1-2): 63-80.
14. Tennant, C. and P. Roberts (2001). Hoshin Kanri: a tool for strategic policy deployment. Knowledge and Process Management, Vol. 8, No. 4 , pp. 262-269.
15. Valentina Ivan?i?, mag.oec. (2013), 1THE BIGGEST FAILURES IN MANAGING STRATEGY IMPLEMENTATION , Social Science Research Network
16. Witcher, Barry & Chau, Vinh. (2007). Balanced scorecard and< IT> hoshin kanri : dynamic capabilities for managing strategic fit. Management Decision - MANAGE DECISION. 45. .10.1108/00251740710745115.

## A Study on the Consumer Behaviour towards Green Marketing Practices -With Special Reference to Coimbatore City

– Dr.D.DivyaPrabha\*

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### Abstract

*The world today is becoming highly aware of the challenges posed to the environment and the resulting problems. An optimistic step towards mitigating the effect of challenges is a shift in the consumer attitude towards a green lifestyle. As businesses have seen this change in consumer attitudes, they are trying to gain an edge in the competitive market by exploiting the potential in the green market industry by incorporating environmental friendly practices in designing, making, packaging, and marketing of products and services as part of the corporate social responsibility. As Indian marketers and consumers have started to understand the importance of green marketing and its resultant benefits, this research is mainly conducted to identify the level of awareness, perceptions, and preferences of consumers towards products that are produced and marketed the green way in Coimbatore city. The results of the study reveal an increased concern of the consumers towards the environment and the different types of environment friendly products purchased by them. The finding of the study also reveals that eco-friendly values of the consumer do not have a significant influence on their decision to purchase green products.*

**Keywords:** : Green marketing, Eco-friendly products, Consumers, Green Value

### Introduction

A world-wide alert in the environmental degradation has compelled today's consumers to become more apprehensive about their buying and consumption habits and the effects that these have on the environment. As consumers have become increasingly choosy and started avoiding products that impact the environment, organizations are adopting green marketing practices not only to meet consumer expectations but also to gain a competitive advantage and establish a strong consumer base. Green marketing also termed as environmental marketing or ecological marketing refers to the marketing of products that are presumed to be environmentally safe. The concept of green marketing includes a wide range of activities such as modifying the product, making changes in the production, packaging and advertising processes while discarding any process that influences the environment in a negative way. Green marketing includes all actions taken to fulfil the needs and requirements of the consumer with minimal disastrous repercussions inflicted on the natural environment.

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In business context, the terms green products and eco-friendly products are used commonly to describe the products that are produced in ways which protect the natural environment by conserving energy/resources and reducing or eliminating the use of toxic agents. This in turn brings down the waste discharge significantly thereby controlling the pollution level. Thus green marketing strategy is adopted by many corporate houses to shift the consumers' opinion when they have to decide on buying a product. All these factors have prompted to take up the present study for analyzing the consumer behavior regarding green products in Coimbatore city.

## **Review of Literature**

Mohammad Azam (2014) in his study on green marketing has identified that corporate people as well as consumers are giving more importance to the issue of green marketing. The corporates have accepted the green production as they have seen a positive interest of the customers with green products.

Rao et al. (2011) suggests that if businesses offer environmental friendly products to consumers at reasonable prices and high quality, consumers will develop positive intentions to purchase them.

Banerjee, 2003; Hay and Lichter 2000 in their study have identified that the overwhelming increase in the overall environmental consciousness among different classes of consumers have encouraged the companies to "go green" by presenting the concept of corporate environmentalism.

Chang and Fong (2010) made a survey of the consumers who purchased environmentally friendly products in Taiwan and found that green product quality and green corporate image could bring greater customer satisfaction and customer loyalty.

A study done by Chase and Smith (1992) revealed that 70% of the consumer purchase decisions were influenced by environmental protection message given in advertising and product labelling.

Patra and Joshi (2009) revealed that the majority of respondents wanted individuals in the society to be socially responsible and take appropriate action to protect the environment.

Gurau, C. & Ranchhod, A. (2005) in their study have identified the issues surrounding the marketing of ecological products in the international marketplace.

Harrison (1993) is of the view that green marketing is the strategy that companies use to position the benefits of green products in such a way that it influences purchasing decisions of consumers.

## **Objectives of the study**

1. To analyze the level of consumer awareness regarding green products and practices.
2. To investigate the consumer perceptions regarding green products.

3. To identify the factors that influences the consumers for buying green products.
4. To identify the type of green products purchased by the consumers.
5. To analyze the influence of green value on the purchase decisions of the consumers.

### Research methodology

The data for the study was collected from various parts of Coimbatore City using convenience sampling method. Field survey was conducted to collect the primary data from 120 respondents using a well-structured questionnaire and also through interviews conducted with the respondents. The secondary data required for the study was collected from the journals and the internet. The data collected from the respondents was tested with suitable statistical techniques.

### Analysis and interpretation

**Table 1: Personal profile of the respondents**

Gender	No. of Respondents	Age	No. of Respondents	Annual Income (In lacs)	No. of Respondents	Educational Qualification	No. of Respondents
Male	54	<30	32	<3	20	High School	8
		30-40	40	3-5	42	UG	64
Female	66	40-50	34	5-10	44	PG	38
		>50	14	>10	14	Doctorate	10
Total	120	Total	120	Total	120	Total	120

Table 1 reveals that out of the 120 respondents, 45% of the respondents were male and 55% of the respondents were female respondents. Majority 33% of the respondents belong to the age group of 30 -40 years, while 11% of the respondents were above 50 years. 37% of the respondents were earning the yearly income between 5-10 lakhs and 35% of the respondents were earning the yearly income 3 to 5 lakhs. Most of (53%) the respondents are educated with undergraduate degree and 32% with master's degree.

**Table 2: Level of awareness about green products**

S. No	Level of awareness	No of respondents	%
1	Completely aware	68	56
2	Partially aware	44	37
3	Unaware	8	7
	Total	120	100

Out of the total 120 respondents, 56% of the respondents were aware of the ecofriendly products, while 37% of them were partially aware and 7% of the respondents were unaware of the ecofriendly products.

**Table 3: Source of information about green products**

S. No	Sources of information	No of respondents	%
1	TV/Internet	49	44
2	Magazines	35	31
3	People at point of purchase	9	8
4	Friends and relatives	15	13
5	others	4	4
6	Total	112	100

44% of the respondents came to know about green products through TV advertisements / internet, 31% of the respondents became aware of the ecofriendly products through magazines/dailies, 8% of the respondents were aware through the salesmen who were present at the point of purchase, while 13% of the respondents came to know about green marketing through friends and relatives. 4% of the respondents came to know about green products through other sources.

**Table 4: Perceptions regarding the prices of ecofriendly products**

S. No	Perceptions regarding prices	No of respondents	%
1	Higher	82	73
2	Same as other products	19	17
3	Not concerned	5	5
4	Lower	6	5
	Total	112	100

Table 4 reveals that a majority (73%) of the respondents feel that the prices of green products are higher when compared to non-ecofriendly products, while 18% of the respondents feel that the prices are same as the non-ecofriendly products. 5% of the respondents were not concerned about the prices, while 5% of the respondents feel that green products are less expensive than the non-eco-friendly products.

**Table 5: Green products purchased by the respondents**

S. No.	Products purchased	No of respondents	%
1	LED lights	43	24
2	5 star energy saving equipment	34	19
3	Solar heaters/Cookers	19	11
4	Wooden toys	4	2
5	Reusable shopping bags	5	3
6	Herbal cosmetics	36	17
7	Recycled stationery	2	1
8	Organic food products	15	9
9	Eco friendly clothing	13	7
10	others	12	7
	Total	183	100

Table 5 shows the different types of green products purchased by the respondents. Majority (24%) of the respondents purchase LED tubes which they feel saves energy consumption. 19% of the respondents purchase the star rated energy saving equipment followed by 17% of the respondents who purchase herbal cosmetics items from soaps to creams. Customers also purchase other items like organic food products (9%), eco-friendly clothing (7%), reusable shopping bags, soft drinks (7%) etc.

**Table 6: Reasons for purchase of eco-friendly products**

S. No	Reasons for purchase	No of respondents	%
1	Health benefits	72	30
2	Good quality & reliability	67	28
3	Promotional efforts	22	9
4	Doctors/friends advice	34	14
5	Brand popularity	12	5
6	Package and design of the product	15	6
7	Proximity and availability of the shop	19	8
	Total	241	100



Table 6 reveals the main reasons for purchase of ecofriendly products. A majority (30%) of the respondents purchase eco-friendly products because of the health benefits. 28% of the customers buy the products because they feel that these green products are of good quality and are reliable. 9 % of them buy because of the promotional efforts of the company and the retailers at point of purchase, 14 % of them buy because of the doctors/friends advice, while 5% of them buy due to brand popularity. 6% of them buy due to the package and design of the product ,while 8 % of them buy if the product is available in their proximal shop.

**Table 7: Consumer perceptions regarding value of being eco friendly**

S. No.	Perceptions regarding the value of being eco friendly	Mean	SD
1	It is important that the products I use do not harm the environment.	4.12	0.58
2	I would describe myself as environmentally responsible	3.96	0.36
3	I am concerned about safeguarding the natural resources of the environment	4.25	0.85
4	My purchase habits is influenced by my concern for the environment	3.78	0.63
5	I am willing to face the inconvenience of being eco-friendly	3.34	0.56
	Overall green value	3.98	0.72

Table 7 shows the perceptions of the consumers regarding the values of being eco-friendly. The respondents were asked to rate their green value in a scale of one to five, and the mean scores indicate that people have a positive attitude towards concern for nature and the importance of buying ecofriendly products.

**Table 8: Influence of green consumer values on purchase decision of green products**

S. No.	R	R Square	Adjusted R square	Standard error of estimate
1	0.453	0.256	0.156	0.768

The correlation coefficient value of  $R=0.453$  suggests that there is a moderate positive correlation between green values of the customers and the purchasing decisions. However only 25.6% (R-square value of 0.256) variation in purchase decisions is influenced by the impact of green consumer values. This implies that there are still other factors which impact the green purchase behavior that remain to be explored in future research.

## Conclusion and Recommendations

In today's competitive environment, businesses are looking towards gaining an edge by redesigning their products to be more environmental friendly. This study on the consumer behavior towards eco-friendly products in Coimbatore city reveals the factors influencing the purchase of

green products which include health benefit, quality and reliability, doctors/friends advice, brand popularity etc. Discussions with the respondents reveal that even though majority of the respondents claim to be aware of green products, the awareness seems to be incomplete and they did not know exactly as to what sort of products constitute the green product list. Barring the energy saving equipment, the real motivation to particularly go for green products is a bit less due to the cost and lack of knowledge. The study also reveals that consumers' decision making process is influenced by the green promotional campaign of the company, and recommendations made by the people at the point of purchase. The marketers therefore have to devise an effective strategy for educating and promoting green products among the consumers. This will help the consumers in better understanding the good effects of eco-friendly products from the perspective of health and environment. Further, such an effort will enable the companies to enhance their goodwill and build a strong brand image in the consumers view point.

## References

1. Mohd Rafi Y and Azman Z (2003), "Customers' Awareness, Perception and Future Prospects of Green Products in Pahang, Malaysia", *The Journal of Commerce*, Vol. 3, No. 2, pp. 1-10.
2. Rao, P., Basha, K. & Kumar, S. (2011). Consumers Perception and Purchase Intentions towards Green Products, 1, pp. 63 - 74.
3. Banerjee, S. B., Iyer, E.S., & Kashyap, R. K. (2003). Corporate Environmentalism: Antecedents and Influence of Industry Type. *Journal of Marketing*, 67(2), 106-122.
4. Chang, N. & Fong, C. (2010). Green Products Quality, Green Corporate Image, Green Customer Satisfaction and Green Customer Loyalty. *African Journal of Business Management*, 4, pp. 2836 - 2844.
5. Chase, D. & Smith, T. K. (1992). Consumer Keen on Green but Marketers Don't Deliver. *Advertising Age*, 63, pp. 82 - 84.
6. Patra, S. & Joshi, S. (2011). Attitude towards the Environment And Green Products: An Empirical Study. *International Journal of Research in Computer Application & Management*, 1, pp. 34 - 41.
7. Gurau, C. & Ranchhod, A. (2005), *International Green Marketing: A Comparative Study of British and Romanian Firms*. *International Marketing Review*, 22, pp. 547 - 561.
8. Harrison, R. V. (1993). Person-environment fit theory: some history, recent developments, and future directions. *Journal of Social Issues*, 49, pp. 253-275.
9. <https://hbr.org/search?term=green%20marketing>
10. <https://hbr.org/1994/07/the-challenge-of-going-green>

## Role of Technology in the Life of the Disabled

– Shriram S Nair\*  
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### Abstract

*Technology, we feel is an amazing tool to drive the differently abled community ahead, across the various walks of life. There have been numerous inventions which have changed mankind forever, helping us achieve massive feats.*

*We are looking at throwing some light into how we could help the disabled get better with the help of this very technology. We think, technology can reduce the gap between the differently abled and the others. And hopefully we will be able to prove it through this paper. Technology, in the form of social media can also help in spreading awareness and that should improve people's understanding about the differently abled.*

*Our work will contain the analysis of real life cases. We feel it is more about understanding what their real problems are. It's important to cater to their needs and find solutions. And that'll be the Prime focus of the paper.*

*Keywords: Technology, Differently abled, Differently abled, Technology, Change, Once again thanking you for the wonderful opportunity. Cheers!*

### Introduction

In this paper we are looking at the role of technology in bettering the lives of the disabled. Tech has indeed lifted our lives from ordinary to extraordinary. But has it really made the change it should have? Has it been able to reach and make a difference to the common man?

Not entirely have we been able to make tech for everybody. The focus has always been on the business and money. The farmers, the fishermen, everybody must be able to get better with technology. Similarly, the differently abled. It is high time that we look at what can be done and what is being done around the globe for them and make a change.

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While talking about making a change, it is important to understand that there are people around the world who have managed to come up with spectacular ideas and now it is about spreading the word. Along with that, the analysis of stats is also important. And we found these stats are convincing enough to prove that the differently abled are already getting better with tech and are finding the different tools made for them effective. So we wish to elaborate on that in this paper.

***Technology has always lent a helping hand for people with disabilities such as visual impairment, speech impairment, people with motion disabilities or disorders etc. There are a lot of apps and gadgets that can help ease the difficulties people with disability face on a daily basis. From providing help with reading despite a visual impairment, to keeping the deaf included in a group conversation, to helping patients with shaky hands have a meal independently, here are some assistive technologies that are helping the disabled get assistance.***

Is a wearable that is also the world's first Braille smart watch. Dot is a practical solution that is more affordable than regular e-Braille devices which may cost thousands, yet still works well for the blind. Dot helps the blind access messages, tweets, even books anywhere and at any time. Technically, this tool functions with six dots on four cells found on the surface of the smart watch. These dots will rise or lower to form 4 letters in Braille at any time. It can connect via Bluetooth to any smartphone then retrieve and translate the text (from an email or messaging app) into Braille for its owner.

## **Talkitt**

Talkitt is an innovative application to help people with speech and language disorders to communicate with someone else. It will translate unintelligible pronunciation into understandable speech so we can understand what they meant to say, despite the speech impediment. Talkitt works in any language: it works by learning the user's pattern of speech first, creating a personal speech dictionary; then Talkitt will identify and recognize the unintelligible pronunciation and translate them into speech we can understand where they need it.

## **Sesame phones**

Mobile phone may have become a common need for everyone, including persons with disabilities. But regular phones are not equipped for the needs of the people with limited mobility and who find it difficult to operate a normal phone. So the Sesame smart phone is a touch free smart phone for people with disabilities. This phone is designed to be used with small head movements, tracked by the front-facing camera. So you can access all the features of a smart phone without even touching the phone. Gestures are recognized as if you were operating a finger to operate it. Voice control is also added to give a real hands free experience to the user.

## **UNI**

UNI is a two-way communication tool for the deaf using gesture and speech technology. This tool works by detecting hand and finger gestures with its specialized camera algorithm, then converting it to the text in very short time to provide meaning of a given sign language. Also equipped is a voice recognition software that will convert speech into text for two-way communication. UNI also enables you to create your own sign language with its sign builder, so it is easy to add custom language to the dictionaries. It is a subscription-based app with two versions, one that requires a data connection and another that doesn't.

## **Liftware**

Liftware is a self-stabilizing handle on which you can attach an eating utensil like a fork or spoon. It is very helpful for patients who suffer from Parkinson's disease or other forms of motion disorders that causes hand tremors. Liftware stabilizes up to 70% of the disruption and helps reduce the spilling of contents from the utensil before food reaches the patient's mouth. Each Liftware comes with the stabilizing handle, a charger and three utensils, a spoon, fork and soup spoon. Each charge can last for several meals and the handle can be wipe down while the spoons and fork can be washed normally.

## **Case Study**

### **Technology in disabled sports**

Bio-mechanics has come a long way in finding solutions through innovative ideas. Other technologies have also contributed. Here, we are going to look at a real life case study which highlights the importance of technology in the lives of differently abled sportsmen. The development of cutting edge devices as well as major advances in engineering have given the differently abled athletes an opportunity to actively participate in sports. The Paralympic games, which had about 400 competitors from 23 countries in the 1960 Games in Rome, has recorded a ten-fold increase in the number of participants. The last Games saw 4000 participants from 150 countries. People compete across a wide range of sport. Prosthetic devices such as artificial limbs or eyes have become much lighter, stronger and more flexible. This is exceptional use of technology. The creation of electronic knees and arms whose movements are triggered by electrical signals generated by nerves in the remaining part of the limbs would have seemed like science fiction. But some committed research has led us here.

This is engineering at its best. Assistive technology includes a lot of adaptive, rehabilitative and assistive devices helping users across different fields. Therefore, technology being able to assist the differently abled is not a far cry from reality. It is definitely the future.

### **Role of the internet and social media**

Well, this in itself is a vast topic. The role of the internet and the social media is colossal in making a change. The internet is growing and it has always been. But the entrance of social platforms

like Facebook, Instagram and Twitter have really changed the way we look at our own ability to communicate. These have opened new ways of communicating. You have the power to tell the world your thoughts and ideas and how people can contribute by being socially responsible. Now, people with disabilities have a much better chance of knowing what people are doing for them. A person from remote location down under can now know about the latest invention to pop up in the Silicon Valley. Such has been the transformation all of us have gone through with the help of the medium. People with disabilities can communicate with people with similar problems across the world. They can team up or consult with doctors, scientists to come up with solutions. And all this is now possible thanks to the internet. Forget the demerits, in reality, the internet has changed the game positively. These platforms also help people in spreading awareness about disabilities. Also the mental stress they people go through is something to take into consideration. We have to get rid of this. So a change in our approach towards them will indeed mean a lot.

Everything is in the mind. Negativities must surely be removed. And the proper use of technology is the way ahead for this matter.

### **Bridging the gap, the key point**

We now know what we can do with technology. It just nullifies a lot of things. This is where technology evens out the difference between the differently abled and the others. The differently abled can come to the forefront or the mainstream and achieve big using computers, applications and gadgets. Now they can compete with the rest. It does not matter if they are not naturally gifted. Technology will enable them to compete and use their special skills more effectively than ever before. There are a lot of people from around the world, who have managed to prove this very fact. It is a big list containing sportsmen, politicians, scientists etc. This is a great argument against articles & books calling technology destructive and hazardous. Technology is good. It just requires proper use. That is our argument.

**Concluding** the paper, we definitely feel that technology can help the differently abled lead better lives. And as we have discussed in the paper, there are enough real life evidences to actually prove the same. All we need is a change in the way we look at tech and a variety of devices which have very much become a big part of our lives. Tech is and must be for everybody. It is about developing higher possibilities and uplifting humanity. Just because someone is disabled, it does not mean they are not talented. After all they are our friends, sisters and brothers too. So let us give them the power they deserve. And relish seeing what they end up achieving. Technology must act as the perfect tool for them to reach greater heights in life.

### **References**

1. [www.hongkiat.com](http://www.hongkiat.com)
2. [www.wikipedia.org](http://www.wikipedia.org)
3. [www.wipo.int](http://www.wipo.int)

## CSR Reporting Practices in Indian Private Sector Banks

– Vidhya B \*

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### Abstract

*Non-Financial Reporting or Sustainability reporting is a tool to collect and present sustainability data to stakeholders. In the 21st century Corporate Social Responsibility is being used to judge the corporate performance and CSR disclosures fall under Non-financial reporting or sustainability reporting. GRI is a global initiative to standardize Non-Financial Reporting which institutions across the globe are adopting, the guidelines are for voluntary use by organizations for reporting on the economic, social and environmental dimensions of their activities, products and services. Keeping in view the importance of banking sector in the economy and the growing importance of sustainability reporting this descriptive and analytical paper aims to analyze and discuss the sustainability reporting practices of Private banking sector in India.*

*For this study secondary information from the annual reports of new private banks in India (banks which came into operation from 1991) for the past 5 years will be collected and analysed using appropriate tool of analysis. Purposive sampling will be used. The results of the study will throw better light on the reporting practices followed.*

**Keywords:** CSR, Sustainability reporting, GRI, Private banking sector.

### Introduction

CSR encompasses a wide spectrum of issues ranging from business ethics, corporate governance and Socially Responsible Investing (SRI) to environmental sustainability and community investment. According to Section 135 of Companies Act 2013 CSR is mandatory for companies in India falling under certain criteria and Rule 8 of the CSR Rules provides that the companies, upon which the CSR Rules are applicable on shall be required to incorporate in its Board's report an annual report on CSR.

Reserve Bank of India in its circular dated December 20, 2007 drew the attention of the banks towards their role in Corporate Social Responsibility, Sustainability development and Non-financial reporting considering the important role they play in financing the economic and developmental activities.

Business Responsibility Report should disclose the responsible business practices by a listed company to all its stakeholders. This is important considering the fact that these companies have

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accessed funds from the public, have an element of public interest involved, and are obligated to make exhaustive disclosures on a regular basis. SEBI, vide amendment dated December 22, 2015 to Regulation 34 (2) (f) of SEBI (Listing Obligations and Disclosure requirements) Regulations, 2015, has extended the applicability of Business Responsibility Reports to top five hundred listed companies from 100 listed Companies based on market capitalisation as on March 31, of every year.

Those Indian Companies that are publishing a GRI report for its operations need not prepare a Business Responsibility Report, but they have furnish the same details to their stakeholders.

Sustainability reporting is a systematic tool to collect and present sustainability data for the managerial process and to stakeholders such as employees, shareholders, customers, local communities, NGOs, investors or financial analysts. It is a tool to upturn transparency and accountability in the issue that traditional financial reporting is not dealing with (INTOSAI Working Group on Environmental Auditing (WGEA), June 2013).

Major providers of sustainability reporting guidance include :a) GRI (GRI's Sustainability Reporting Standards). b) The Organization for Economic Co-operation and Development (OECD Guidelines for Multinational Enterprises). C) The United Nations Global Compact (the Communication on Progress). D) The International Organization for Standardization (ISO 26000, International Standard for social responsibility) and most popularly used is GRI Standard.

GRI is an independent international organization that has pioneered sustainability reporting since 1997. GRI Guidelines can be applied to multinational organizations, public agencies, small and medium enterprises, NGOs, industry groups and others. There are about 7500 companies around the world that use GRI guidelines.

- In 2000 the first version of GRI guidelines were launched.
- In 2002 GRI G2 guidelines were launched.
- In 2006 GRI G3 guidelines were launched.
- In 2011 GRI G3.1 guidelines were launched.
- In 2013 GRI G4 guidelines were launched.
- In 2016 GRI sustainability reporting standards were launched.

Among these guideline providers, GRI's sustainability standards are the popular and worldwide used model across the world (GRI, 2017b; M. H.-U.-Z. Khan et al., 2010; Wikipedia, 2016).

## Objectives

1. To study the CSR reporting practices followed by Indian private banks.
2. To analyse and review the reporting practices in light of Companies Act 2013 and GRI standards.



## Review of Literature

The format, content and detail of disclosures are unregulated. There have been numerous studies in the area of corporate social disclosure and their main source of examination were the annual reports. (e.g. Singh & Ahuja, 1983; Andrew et al., 1989; Lynn, 1992; Savage, 1994; Gray et al., 1995; Kreuze et al., 1996; Nafez & Naser, 2000). Some of these studies use content analysis or disclosure indices to measure the extent of disclosure or to discover if there is a relationship between disclosure and other variables of interest.

The demand for CSR disclosures can be viewed as a result of public's desire for information with the help of which they can evaluate the corporate legitimacy and form an opinion about whether a corporation is right. Most of the corporations voluntarily disclose social information which may take the form of management discussion in annual reports, or separate disclosures may be made. (KPMG, 2005).

The survey by KPMG and sustainability (2008) revealed that the stakeholders use the sustainability reports to understand the company's approach towards sustainability and also to decide which products they can buy, whether they can invest in the company.

Brown et al. (2009) in their study suggest that mainstream institutional investors, NGOs, and the media do not show very much interest in sustainability reports. The reasons include uneven data quality and trustworthiness of reports, selective reporting by companies, as well as excessive and unfocused information. However, this view has been challenged recently. Sullivan (2011) in his study indicated that the investment community is now one of the most important audiences of corporate responsibility reporting.

Menassa (2010) attempted to identify the type and quality of social information disclosed by Lebanese commercial banks, the extent of these disclosures and their relationship with size, financial performance and other chosen variables. This paper used content analysis of annual reports and results revealed that banks attributed a greater importance to HR and product and customer disclosures.

Sanjay Kanti Das (2012), in his study concluded that absence of mandatory provisions regarding reporting of CSR practices further cause negligence on the issue of reporting and further stated that regulatory authorities must envisage the regulations for initiating reforms in reporting practices.

Kshitiz and Amar (2013), in their study on negative banks concluded that disclosures were mostly qualitative in nature. They emphasize on the fact that there is inadequate norms regarding CSR, strongly recommending the development of uniform standards.

Pallavi Sethi (2013) in her study concluded that greater the size, higher the level of social information reported in annual reports, the report revealed that larger the bank better the CSR reporting because of accountability and visibility. They have more shareholder base and stakeholders to whom they are accountable and hence require disclosing more about social responsibility. Profitable companies disclose more in order to legitimize their actions in front of the society.

Mahmud, Biswas, Islam (2017) studied the sustainability reporting practices of the banking sector in Bangladesh and the analysis revealed that reporting practices have been changing from the past five years and few banks are following GRI standards but still there is a long way to go. Banks are showing an emphasis on sustainability disclosure day by day in an effort to measure, disclose and be accountable to internal and external stakeholders in terms of governance, economic, environmental and social aspects including both positive and negative contributions, but are falling short on issues.

In the years gone by corporate responsibility information was considered as "Non-Financial" information and not relevant to include in annual financial reports. The corporate responsibility report that we see today is based on these beliefs. But now times are changing and there is an integration where non-financial information is included in financials. (KPMG 2017)

## **Methodology**

It is a descriptive and analytical study in which CSR reporting by Indian Private Banks is explored.

For this research nine private sector banks were selected. All the selected banks began their operations in India after 1991 and therefore it is purposive sampling. The annual reports, sustainability reports and Business Responsibility Reports of the banks for the past five years (2012-2017) were downloaded from the concerned bank websites.

## Analysis and Findings

### Status of CSR Reporting in Indian Private Banks

Sl. No	Name of the bank	2012-13	2013-14	2014-15	2015-16	2016-17
1.	Axis Bank	Disclosed with limited information.	Disclosed with limited information.	Reported as per Companies Act 2013	Reported as per Companies Act 2013	Reported as per Companies Act 2013
2.	Bandhan Bank	NIL*	NIL*	NIL*	Reported as per Companies Act 2013	Reported as per Companies Act 2013
3.	DCB Bank	Not disclosed	Disclosed with limited information	Reported as per Companies Act 2013	Reported as per Companies Act 2013	Reported as per Companies Act 2013
4.	HDFC Bank	Disclosed with limited information	Disclosed with limited information	Reported as per Companies Act 2013	Reported as per Companies Act 2013	Reported as per Companies Act 2013
5.	ICICI Bank	Disclosed with limited information	Disclosed with limited information	Reported as per Companies Act 2013	Reported as per Companies Act 2013	Reported as per Companies Act 2013
6.	IDFC Bank	NIL*	NIL*	NIL*	Reported as per Companies Act 2013	Reported as per Companies Act 2013
7.	IndusInd Bank	Disclosed with limited information	Disclosed with limited information	Reported as per Companies Act 2013	Reported as per Companies Act 2013	Reported as per Companies Act 2013
8.	Kotak Mahindra Bank	Disclosed with limited information	Disclosed with limited information	Reported as per Companies Act 2013	Reported as per Companies Act 2013	Reported as per Companies Act 2013
9.	Yes Bank	Disclosed with limited information	Disclosed with limited information	Reported as per Companies Act 2013	Reported as per Companies Act 2013	Reported as per Companies Act 2013

*Soruce: Annual reports of the bank*

*\*started operations in 2015*

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**Separate Sustainability Report**

Sl. No	Name of the bank	2012-13	2013-14	2014-15	2015-16	2016-17
1.	Axis Bank	NIL	NIL	In accordance with GRI G4 standard	In accordance with GRI G4 standard	In accordance with GRI G4 standard
2.	Bandhan Bank	NIL	NIL	NIL	NIL	NIL
3.	DCB Bank	NIL	NIL	NIL	NIL	NIL
4.	HDFC Bank	NIL	In accordance with GRI G3.1 standard	In accordance with GRI G4 standard	In accordance with GRI G4 standard	In accordance with GRI G4 standard
5.	ICICI Bank	*	*	*	*	*
6.	IDFC Bank	NIL	NIL	NIL	In accordance with GRI G4 standard	NIL
7.	IndusInd Bank	In accordance with GRI G3 standard	In accordance with GRI G3.1 and G4 standard	In accordance with GRI G4 standard	In accordance with GRI G4 standard	In accordance with GRI G4 standard
8.	Kotak Mahindra Bank	NIL	NIL	NIL	NIL	NIL
9.	Yes Bank	In accordance with GRI G3.1 standard	In accordance with GRI G4 standard	In accordance with GRI G4 standard	In accordance with GRI G4 standard	In accordance with GRI (101) standard

Source: Sustainability reports

\*Separate ICICI foundation report not in accordance with GRI standards.

- From Table I we can see that after the Mandatory norms on CSR as per Companies Act 2013 came into force all the banks under the study are reporting CSR activities as per rule 8 of the CSR rules giving complete details of the projects undertaken, the amount outlay and amount spent on the activities. Earlier the banks were spending on CSR activities but were not reporting the same; the activities were just disclosed in the annual reports without giving detailed information.
- From table II we see that banks except Bandhan and Kotak Mahindra Bank have separate sustainability reports which the banks have started about 4-5 years back. We also see that the sustainability reports in accordance with GRI standards.
- ICICI bank reports its CSR and sustainability activities in a separate report called ICICI foundation report, this report gives complete details of the activities but is not in accordance with GRI standards.
- Kotak Mahindra Bank reports on its CSR and sustainability activities in the Business Responsibility report.
- Bandhan Bank reports on its CSR and sustainability activities in the Business Responsibility report.

- DCB bank neither has a Business responsibility report nor a sustainability report.
- Sustainability reports of Axis, HDFC and Yes bank are externally assured by KPMG (registered) India.
- All the banks mention the CSR activities and sustainability activities in their websites.

## **Conclusion**

- Emphasis on sustainability disclosure is increasing day by day in order to be more accountable too stakeholders in terms of governance, economic, environmental and social aspects including both positive and negative contributions.
- Demand for sustainability reports from different quarters is helping organizations manage their social and environmental influences and is improving operational efficiency.
- We see that after the mandatory CSR policy introduced by Companies Act 2013, there has been tremendous change in reporting CSR activities with a proper CSR policy in place.
- Though CSR reporting is done by banks it fails to give the complete picture of what the banks are doing on the CSR front and its impact cannot be measured.
- Even after necessary steps taken by the government sustainability reporting is still in the infancy stage and this can be attributed to certain barriers like unclear and rapidly evolving reporting standards and frameworks, the topics to be covered , cost, time and expertise required etc to mention a few.
- Since the standards are voluntary in nature not all banks follow the same and therefore it becomes difficult for comparison

## **Recommendations**

- As seen in the conclusion there are different sustainability reports standards and it becomes difficult for the banks to chose the best from them, therefore Indian policy makers can take a decision as to which standard as to be followed.
- Since the breadth of topics is more and one reporting standard does not fit all the countries, there can be a separate standard for Indian Companies in line with the international standards so that comparison of two reports becomes easy.
- Scope of the reporting standards has to streamlined according to needs of Indian companies.
- There should be training and education of management and employees responsible for the report.
- Banks that are already practicing sustainable disclosures should make more contributions.

## References

1. Mahmud.S, T.Biswas, and I. Nazmul, 2017, Sustainability Reporting practices and implications of Banking sector of Bangladesh according to Global Reporting Initiative(GRI) reporting framework: An empirical evaluation,6(3), pp 01-14
2. Sabeena.A and Krishnmoorthi. N, 2016, CSR practices and CSR Reporting in Indian Banking Sector, International Journal of Applied and Advanced Scientific research, 1(1)
3. Brown, J., & Dillard, J. (2014). Integrated reporting: On the need for broadening out and opening up. Accounting, Auditing & Accountability Journal, 27(7), 1120-1156.
4. Kshitiz. U and Amar. D, 2013, Corporate social responsibility reporting practices in the banking sector of Nepal, Banking Journal,3(1).
5. Sethi.P, 2013, Social reporting by Indian Banks and foreign Banks-A comparative analysis, IOSR- Journal of business and management, 15(3), pp 45-53
6. Kanti.S, 2012, CSR practices and CSR reporting in Indian Financial Sector, International Journal of Accounting and Financial Management Research 2(3), pp 33-55
7. Tewari.R, 2011, Communicating Corporate Social Responsibility in annual reports: A comparative study of Indian companies and Multi-National Corporations, Journal of Management and Public policy, 2(2).
8. Sullivan, R., 2011. Valuing corporate responsibility. How do investors really use corporate responsibility information? Greenleaf Publ, Sheffield.
9. Khan, M. H.-U.-Z., Islam, D. M. A., & Ahmed, K. (2010). Corporate Sustainability Reporting of Major Commercial Banks in line with GRI: Bangladesh Evidence. Paper presented at the 6th Asia Pacific Interdisciplinary Research on Accounting (APIRA) Conference, Sydney, Australia.
10. KPMG. (2005). KPMG International Survey of Corporate Responsibility Reporting (pp. 1-55). Amsterdam: University of Amsterdam and KPMG Global Sustainability Services.
11. Nafez, A.B. and Naser, K. (2000). Empirical evidence on Corporate Social Disclosure practices in Jordan. International Journal of Commerce and Management, 10(3), 18-34.
12. Kreuze, J.G., Newell, G.E. and Newell, S.J. (1996). Environmental disclosures: what companies are reporting? Management Accounting, 78(1), 37-46.
13. Gray, R., Kouhy, R. and Lavers, S. (1995a). Corporate social and environmental reporting - a review of the literature and longitudinal study of UK disclosure. Accounting, Auditing and Accountability Journal, 8(2), 47-77.
14. Savage, A.A. (1994). Environmental reporting: Stakeholder's Perspective, Port Elizabeth. University of Port Elizabeth, Working paper 94.
15. Lynn, M. (1992). A Note on Corporate Social Disclosure in Hong Kong. British Accounting Review, 24, 105-110
16. Andrew, B.H., Gul, F.A., Guthrie, J.E. and Teoh, H.Y. (1989). A note on corporate social disclosure practices in developing countries: the case of Malaysia and Singapore. British Accounting Review, 21 (4), 371-376

17. Singh, D.R. and Ahuja, J.M. (1983). Corporate social reporting in India. *International Journal of Accounting Education and Research*, 18(2), 151-169.
18. [www.kpmg.com/crreporting](http://www.kpmg.com/crreporting).
19. [www.axisbank.com](http://www.axisbank.com)
20. [www.bandhanbank.com](http://www.bandhanbank.com)
21. [www.dcbbank.com](http://www.dcbbank.com)
22. [www.hdfcbank.com](http://www.hdfcbank.com)
23. [www.icicibank.com](http://www.icicibank.com)
24. [www.idfcbank.com](http://www.idfcbank.com)
25. [www.indusindbank.com](http://www.indusindbank.com)
26. [www.idfcbank.com](http://www.idfcbank.com)
27. [www.kotak.com](http://www.kotak.com)
28. [www.yesbank.com](http://www.yesbank.com)
29. [www.globalreporting.org/](http://www.globalreporting.org/)

## Value Stream Mapping to Identify the Impact of Waste in the Process

– Dr.Veda D. Malagatti\*

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### Abstract

*At the beginning Value Stream Mapping (VSM) was used as a methodology which identifies waste time and unneeded actions occurring in the process. But now a day's VSM is being used as a re-engineer business for identifying the unnecessary work and resources being used for the process of the operation. This study is about the Akshaya Patra Foundation, a non-profit organization with the vision that no child shall be deprived of education because of hunger, runs the largest mid-day meal program in the world. The main objective is to find process cycle efficiency as well as the process lead time of production by using VSM. The Problem definition is that, since 2016 the product cost is increasing above Rs.3.06 per meal which is effecting the operating cost of the company. Due to this increase, the strategy to monitor the performance by using VSM method becomes crucial, the design of the System of Core Competencies has to be adapted to provide the Scalabililt and Service to inturn ensure its Sustainability. The main goal of this is eliminating the rigorous impact of the waste by using the strategy of Muda, Muri and Mura.*

*Keywords: Mapping, Waste, Strategy, Impact, Control.*

### Introduction

Value Stream Mapping is the primary map indicating the flow of materials along with the process of operations for meeting the end product. The map represents the current key measurements which can be used for not only benchmarking but for improvement in the activities of operations. Usually it is pivotal essential in the manufacturing process where the information about the flow of material that is scheduled, the stations for services to keep the smooth flow is planned and the point of administration to indirectly control it is sketched out. The primary objective of this mapping is to manufacture with least waste in the process and to enhance the productivity with efficiency. It aids to identify the bottleneck, replications, and repetitions that reduce the magnitude of the operations. Value stream mapping is the start-up stream established as per the customer's requirement. It is a key for measuring the elements and the count of inventory to keep the stable flow of operations. The typical data varies

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with context to the product and use smallest time measurement feasible for products like seconds, minutes, hours, days etc.. The ratio of Cycle time, Changeover time, lead time for leveled production time, Scrap rate of operators, Pack size available time etc related to layout, scheduling and processing programmes. It implies five simple principles:

- Specify value from the standpoint of end customer
- Identify the value stream for each product family
- Make the flow of the product effective
- Manage the Lead towards the perfection
- It usually represents a Pull strategy.

Benefits are:

- We can visualize the entire process within the framework as it act as the stimulation Model.
- There exists a course of Common Language which is humorous.
- It is like amplifier which demonstrates the link between the operations.
- As it is the iterations illustrating the continuous flow for further improvement if higher level of wastage is identified. The decision making process becomes much faster for taking accurate decisions.
- Benchmarking with the best practice in the industry would aid for designing the structure for further modification.

## **Statement of Problem**

Akshaya Patra implements the Mid-Day Meal programme in 32 locations of 12 states of India. Each day the Foundation feeds 1.5 million children covering more than 10000 Government Schools. Akshaya Patra's combines a good management, innovative technology and smart engineering to deliver school lunch for a fraction of the cost of similar meal programs in other parts of the world - it costs \$28 to feed a child daily for the entire year. With an average government subsidy of 50%, \$28 can actually feed two children. The problem statement is to reduce the Cost of Production by identifying the maximum waste producing process, rectify them to shorten the lead time, and improve the capacity to bear the cost @ \$20 without Government subsidy.

## **Research Methodology**

### **Organisation of Research : Akshaypatra, ISKON, Dharward**

The Akshaya Patra Foundation, a public-private partnership which is a non-profit organization with the vision to support the most significant programmes namely SarvaShikshaAbhiyan and Mid-

Day Meal Scheme prepares nutritious meal hygienically and caters for the local appetite -the school children in Government schools who shall not be deprived of education because of hunger. The Foundation follows both centralised kitchen format in 32 locations and decentralized kitchen formats in 2 locations as a model infrastructure for large scale production to implement the programme. Akshaya Patra Dharwad, was established in 2004 and is the largest kitchen, located in Hubli-Dharwad that prepares meals for 1,85,000 children in less than 5 hours. Food stocks are sourced from local farmers, insulating the program from external price shocks and employs local workers.

**Primary Data collection Method:** Observation and Participation in noting the timings for each activities of Pre-cooking & Cooking process.

**Data collection Parameter** - Matrix, Takt time, Cycle time, Customer's Demand, Manpower, Total Output. Takt Time=Effective working time per shift/Customer requirements per shift

**Tool used for Assessment and Analysis:** Value Stream Mapping Software namely Quality Companion 3.

**Format for collecting Primary Data:**

ACTIVITIES FOR Pre-Cooking	OUTPUT	Total Time	TOTAL TIME in secs	CYCLE TIME	CUSTOMER'S DEMAND	TAKT TIME	SEGREGATION	CHLORINATION
Total	703.125	69.647	250729.2	121731.729	784.75	63734.7	1454.315	15339.21
ACTIVITIES FOR Pre-Cooking	STORING	CLEANING	CHOPPING/CUTTING	GRINDING	TOTAL MANPOWER	LEAD TIME	TOTAL VA TIME	Average Process Waste
Total	10442.73	35222.1	34817.175	3889.97	369	397135.6	121731.721	312.9175
ACTIVITIES FOR Cooking	OUTPUT	Total Time	TOTAL TIME in secs	CYCLE TIME	CUSTOMER'S DEMAND	TAKT TIME	SEGREGATION	CHLORINATION
Total	4115	86.81	312516	11143.9702	5230	7156.581	0	0
ACTIVITIES FOR Cooking	STORING	CLEANING	CHOPPING/CUTTING	GRINDING	TOTAL MANPOWER	LEAD TIME	TOTAL VA TIME	Average Process Waste
Total	0	0	0	0	160	1.9261734	11143.9702	39.415

**Pre-Cooking** activities includes segregation, chlorination, cleaning, chopping of vegetables, grinding of masala and storing them. **Cooking** activities includes Dividing of Masala, loading of vessels,

washing of Rice+Tur dal, heating of Oil, seasoning of Jaggery, Tamarind, Preparing Boiler for steam required for cooking, Vessel loading and unloading and Labelling of vessel for dispatch.

## Objectives of Research

are structured into the Hypothesis and it is further tested with relevant tests:

1. **H0:** The Operating Cycle is efficient enough to meet the customer's demand

**H1:** The Operating Cycle is efficient enough to meet the customer's demand

As per the Pearson value between Lead time and the Takt time is 0.99 and the FTest between the Cycle time and Lead time is 0.076 which is within the Critical value of  $F=2.37$  @ 5% level of significance

which is acceptable. Pearson Value between the Total output and Customer's Demand is 0.90 which proves that the variance of 10% donot refrains from meeting the customer's demand.

**Table 1: Illustrating the TTest for Parameters of Processing**

<b>ACTIVITIES FOR</b>	<b>Pre-Cooking</b>	<b>Cooking</b>	<b>Ttest</b>	
Total Time In Secs	250729.2	875761.2	0.25957	<b>Accept</b>
Customer's Demand	251629.2	870541.2	0.057637	<b>Accept</b>
Takt Time	490748.4	614592	0.406697	<b>Accept</b>
Total Manpower	603158.4	488592	0.375575	<b>Accept</b>
Lead Time	608641.2	480492	0.368551	<b>Accept</b>
Total Va Time	594961.2	479412	0.320596	<b>Accept</b>

The Critical Value of Student T's @5% level of significance with Degree of Freedom is 1.671. As all the TTest values are within the range of Critical value, we accept the Null Hypothesis indicating that there is no much error in the Operation from Input till the dispatch of output.

2. **H0:** The Factors donot have immense impact on the operation of production

**H1:** The Factors have immense impact on the operation of production

Table 2: Showing Factor Analysis using Centroid Method

<b>Matrix of Factor Cross Products</b>					
<b>Factor loading</b>	<b>0.4446</b>	<b>0.4461</b>	<b>0.6367</b>	<b>0.4661</b>	<b>0.3482</b>
<b>0.4446</b>	0.1976	0.1983	0.2831	0.2072	0.1548
<b>0.4461</b>	0.9965	1.0000	1.4274	1.0448	0.7806
<b>0.6367</b>	0.2831	0.2840	0.4054	0.2968	0.2217
<b>0.4661</b>	0.2072	0.2079	0.2968	0.2172	0.1623
<b>0.3482</b>	0.1548	0.1553	0.2217	0.1623	0.1213
<b>Matrix of Residual Coefficient</b>					
	1	2	3	4	5
1	0.8024	0.3790	0.2598	0.2411	0.4421
2	1.1772	0.0000	1.5253	1.0888	0.4134
3	0.2598	0.3820	0.5946	0.0568	0.4155
4	0.2411	0.2519	0.0568	0.7828	0.2330
5	0.4421	0.2118	0.4155	0.2330	0.8787
Col Total	2.923	1.225	2.852	2.402	2.383
	11.784				
	3.4329				
	0.851	0.357	0.831	0.700	0.694
<b>Determination of Commonalities &amp; Eigen Values</b>					
<b>Variables</b>	<b>Factor Loadings</b>		<b>Commonality</b>		<b>Total Comm</b>
1	0.4446	0.851	0.198	0.725	0.922
2	0.4461	0.357	0.199	0.127	0.326
3	0.6367	0.831	0.405	0.690	1.096
4	0.4661	0.700	0.217	0.490	0.707
5	0.3482	0.694	0.121	0.482	0.603
			1.141	2.514	3.654
			0.2281	0.5028	0.7309
			0.3121	0.6879	1

In the above table, the factors considered are the ones that have impact on the process of production and the factors taken into consideration are Customer's demand, Lead Time, Total Manpower Supply, Total Value-added Time, and the Average Process Waste. As per the Factor Analysis using the Centroid Method the loading of factors is 0.31 in context to the Residual Factor loading which accounts for 0.6879. This proves that Factors donot immensely impact the flow of process of operation and we accept the Null Hypothesis.

### 3. H0: The Production of waste donot effect the Lead Time

#### H1: The Production of waste effects the Lead Time

The Correlation between the Lead time and the Wastage produced during the process is  $=-0.036$  but the Pearson value is 0.74 which is positive as well within the limit of +1. The dilemma is whether to accept the Null hypothesis or the Alternate. Though there is no correlation between the Lead time and the waste produced during the process we accept the Null hypothesis indicating that production of waste during the process donot hamper the Lead time based on the Pearson value. Further to justify the above decision, the P-Control Chart was used for assessment, the calculated values are  $p=0.0030$ ,  $q=0.9970$ , Lower Control Line(LCL)= -4.5 and Upper Control Line(UCL)=6.4. All activities related to Pre-cooking and Cooking except the cleaning of Chilly and Ginger is beyond the UCL, yet the Pearson value is acceptable and henceforth we accept the Null hypothesis. (pcontrolchart is  $\bar{p} \pm 3\sqrt{\frac{\bar{p}(1-\bar{p})}{n}}$ )

### 4. H0: The Expected value of Lead time would not help us to improve

#### H1: The Expected value of Lead time would not help us to improve

The FTest is the two-tailed probability that the variances between the Total Process time and Cycle time is 5.740 which is beyond the Critical value of  $F=2.37$  @ 5% level of significance and hence Null hypothesis is not acceptable indicating that they are significantly different. Further it visions the scope of improvement in the system by identifying the activity with high probability of lead time and reduce it to short. The Poisson distribution of Average Process waste is 1.3 where mean is 0.7580 and the probability @  $r=1.3$  are  $p(1)=0.2725$ ,  $p(2)=0.3543$ ,  $p(3)=0.2303$ ,  $p(4)=0.0998$ ,  $p(5)=0.0324$ ,  $p(6)=0.0084$ ,  $p(7)=0.0018$ ,  $p(8)=0.0003$ ,  $p(9)=0.0001$ . These probability values are used to calculate Expected value for each activity. The process of waste is high for Chilly, Tur dal washing, Bean Washing, Ladies finger and Potato. When we analyse these summation of expected probabilities for Lead time, than ranking for five highest activities for Pre-cooking process are Hirekai, Chilli, Pudina, Potato, and Sorekai respectively. Similarly, ranking for five highest activities for Cooking process are during Boiler washing, Sambhar cooking, Oil heating, Seasoning for Jaggery mixing for Sambhar, and Item dividing of Masala respectively. During Pre-cooking process activities of segregation, chlorination and cleaning of vegetables take too much of time and during cooking process, arrangements take too much of time. Improvement should be aligned with Technology during heating of Boiler and Time Layout of Scheduling for Washing, Seasoning, etc., is a crucial one. Lean Management, Total Quality Management, Six sigma etc. would be very spurious one to reduce the cost of operation too.

## Conclusion

- Muda (waste): In this system, Excess /Unnecessary motion during Pre-cooking process, Waiting during Cooking process is high.
- Muri (overburden): Actual Cycle time is less than the Total time taken for per Output.

- Mura (unevenness): Lot of time is involved due to rework, repetition of activity and preparation during Pre-Cooking Process.

## Suggestions

**Table 3: Suggestions for 5 s'**

	<b>SEIRI (Organisation)</b>	<b>SEITON (Neatness)</b>	<b>SEISO (Cleaning)</b>	<b>SEIKETSU (Standardization)</b>	<b>SHITSUKE (Discipline)</b>
<b>Strategy</b>	Kaizen system to reduce waste	Avoid of rework, repetitions, replications	Identifying the bottlenecks using Critical Path Method for its elimination	Work Study, Time Study, (Ergonomics)	Quality Function Deployment
<b>System</b>	Quality Management System to evenly control variances	Kanban System for inventory to save time	Reduce the defects identified by using the Control Charts.	Enterprise Performance Measurement System	Quality Circles and Theory Y for reducing errors
<b>Service</b>	Function Analysis System Technique	Preventive Maintenance System	Performance/Program me Evaluation Review Method to measure effectiveness	Motion study for accurate & quick work	Human Capital Management to use professional talents
<b>Scalability</b>	Manufacturing Process Validation	Fish-Bone diagram to study cause-effect relationship	Theory of Constraints	Maximization and Optimization Method for Benchmarking	Process control system (Poka Yoke)
<b>Sustain-ability</b>	To implement World Class Quality	Operational Control for Build-in-Quality	Error Proffing	Total Quality Management System for sustaining the quality	Product quality Standards for gaining Loyal Customers

## References

1. [Businesscasesstudies.co.UK>BSI>creatingworldclasstandards](http://Businesscasesstudies.co.UK>BSI>creatingworldclasstandards)
2. [Blog.Insresearch.com/world-class-quality](http://Blog.Insresearch.com/world-class-quality)
3. [www.cliffnotes.com -world-classquality:ISO9000certification](http://www.cliffnotes.com -world-classquality:ISO9000certification)
4. [www.amazon.com/the power of ultimate Six Sigma](http://www.amazon.com/the power of ultimate Six Sigma)
5. [www.isixsigma.com](http://www.isixsigma.com)
6. [www.dtic.mil](http://www.dtic.mil)
7. [www.eduavet.eu/asq.org/qic/display-item/index](http://www.eduavet.eu/asq.org/qic/display-item/index)
8. [www.industryweek.com](http://www.industryweek.com), What is World Class Manufacturing & how do you measure it.

## Adoption of E-Commerce Marketing on Agricultural Products

– S. Dharanidharan\*  
– V. Praveen Kumar\*\*  
– P. Abishek\*\*\*

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### Abstract

*This is an era of digitalization. Every sector had been brought into this digitalization, and agriculture also growing with the help of IT. As many of the agricultural lands are located in rural areas, to help the farmers in good output and to enjoy many benefits they are advised to use the latest agricultural technologies. By using these technologies it will be very easy for the farmers to fix rate for their product. The government and private sector can implement the e-service to the farmers which would help them to trade in online. It will create awareness among them to trade on online and helps the agriculture marketing in well defined. In day to day life farmers face many issues, like improper plant growth, fixing price etc. Those problems can be rectified and fixed by this system. At last the products details and its current status are updated and the government and private sector can buy the products through this e-service. Even though it is already implemented it doesn't make much impact in India. Thus online trade marketing helps the farmers to change their life style in high-tech farming.*

*Keywords: e-service, high-tech farming, government and private sector, financial struggles, potential development*

### Introduction

Now a day's e-commerce became the key features for all consumer buying products and online trading made also easier. Based upon the two major models of e-commerce B to B and B to C are used. Creating awareness on online marketing among the farmers will help the farmers in good output, and also they enjoy many benefits. Quality of the product can be directly detected by the consumer. The vision and mission of the agricultural products price vary for each state and each district. Based upon the trading the mediator fixes the price and gains the profit more than the farmers. But business to consumer plays an important role in consumer buying product. The agricultural products or goods which are placed can be easily determined. There are e-commerce companies who have already started selling agricultural products. Even the agricultural products are product in online with less number. In India 72 percent of the people lie on the basis of agriculture. The Expected prices which are determined after the harvesting are not determined by them. Thus the below function or system can be made for the farmers to utilize the proper economic growth of the nation.

## **Review of Literature**

Yaping Huo and Huiping Mu (2017) in his study entitled "Research on the Development of E-commerce Model of Agricultural Products" stated that the current problems of e-commerce of agricultural products in China. The author have analyzed the classic case of e-commerce in the different patterns and then summarized the differences between the models and links. Finally, some suggestions were put forward from three different perspectives farmer (or rural cooperatives), e-commerce enterprises and government.

Xin-Zhi Tang, Ai-Tong He<sup>1</sup> and Meng-Wei Chen(2016) in his study entitled "A Study of the Status and Strategies of Agricultural Products E-commerce in China" stated that the dilemma in agricultural E-commerce development in China and mainly analyzed agricultural products E-commerce of our country by integrating theory with practice.

Sumitha Thankachan and Dr. S. Kirubakaran (2014) in their study entitled "A Survey Conducted on E-Agriculture with Indian Farmers" stated to generate the advice by using the modern agriculture which is highly knowledge for the farmers. On the basis of developing the knowledge mobile Sms are utilized for the farmers for the guiding them.

N. Jamaluddin (2013) in his study entitled "Adoption of E-Commerce Practices among the Indian Farmers and A Survey of Trichy District in the State of Tamilnadu, India" stated that the reliability of the scale developed to capture the perception of farmers regarding the benefits and constraints in usage of Internet information and measure the influence of e-commerce usage on farming practices. And also identify the impact of constraints in adoption on benefits of e - commerce application for farmers.

## **Objectives**

- To adopt e-commerce in agricultural products.
- To create awareness among the farmers about the advantages and guidelines of using e-commerce.
- To offer suggestions to the government for effective implementation of agricultural e-commerce

## **Overview of E-Commerce In Agriculture**

Generally, e-commerce had evolved all the sectors in and around the world. In US the e-commerce in agriculture had started in 2000 itself. The government of US created a website on exploring the agricultural products in the website. Chinese giant Alibaba and JDare the two e-commerce companies which are doing services in all type of sectors. They follow supply chain logistics to carry the products to the customers. In India there is some e-commerce start-ups like Agriguru, omnivore partners, kisan point, bighaat etc, which are not utilized effectively and most of the company have started marketing the organic products. There is no proper awareness among the farmers. The idea



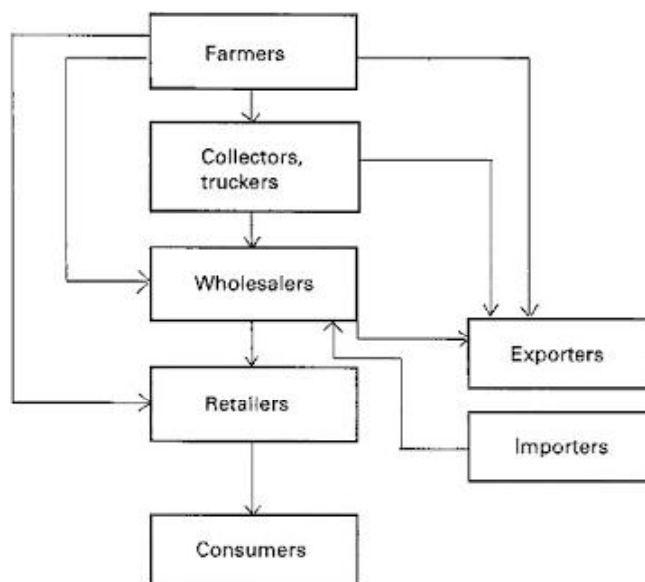
and system of utilizing have not gone to the all farmers and trust upon the marketing lacks. Even though many apps are exclusively developed for farmers that is not user friendly, as they are in the rural areas they need some training for using such apps.

### Current Methods of E-Commerce In Agriculture

1. **Business to consumer (B2C):** Participation in e-commerce requires that both buyers and sellers have access to the Internet and that they are able to use the required hardware and software effectively.
2. **Business to Business (B2B):** B2B transactions such as buying, selling, trading, delivering and contracting seem to be natural targets for conversion to e-commerce. Keeping the base as business to consumer nowadays the selling of the products has started in all sectors. Even agricultural goods have started but, the products which are bought are not trusted by the consumer. As the agricultural products are traded and price are fixed by the mediators the goods quality made consumer to predict in negative way.

### Marketing and Distribution of Agro Products In India

Agricultural products like whole grains are harvested and taken to the daily markets and weekly markets and then distributed to consumers. And also it is distributed to other states. Based on the market need the demand occurs for agricultural products and based on the output price is fixed in the market.



## **Awareness of Government Policies Among Farmers**

The policies which are made by the government are not directly utilized by the farmers. Most of them are not aware of any policies made by the government. And many of them started to oppose the policy without knowing the benefits of it. So the centres for each Panchayat can be created. The usage and the effective of growing the farmer's wealth on farming can be improved.

As the India's wealth mainly depends on the GDP (gross domestic products) we need to improve in maximizing the agricultural farming and marketing of the goods. In agriculture, the B2B and B2C categories of transactions can use Internet in Agriculture, Remote service and Maintenance referred to as agribusiness-to-agribusiness (A2A) and agribusiness-to-grower (A2G). The development of e-commerce in agriculture can be linked with the adoption of the Internet mainly by the farmers. The centres and awareness program by government and students may also help their children's in farming and effective utilization of the policies.

## **Proposed System**

### **Implementation of Systematic Scheme for Farmers**

Already there are schemes and measures like having toll free numbers for any cultivation problems, crops fertility problems etc. But it has not made any growth or development for farmers. When they use the online trading it will be easy for the farmers to utilize the benefits and growth among the farmers. The steps for the systematic schemes,

**STEP 1:** The centres are made in every panchayat of villages. A Separate ID is created for each farmers based upon large, medium and small scale of harvesting. It is made as permanent ID for them. The data of the products are entered for which there are preferred to start the cultivation.

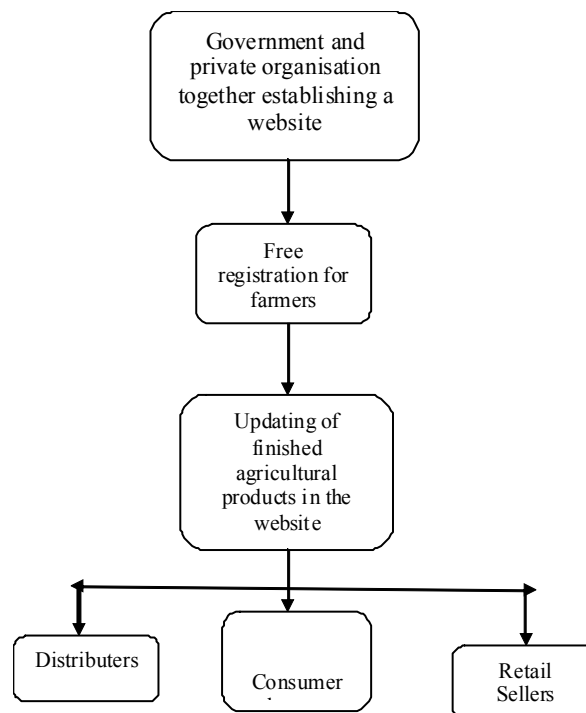
**STEP 2:** The cultivation processes are updated minimum of three times in the month. So that the growth and problems faced are directly guided. As centres are made the farmers can rectify and clarify the problems. The app which is made especially for the farmer's utilization makes to believe the trust upon the government.

**STEP 3:** The finished agricultural products data are updated in the online. The price for the products can be fixed by them. Based upon the finished products the rating can be made which will be useful for determine the price. The main function of utilizing e-commerce is marketing and rectifying the problems faced by the farmers.

**STEP 4:** The combination of private and government sectors they can directly buy the products from the farmers and sell them to the consumer. Already there are some private companies like big basket explore the product using the limited amount of sales in the market. So, based upon the criteria selection of the data and quantity there can be bought from the farmers directly.

**STEP 5:** The government can directly involve the problems faced by the farmers. As Separate ID is created for each farmer we can make service centres to make awareness among the farmers. Make the farmers to utilize the implementation of the schemes in the network.

### Representation of Proposed System



### Pilot Study in Agriculture

The data are collected on the basis of survey on 20 farmers and agro-business people. The direct interaction is made within the farmers about the awareness of the government policies. Most of the farmers lack in understanding the policies and utilization of the policies in an effective manner. The farmers prefer to fix the price by them.

### Farmer's Opinion on E-Commerce

Based on the survey undertaken, the farmers don't believe the schemes or policies which are established by the government. The main issue is need of money for the cultivation of land and harvesting of crops and marketing of grains in the market. When the farmers lack in the harvesting or environment issues they will be huge loss. So the farmers believe that utilization of the policies is not effective. On the way to e-commerce the farmers think that the people have started in online markets

and they believe the products which are artificially harvested and are brought to the markets. The products prices are determined by the middle man. But the farmers wouldn't utilize the effectiveness of the implementation made by the government. Still there lack in it. If the private and government sectors combine together it will be trustful to the farmers and consumers.

## Conclusion

Thus we conclude that the online marketing of agricultural products and using the applications which is exclusively designed for the farmers will sort out many problems faced by them. By adopting e-commerce in agriculture every farmers can grow along with the country. The implementation of the systematic schemes will guide the farmers in better way. It makes better solution for product prices fixing and determination. Agriculture is the backbone of our country so our government must take necessary action and must bring awareness among the farmers on e-commerce for High-tech farming.

## References

1. Darryl Jeethesh Dsouza and H.G.Joshi, "Development of agricultural e-commerce framework for India, a strategic approach", Int. Journal of Engineering Research and Applications ISSN: 2248-9622, Vol. 4, Issue 11 (Version - 5), November 2014.
2. Sumitha Thankachan and Dr. S. Kirubakaran, "A Survey Conducted on E-Agriculture with Indian Farmers", International Journal of Computer Science and Mobile Computing, Vol.3 Issue.2, February 2014.
3. N. Jamaluddin, "Adoption of E-Commerce Practices among the Indian Farmers, A Survey of Trichy District in the State of Tamilnadu", International Conference on Economics and Business Research 2013.
4. Xin-zhi TANG, Ai-tong HE and Meng-wei CHEN, "A Study of the Status and Strategies of Agricultural Products E-commerce in China", International Conference on Social Science and Development (ICSSD 2016).
5. DR.S.JAMUNA, "Inflation and Its Impact on Indian Economy" International Journal of Application or Innovation in Engineering & Management (Ijaiem) April 2016.
6. Yaping Huo and Huiping Mu "Research On The Development Of E-Commerce Model Of Agricultural Products", MATEC Web Of Conferences (2017).
7. Dr. Renu Tanwar "Nexus between Inflation and Economic Development in India", International Journal of Humanities and Social Science Invention (2014).

## **Environment is Simply Our Surrounding with Special Reference to Green Marketing**

**– Saranya Sarma\***

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### **Introduction**

Due to global warming, the government is taking great effort in discouraging unhealthy and product that pollute the economy. This led to the growth of eco-friendly or green products. . The growing use of green products proves that people have accepted the fact that using more polluted product will led our world unsafe for life. We are more aware about it now than in the past because the effects are more apparent today. This trend creates a huge niche for both environmentalists and entrepreneurs to come up with innovative solutions that would change people's mindset toward the environment by introducing new eco friendly products in the market. The innovation of green products has helped to develop recent trends in commerce. This trend is envisaged to change human consumption in the long term, thereby instilling a paradigm shift that would enable consumers to act as environmental stewards as they patronize eco-products to help achieve green sustainability.

### **Objectives of the Study**

The study is undertaken with the following objectives:

- I. To investigate the customer ideas and opinions towards eco-friendly or green products.
- II. To know the characteristics or factors which make the consumer to prefer green products compared to conventional products.
- III. To study the customer satisfaction towards green products.

### **Methodology**

1. Population of the study: The population of the study is customers in the market.
2. Sample areas: The capital city Trivandrum is selected as the sample area for this study.
3. Sample design: The sample of the study consists of 50 respondents, selected using convenience sampling method from the customers in Trivandrum city.

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4. Data collection: The proposed study is conducted through primary and secondary data. The Data was collected from primary and secondary sources. The primary data were collected from 50 samples through structured questionnaire and the secondary data collected from different documentary sources, journals and related websites.
5. Data analysis: Data were tabulated and analyzed by using tables, percentages, weighted average and ranking method.

### **Limitations of the Study**

1. Only 50 responders are taken for the Data Collection
2. The information given by the respondents may be vague and unintelligible and in certain cases the information may not be useful.
3. The study is limited to the Trivandrum district only.

### **Findings**

1. Majority of the respondents agreed to the statement " I am aware about green products"
2. Informative articles/ magazines/ newspapers/ internet/ are the major source of information about green products.
3. The green brands known to majority of the respondents are found to be "Dabur" and "Amul"
4. Majority of the respondents (94%) are consumer of green products
5. Fruits and vegetables are the most consuming green products among consumers.
6. Eco-friendliness and Goodwill are the major factors influencing purchase decision for green products than that of price.
7. Majority of the consumers opined that "improvement in health and saves from life style diseases" and "causes less pollution are the major reasons for consuming green products.
8. Majority of the consumers are satisfied with the use of green product compared to conventional goods.
9. Improvement in health, Environment friendliness, Providing peace of mind and Reduction in generation of wastage are the major reasons for the high satisfaction in the use of green products.
10. Most of the consumers are willing to pay more for green products when the green product increases its features.
11. "Enhancing quality of life" and "Getting of high level utility" are the major factors that induce the consumers to pay extra for green products.

12. "Hike in the price of green products" and "dissatisfaction in green expectations" are the main reason that makes the consumer not willing to pay more for green products.
13. Majority of the consumers of green product agreed that they would not switch on to other conventional products after using green products.
14. Due to the factors more expensive, poor quality and perishable in nature made some customers to switch on to other relative products.

## **Conclusion**

In our modern life, using a eco friendly products have become necessary for all group of people whether it is used for personal need, family needs or business purpose. There are number of brands available in the market for this eco friendly/organic/biodegradable/green products but the market for the same depend on customer preference and customer satisfaction towards the same. The design, price, quality, quantity, durability, unpolluted environment, availability are the aspects of eco friendly products will have influence on the choice and preferences of customers. The brand of eco-friendly products which fulfils all the requirements establishes a better image among customers and sells more in the market. The study "consumer preferences towards green products" reveals that consumers who are environmentally conscious are more likely to purchase green products. Traditional product attributes such as price, quality, and brand are the most important attributes that consumers consider when making green purchase decision.

This study reveals that consumers who purchase green products are below the age of 25 years. The result also shows that, the consumers prefer green products because of the reasons that they are cared about health status and environment protection. Higher price has a negative effect on the probability of consumers purchasing green products, consumers are less likely to purchase if the products are more expensive.

## **Recommendations**

1. Promotion of eco-mark or eco-labelling should be to create awareness among consumers.
2. Incorporation of "green" sort on the product may attract the consumers to a great amount towards the product.
3. New papers/ magazines/internet remains leading source of information for most of the respondents and it should be utilized more for reaching out to the customers regarding green products.
4. Conduct green campaigns in the society and inform the people to be aware from the consequences of the conventional products.

5. The certification bodies should play an important role in promoting their eco-labels to the consumers as well as the industry and make them aware about the attributes of greenness of products.
6. In order to address the issue of availability, accessibility and affordability of green products, continuous efforts by the industry and the government institutions are required for the promotion and marketing of green product.

## **References**

### **Textbook**

- Research Methodology, By C.R. Kothari 2010.
- Research Methodology, by Ranjit Kumar, 2011
- Marketing Management, by Philip Kotler.

### **Website**

- [www.wikipedia.com](http://www.wikipedia.com)
- [www.investopedia.com](http://www.investopedia.com)
- By Prof. Sanjit Kumar Dash (2010). "Green Marketing: Opportunities & Challenges." <http://www.coolavenues.com/mba-journal/marketing/green-marketing-opportunitieschallenges>



## Camel Rating System and Performance of Commercial Banks in Sri Lanka

– Lingesiya Kengatharan\*

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### Abstract

*The primary objective of the study was to examine the impact of CAMEL rating system on performance of listed commercial banks in Sri Lanka. Random sampling was used to select the sample and data were collected from annual reports of the ten commercial banks for the 6 years period from 2011 to 2016. Capital adequacy ratio, assets quality, managerial efficiency, earnings and liquidity were the CAMEL factors. Performance was measured by Tobin's q. Data were analyzed using descriptive analysis, correlation and regression analysis. Results of the study highlight that there is a significant positive relationship of capital adequacy and managerial efficiency with performance. Assets quality, earnings and liquidity did not show any significant relationship with performance. Findings suggested that using capital adequacy ratio and managerial efficiency ratio banks might try to increase their performance level. Therefore, results of the study may be useful for the decision makers in order to maximize their wealth.*

**Keywords:** Capital adequacy ratio, managerial efficiency, Tobin's q

### 1. Background of the Study

Commercial banks play a very important role in the development of a country's economy and a very progressive and active banking system is a basic requirement for development of the country (Central Bank of Sri Lanka, 2015). Banks, Finance and Insurance sector of Sri Lanka's stock market act as the backbone of economic growth and prosperity by acting as a catalyst in the process of development and growth of a country in many ways. Specially banks promote savings and mobilization of funds from numerous small households and businesses and then they spread the collected funds across a vast geographical area for the production purposes in agriculture, industry and trade sectors in the country. Therefore, banks are facilitating the proper and optimum utilization of financial resources of a country. The banking sector in Sri Lanka is monitored by the Bank Supervision Department of the Central Bank of Sri Lanka under the Banking Act of Sri Lanka. There are two types of commercial banks in Sri Lanka such as public and private commercial banks. The private commercial banks are subdivided into domestic and foreign private commercial banks. There are 22 private banks and 2 state banks currently functioning in Sri Lanka.

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Performance of bank can be defined as how well a firm can utilize the assets from its primary mode of business and generate revenues. Banks are using several different ways to measure and evaluate the performance of a bank such as solvency ratio, liquidity ratio, efficiency ratio etc. There are many risk and uncertainties facing by the banking, finance and insurance sector in the contemporary business world. It has been evidenced by global financial crises which was severely affected the world in 2007. In order to mitigate the risk and uncertainty, there are several ways used by the banks. There are some important regulatory frame work has been developed by the banks. One of such measures of supervisory information is the CAMEL rating system. Evaluating the Capital adequacy, Asset quality, Management quality, Earning ability and Liquidity is the CAMEL rating system.

### **1.1 Research problem**

In today's fast moving world, all commercial banks are operating in the fully globalized with advanced technological and fully fledged competitive environment. They have to face immense trouble to operate successfully and to obtain the competitive advantage. All banks are using different strategies to sustain and survive in the business. Then, they formulate different performance measures to assess the progress. CAMEL is a supervisory rating system of banks. Proper application of this supervisory system leads to higher level of performance. Therefore, researcher attempt to examine the relationship between CAMEL rating system and performance of commercial banks focusing on Sri Lankan listed commercial banks. Therefore research problem of the study is *'How far CAMEL rating system impacts on financial performance of commercial banks in Sri Lanka'?*

## **2. What is CAMEL Rating System?**

'The Uniform Financial Institution Rating system, commonly referred to the acronym CAMEL rating, was adopted by the Federal Financial Institution Examination Council on November 13 1979, and then adopted by the National Credit Union Administration in October 1987. It has proven to be an effective internal supervisory tool for evaluating the soundness of a financial firm, on the basis of identifying those institutions requiring 14 special attention or concern'. (The United States, Uniform Financial Institutions Rating System 1997, p.1). 'CAMEL rating has become a concise and indispensable tool for examiners and regulators' Barr et al. (2002, p.19). Therefore, CAMEL rating make-sures a bank's vigorous conditions by focusing different characteristics of a bank based on wide range of information sources such as financial statement of banks, sources of funding, macroeconomic data, budget and cash flow.

## **3. Research Methodology**

### **3.1 Sample**

There are two major categories in Sri Lankan commercial banks such as state and private sector commercial banks. Two state commercial banks and 22 private sector commercial banks are

functioning in Sri Lanka (Central Bank of Sri Lanka, 2012). Randomly selected 10 listed commercial banks have been considered in this study.

### 3.2 Data

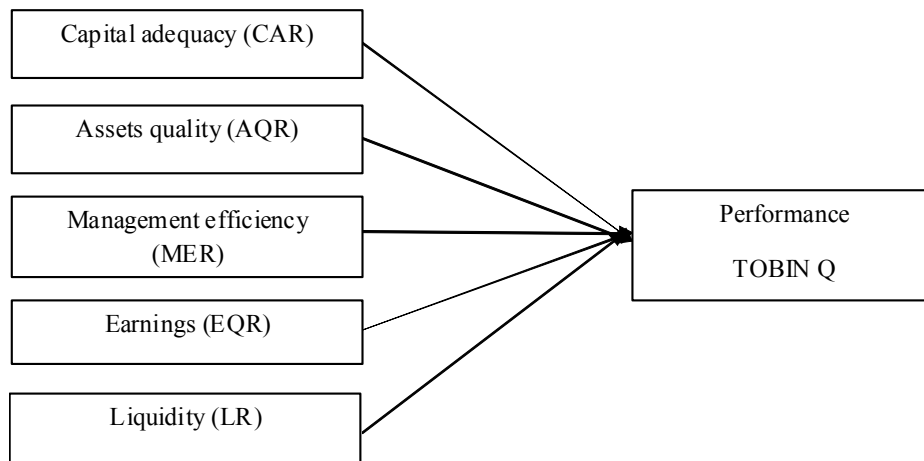
Secondary data were collected from annual reports of the 10 listed commercial banks for the 6 years period from 2011-2016. Annual reports of the banks have been obtained from Colombo Stock Exchange official web site.

### 3.3 Conceptual framework

Following conceptual frame work has been developed to carry out the study.

Independent variable

Dependent variable



Variables and measurements have been presented below

Concept	Variable	Measure
Dependent variable	Performance	<i>Tobin Q</i> = (Number of Share X Market Price) + Debt / Total Assets
Independent variable	Capital adequacy ratio	<i>CAR</i> = Equity Capital / Total Assets
	Assets quality ratio	<i>AQR</i> =Total Loans & Advances /Total Assets
	Managerial efficiency ratio	<i>MER</i> = Operating Cost / Profit After Tax
	Earnings	<i>EQR</i> = Net Profit / Total Assets
	Liquidity	<i>LR</i> =Current Assets/Current Liability

### 3.4 Hypothesis

Based on the conceptual framework following hypothesis formulated for the purpose of the study. H1: There is a significant impact of CAMEL RATING system on Tobin Q

## 4. Data Analysis

### 4.1 Descriptive Statistics

Descriptive analysis has been presented in the table 1 below.

**Table 1: Descriptive Statistics**

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
CAR	60	5.35	38.47	11.76	8.25
AQR	60	1.31	22.57	6.03	5.73
MER	60	11.61	43.41	27.83	8.15
EQR	60	.17	11.91	1.66	1.51
LQ	60	19.80	39.30	24.60	4.21
TQ	60	.04	3.04	.85	.44

As per the table 1, 60 observations have been used for analyzing minimum, maximum, mean and standard deviation for each variable, the descriptive statistics show that over the period under the study, the CAR has maximum value of 38.47 ,its minimum value of 5.35 and standard deviation is 8.25. Mean value of CAR is 11.76 which means the average of 11.76% of total equity on total assets in commercial banks of Sri Lanka.

AQR has maximum value of 22.57 and minimum value is 1.31. It has mean value of 6.03 which means the average of 6% of total loans and advances are on total assets in commercial banks of Sri Lanka with standard deviation of 5.72.

MQR has maximum value of 43.41 and its minimum value of 11.61 and standard deviation of 8.15 and it also has mean value of 27.83. This means the average of 27% of operating cost on profit after tax in commercial banks of Sri Lanka. According to the table 1, EQR has maximum value of 11.91 and minimum value 0.17, standard deviation of 1.50 and mean value 1.66. LQ has maximum value 39.30, minimum value is 19.80 mean value is 24.60. This means the average of 25% of current assets on current liability in commercial banks of Sri Lanka.

The performance was measured by Tobin Q. It has average value 0.85. This means the average of 85% of total market value of bank are on total assets in commercial banks of Sri Lanka.

#### 4.2 Correlation Analysis

Correlation analysis is carried out in order to find out the nature of relationship between the variable based on the value of correlation coefficient. Table 2 shows the relationship exist between CAMEL ratings and Performance.

**Table 2: Correlation Analysis**

		CAR	AQR	MER	EQR	LQ	TQ
CAR	Pearson Correlation	1					
	Sig. (2-tailed)						
AQR	Pearson Correlation	.044	1				
	Sig. (2-tailed)	.738					
MER	Pearson Correlation	-.367**	-.026	1			
	Sig. (2-tailed)	.004	.845				
EQR	Pearson Correlation	.572**	-.162	-.284*	1		
	Sig. (2-tailed)	.000	.217	.028			
LQ	Pearson Correlation	.196	.147	-.237	-.039	1	
	Sig. (2-tailed)	.134	.261	.068	.768		
TQ	Pearson Correlation	.043	.150	.652**	-.046	-.122	1
	Sig. (2-tailed)	.746	.251	.000	.730	.352	

As per the correlation analysis presented in the table 2, it can be observed that there is a significant association between management efficiency ratio and Tobin Q of commercial banks ( $r = 0.652$ ,  $P < 0.05$ ). Capital Adequacy ( $r = 0.043$ ,  $p = 0.746$ ), Assets Quality ( $r = 0.150$ ,  $p = 0.251$ ), Earnings ( $r = -0.046$ ,  $p = 0.730$ ) and Liquidity ( $r = -0.122$ ,  $p = 0.352$ ) did not show any significant association with Tobin Q.

### 4.3 Multiple Regression Analysis

Regression analysis has been performed to answer the research question and results presented in table 3.

As per the results presented in the table 3, 54.2% (R<sup>2</sup>) of the observed variability in TQ can be explained by the differences in the variables such as LQ, EQR, AQR, MER and CAR. The remaining 45.8% of the variances is related to the other variables not depicted in this model.

As per the significant value for the F value (12.783) is 0.000 (p = .000), which explains the model significant. Therefore this model is significant to examine the relationship CAMEL rating system and Tobin Q.

As per the results presented in the table 3, model is derived in the following manner

Tobin' Q =  $-.537 + .017CAR + .013AQR + .042MER + .006EQR - .003LQ + e \dots \dots (1)$

**Table 3: Multiple regression analysis to examine relationship between CAMEL rating factors and Tobin Q**

	Model	B	Std. Error	t	Sig.
1	(Constant)	-.537	.339	-1.582	.119
	CAR	.017	.006	2.594	.012
	AQR	.013	.007	1.719	.091
	MER	.042	.006	7.583	.000
	EQR	.006	.035	.172	.864
	LQ	-.003	.010	-.245	.808
R <sup>2</sup> = .542		Ad.R <sup>2</sup> = .500		F = 12.783	
				P = 0.000	

Table 3, illustrates the coefficients value of regression analysis. Based on the above table, there is a significant impact of capital adequacy (?=0.017, P =0.012) and management efficiency ratio (?=0.042, P = 0.000) on Tobin\_Q. There is no significant impact of assets quality (?=0.013, P =0.091), earning (?=0.006, P =0.864) and liquidity (?= - 0.003, P =0.808) on Tobin\_Q.

Therefore, it can be concluded for Capital Adequacy, Management Quality have significant impact on performance and other independent variables such as, Assets Quality, Earnings Quality, and Liquidity do not have significant impact on performance.

### 4.4 Hypotheses Testing

H1- There is a significant impact of CAMEL rating factors on Tobin Q

Table 3 clearly indicate that only two variables which is Management efficiency(MQR) and Capital Adequacy(CAR) have positive significant impact on Tobin Q. Rest of the other factors such as Assets Quality, Earnings, Liquidity don't have significant impact on Tobin Q. Therefore hypothesis has been partially supported with the results of the study that managerial efficiency and capital adequacy have significant impact on Tobinq.

## **5. Conclusion**

The main goal of the study is to examine impact of CAMEL rating system on performance of commercial banks in Sri Lanka. Random sampling method was used to select the 10 sample banks and data were collected from secondary data for the 6 years period from 2011 to 2016. Data were analyzed using descriptive analysis, correlation and regression analysis. Results of the study highlights that, there is a significant impact of CAMEL rating factors on performance (Tobin Q) in terms of capital adequacy ratio and managerial efficiency. Findings of the study may useful for the decision makers in order maximize their wealth.

## **References**

1. Annual Report (2015). Annual Report: Central Bank of Sri Lanka.
2. Barr, Richard S. et al. (2002). "Evaluating the Productive Efficiency and Performance of U.S. Commercial Banks". *Engineering Management*, 28(8), p. 19. Uniform Financial Institutions Rating System (1997). Statements of Policy. The United States: Federal Deposit Insurance Corporation (FDIC).

## Awareness of Green Marketing and Its Influence on Consumer Perception: An Exploratory Study

– Fouziya R.\*

– Dr.Gracious J.\*\*

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### Abstract

*The green and environment friendly marketing has gained more importance in India because our country has been facing environmental problems of increased pollution due to industrial growth and development. To prevent environmental degradation, corporate have been identified green marketing as a good marketing philosophy. Nowadays consumers' perception and attitudes have been changed from grey products to green products. Their awareness towards eco friendly marketing influences their buying behavior. Thus the companies have started making use of environment friendly marketing strategies and techniques through the introduction of more eco friendly products. The increased consumer awareness about the environmental crisis forced the marketers to adopt green marketing strategies. The present study is an attempt to analyze the influence of consumers' awareness of green and environment friendly marketing on their buying behavior. The data were collected from 100 consumers of personal care products and cosmetics. Sample respondents include 50 men and 50 women. Convenient sampling technique was adopted to select the respondents. A structured questionnaire has been used to collect primary data from the sample respondents. The findings of the study indicate that the awareness of consumers on green marketing has a significant impact on consumer's buying behavior.*

**Keywords:** Green Marketing, Consumer Perception, Eco- Labeling, Eco- brand name, Green Promotion, Green washing.

### Introduction

Eco- friendly marketing initiatives have gained more significance in recent years because India has faced environmental pressures due to increased industrial development. Companies are forced to adopt green marketing strategies and techniques to address the environmental issues faced by the country. Today most of the companies have accepted the responsibility of protecting the environment because they realize that through the adoption of green marketing strategies they can reduce environmental pollution and increase their profit at the same time (Banerjee et al, 2003). Green marketing is considered as an effective marketing philosophy for the preservation and conservation of our limited

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natural resources. By adopting green marketing strategies and introducing eco- friendly products, companies can enjoy the advantage of reduced wastage in packaging and increased energy efficiency in production.

The growing consumer awareness towards the environmental protection has forced the companies to incorporate eco- friendly strategies in to their operations. This increased consumer awareness towards natural issues influences the perception and buying behavior of the consumers. Manrai et al (1997) reported that knowledge of consumers about the environmental issues decides their green consumer behavior. Eco- friendly marketing enables the manufacturers to gain a significant level of environmental improvement by reducing the use of toxic elements in production, recycling of products and minimizing environmental influence of their products.

Business operations are said to be green when they attempt to minimize wastage in their day to day operations. Eco- friendly marketing is considered as an opportunity for the business to achieve their objectives by being more ethical and socially responsible (Keller, 1987). Introduction of environment friendly product enable the business to take the advantage of consumers' willingness to buy such products. Consumers prefer an eco- friendly product due to various reasons such as it ensure safety, helps to protect the natural deposits and protects the moral and ethical values of the society. The consumers are willing to buy pricier eco- friendly products because they assume it as a premium for the conservation of nature (De Pelsmacker et al., 2009). Thus the present study is an attempt to investigate the effect of consumer awareness of green marketing on consumer perception.

### **Relevance of The Study**

Environmentalism has emerged as a major issue confronting the business world today. Human wants are unlimited, but the resources are limited to meet these unlimited wants of the human being. Thus the business should develop alternative methods to satisfy the unlimited wants of mankind. Go green is considered as an effective corporate strategy for the effective utilization of these limited resources. Adoption of environment friendly marketing strategies and techniques plays an important role in the buying intention of the consumers (Rahbar & Wahid, 2011). Therefore the study is relevant in business, cultural and ethical context.

### **Green Marketing**

Polonsky (2011) have defined green marketing as the corporate efforts made in the design, promotion and distribution of products in such a manner with minimum negative impact on the natural resources. Thus green marketing is a sustainable marketing strategy which promotes the companies to design, produce and distribute eco- friendly products.

## **Consumer Perception**

Consumer perception may be defined as the mental and emotional state of a consumer while searching for the purchase of a product or service (Engel, 1961). Simply speaking consumer perception is the impression and awareness about a company and its products and services.

## **Eco -Labeling**

Eco- labeling may be defined as the use of environment friendly labels to enable the customers making decision to select eco- friendly products (Rex and Baumann, 2007). Thus it is identified as an important green marketing tool which leads the consumers to take green purchasing decisions.

## **Eco- Brand Name**

Eco- brand name is a name, symbol or design of a product which helps the consumers to differentiate the green products from non green products (Rahbar & Wahid, 2011). Green brand name is a significant marketing tool which motivates the consumers to shift their purchase perception to eco- friendly products.

## **Green Promotion**

Green promotion may be defined as an advertisement of a product or service which claims that the advertised product or service is environment friendly (Chang, 2011). Green advertising helps to increase the consumer awareness on green marketing.

## **Green Washing**

Green washing may be defined as the false representation by the companies to mislead the consumers concerning the environmental benefit of the products or services of the company. It is the misrepresentation of the company's eco friendly efforts which leads to confusion among consumers regarding the eco- friendly claims of many products (Newell et al, 1998). Green washing may have negative influence on consumer perception and behavior.

## **Review of Literature**

According to Cherian & Jacob (2012) green or environmental marketing is an effective marketing strategy to achieve sustainable and competitive advantage. In order to implement green marketing strategies and policies, companies should provide guidance to retailers and consumers on green change. Firms should realize their responsibility towards environmental protection and should encourage consumers to shift from their conventional buying behavior to green buying by marketing eco friendly products (Bhat & Vasanthakumar 1993). Green marketing covers all those marketing policies and strategies undertaken by business firms in the manufacture and distribution of products and services in such a manner which promotes protection of the natural resources. (Polonsky & Rosenberger,

2001).Bleda & Valente (2009) suggested that it is beneficial for the business firms to evaluate the factors which determine the consumers' green buying behavior and the level of consumer perception towards eco- friendly marketing.

### Objectives of the Study

The basic objectives of the study are:

1. To assess the level of consumer awareness on green marketing initiatives.
2. To investigate the influence of green marketing awareness on consumer perception.

### Hypotheses

Based on the review of literature the following Hypotheses were developed:

1. There is a significant level of consumer awareness on green marketing initiatives.
2. There is a significant impact of green marketing awareness on perception of the consumers.

### Variables of the Study

Consumer perception has been identifies as the dependant variable of the study. The independent variables identified to assess the level of green marketing awareness among consumers are; Eco- Labeling, Eco- brand name, Green Promotion and Green washing

### Methodology

The data were collected from 100 consumers of personal care products and cosmetics. Sample respondents include 50 men and 50 women. Convenient sampling technique was adopted to select the respondents. A structured questionnaire was used to collect data related to green marketing awareness and consumer perception.

### Results

**Table 1 : Level of Consumer awareness on Green marketing**

Variables	Low Awareness		Medium awareness		High Awareness	
	Count	Percent	Count	Percent	Count	Percent
Eco- labeling	16	16	26	26	58	58
Eco- brand name	8	8	38	38	54	54
Green promotion	13	13	30	30	57	57
Green washing	21	21	27	27	52	52

*Source: Primary Data*

Table I shows the data relating to the level of consumer awareness on green marketing. Data shows that majority of the respondents having high awareness on eco- labeling (58%), 26% having medium awareness and only 16% having low awareness on eco- labeling. Similarly majority of the respondents having high awareness on eco- brand name (54%), 38% having medium awareness on eco- brand name and only 8% having low awareness on eco- brand name. Data also indicates that majority of the respondents (57%) having high awareness on green promotion, 30% having medium awareness on green promotion and only 13% having low awareness on green promotion. Similarly 52% of the respondents having high awareness on green washing, 27% having medium awareness on green washing and only 21% having low awareness on green washing. Thus it can be concluded that there is a significant level of consumer awareness on green marketing.

**Table 2 : Correlation between Consumer Perception and Selected Variables**

Variables	R	P
Eco- Labeling	0.642**	0.000
Eco- Brand Name	0.686**	0.000
Green Promotion	0.641**	0.000
Green Washing	-0.586**	0.000

*Source: Primary Data*

The data relating to correlation between consumer perception and selected variables is shown on the table II. The Karl Pearson correlation between consumer perception and eco- labeling is 0.642 ( $p < 0.01$ ). It means that there is a significant positive correlation between consumer perception and eco- labeling. The Karl Pearson correlation between consumer perception and eco- brand name is 0.686 ( $p < 0.01$ ). This means that consumer perception increases significantly with adoption of eco- brand name for the product. The Karl Pearson correlation between consumer perception and green promotion is 0.641 ( $p < 0.01$ ). It means that there is a significant positive correlation between consumer perception and green promotion. The Karl Pearson correlation between consumer perception and green washing is -0.586 ( $p < 0.01$ ). It means that there is a significant negative correlation between consumer perception and green washing.

**Table 3 : Predictive Power of Selected Variables on Consumer Perception**

Variables	Constant	B	T	P	R <sup>2</sup>
Eco- Labeling	32.57	2.53	56.71**	0.000	0.007
Eco- Brand Name	30.50	0.38	26.97**	0.000	0.301
Green Promotion	9.56	0.62	7.53**	0.000	0.480
Green Washing	50.14	-0.54	40.97**	0.000	0.433

*Source: Primary Data*

In order to study the influence of green marketing awareness on consumer perception regression analysis were carried out. The results of six linear regression analysis were presented in Table III. It can be seen from the table that the B coefficient of the variable eco- labeling for predicting consumer perception is 2.53. It means that as there is an increase in score of 25.3 in consumer perception for increase of every 10 score in eco- labeling. The p value shows that the influence of eco- labeling on consumer perception is statistically significant at 0.01 level. The R<sup>2</sup> of the regression equation is found to be 0.007 which indicates that 0.07 percent of variation in the consumer perception can be explained by eco- labeling.

B coefficient of the variable eco- brand name for predicting consumer perception is 0.38. It means that as there is an increase in score of 3.8 in consumer perception for increase of every 10 score in eco- brand name. The p value shows that the influence of eco- brand name on consumer perception is statistically significant at 0.01 level. The R<sup>2</sup> of the regression equation is found to be 0.301 which indicates that 30.1 percent of variation in the consumer perception can be explained by eco- brand name.

B coefficient of the variable green washing for predicting consumer perception is 0.38. It means that as there is an increase in score of 3.8 in consumer perception for increase of every 10 score in eco brand name. The p value shows that the influence of eco brand name on consumer perception is statistically significant at 0.01 level. The R<sup>2</sup> of the regression equation is found to be 0.433 which indicates that 43.3 percent of variation in the consumer perception can be explained by green washing.

## Discussion

The purpose of the present study is to assess the level of consumer awareness on green marketing initiatives and to investigate the influence of green marketing awareness on consumer perception.

Hypothesis I stated that there is a significant level of consumer awareness on green marketing initiatives.

It was found that majority of the respondents have high awareness on eco- labeling, eco- brand name, green promotion and green washing. So the above hypothesis is accepted.

Hypothesis II stated that there is a significant impact of green marketing awareness on perception of the consumers.

Karl Pearson correlation shows that there is a significant positive correlation between consumer perception and the variables such as eco- branding, eco labeling and green promotion. Karl Pearson correlation also shows that there is a significant negative correlation between consumer perception and green washing. Six linear regression analysis shows that the influence of green marketing awareness on consumer perception is statistically significant ( $p < 0.01$ ). Thus the above hypothesis is accepted in this context.

## Conclusion and Recommendations

The present study concludes that there is a significant level of consumer awareness on environment friendly marketing practices and eco- friendly products. Similarly there is a significant impact of green marketing awareness on the perception level of consumers. In order to increase consumer perception and impression, the following measures can be adopted by the marketers.

1. Use environment friendly materials for product manufacturing
2. Developing a green business culture by conducting environment friendly awareness programs among employees, retailers and consumers
3. Use recyclable materials for packaging
4. Use of eco- friendly labels
5. Use of recyclable energy for production

## References

1. Banerjee, SB, Iyer, ES & Kashyap, RK 2003, Corporate Environmentalism: Antecedents and Influence of Industry Type, *Journal of Marketing*, vol. 67, no.2, pp.106-122.
2. Bhat, Vasanthakumar 1993, Green Marketing Begins with Green Design, *Journal Of Business & Industrial Marketing*, vol.8, no.4, pp.26-31.
3. Bleda, M & Valente, M 2009, Graded eco-labels: A demand-oriented approach to reduce pollution, *Technol Forecast Soc Chan*, vol. 76, no.4, pp.512-524.
4. Chang, C 2011, "Feeling ambivalent about going green- Implication for Green Advertising Processing", *Journal of Advertising*, vol. 40, no. 4, pp. 19-31.
5. De Pelsmacker, P, Geuens, M & Den Bergh, J 2010, *Marketing communication: A European Perspective*. 4th Edition.
6. Engel, JF 1961, "Motivation Research- Magic or Menace", *Michigan Business Review*, vol. 13, pp. 28-32.
7. Jacob, C & Jacob, J 2012, Green Marketing: A Study of Consumers' Attitude towards Environment Friendly products, *Asian Social Science*, vol. 8, no.12, pp. 117-121.
8. Keller, GM 1987, *Industry and the Environment: Toward a New Philosophy*, *Vital Speeches*, vol. 54, no. 5, pp.154-157.
9. Manrai, LA, Manrai, AK, Lascu, DN, & Ryans, JK 1997, How green-claim strength and country disposition affect product evaluation and company image, *Psychol Mark*, vol.14, no.5, pp.511-537.
10. Newell, SJ, Goldsmith, RE & Banzhaf, EJ 1998, The effects of misleading environmental claims on consumer perception of advertisements, *Journal of Marketing Theory and Practice*, vol. 43, no.8, pp. 48-60.
11. Polonsky, MJ 2011, Transformative green marketing: Impediments and opportunities, *Journal of Business Research*, vol. 64, no.12, pp.1311-1319.
12. Polonsky, MJ & Rosenberger, PJ 2001, Re evaluating green marketing: a strategic approach, *Business Horizons*, vol.44 no.5, pp. 21-30.
13. Rahbar, E, Abdul Wahid, N 2011, Investigation of green marketing tools effect on consumers purchase behavior, *Bus Strategy Series*, vol. 12, no.2, pp.73-83.
14. Rex, E, Baumann, H 2007, Beyond eco labels: What green marketing can learn from conventional marketing, *J Clean Prod*, vol.15, no.6, pp. 567-576.

## **A Case Study on Green Marketing - With Special Reference to Swarajya Ayufit Wellness Club, Kolhapur**

– Dr. Vidya A. Salokhe\*

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### **Abstract**

*The term "green marketing" came into prominence in the late 1980s & early 1990s. Green marketing is also alternatively termed as environmental marketing or ecological marketing. It incorporates a broad range of activities, including product modification, changes of the production process, packaging charges, as well as modifying advertising.*

*Green marketing is a phenomenon which has developed particular importance in the modern market & has emerged as an important concept in India like a developing & developed countries of the world. The role played by number of NGO's is vital, to teach & create a mindset of citizen regarding environment sensitivity in Kolhapur city. However, there has been a change in consumer attitudes towards green lifestyle.*

*The research paper focuses on the study of Swarajya Ayufit wellness Club's special products - earthen cooking & serving utensils. Data has collected from both primary & secondary sources, in addition to books, journals, websites and newspapers. The paper describes the current scenario of green marketing in study area.*

**Keywords:** *Ecological green marketing, consumer, environmental sensitivity, Green Lifestyle.*

### **1.0 Introduction**

Green marketing is phenomenon which has developed particular importance in the modern market. The term 'Green Marketing' was first discussed in a seminar on 'Ecological Marketing', organized by American Marketing Association (AMA) in 1975 and took its place in literature. According to the Association (AMA), green marketing is the marketing of products or goods that are supposedly believed to be environmentally safe. The green marketing refers to the holistic marketing approach and concept where in a broad range of activities includes, product modification, changes to production process, packaging charges as well as modifying advertisements etc. It came into prominence in the late 1980s and early 1990s, in the published books written by Iken Pattie in 1992 of U.K. and Jacquelyn Ottman in 1993 of U.S.A. According to Pattie the evolution of green marketing is not limited to only to

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environment & its problem but also has three phases of 'EES' i.e. ecological, environmental & sustainable. He wrote in his book, in the 1st phase, it was termed as "Ecological" green marketing because all marketing activities were concerned to help environmental problems and provide remedies for environmental problem. Accordingly 2nd phase was "environmental" green marketing & the focus shifted on clean technology that means, designing of innovative new products, which take care of pollution and waste issues. The 3rd phase was "Sustainable" green marketing, developing good quality products, which can meet consumers need by focusing on the quality, performance, pricing & convenience in an environmental friendly way.

Green marketing of earthen cookware / utensils / pot & serving pots are the combination of these three phases. In India, green marketing is still in its infancy, also around 25% of the consumer prefer environment friendly product and around 28% may be considered health conscious. Therefore, marketers have to focus on fairly sizeable segment of consumers to cater it.

## **2.0 Objectives**

1. To study green marketing of Swarajya Ayufit Wellness Club, Kolhapur. (the study organization).
2. To study challenges and prospectus of Green Marketing by Study Organisation.
3. To offer such meaningful suggestions, as may be appropriate.

## **3.0 Research Methodology**

To accomplishing objectives of the study, primary & secondary data collected. For primary data, scheduled interview questioner is used. While secondary data is collected from Literature review, newspapers, Journals & other reliable sources.

## **4.0 Scope of the Study**

The present work, in fact, is an exploratory investigation into ongoing marketing practices of the study organization for their earthen cookware. Along with conclusion, the functional scope is to confine offering a set of meaningful suggestions to improve the green marketing of Swarajya Ayufit Wellness Club, Kolhapur and also helpful to increase the practices of Green Marketing in Kolhapur furtherance.

## **5.0 Significance of the Study**

The Princely State of Kolhapur was introduced to modern thoughts at the turn of 20th century. The State's Rural Shree Shahu Chhatrapati Maharaj took the initiative in sowing seeds to "Environmental Sensitivity" in the minds of citizens since 1901. However, may as a heredity, presently the number of NGO's are forwarding same message in the society.

In the welfare state of Kolhapur, Green Marketing have come to be deemed as an instrument of social change. Green marketing is receiving substantial attention both from the academic and in-house



research. The review of literature, however, revealed that there is a lack of research endeavor in Green Marketing in the Kolhapur city. The present work has attempted to fill this void.

## 6.0 Green Marketing - A Conceptual Framework -

Green Marketing is a tool for protecting the environment for future generation. Adoption of green marketing may not be carry in the short run, but in the long run it will definitely have a positive impact on the firm. Green marketing means the organisation's efforts at designing, promoting, pricing & distributing products that will not harm the environment. However, it is nothing more than marketing of green products.

Accordingly the characteristics of Green products, can be measures as follow.

1. Products those are originally green.
2. Products those are recyclable, reusable & bio degradable.
3. Products with natural ingredients.
4. Products that do not harm or pollute the environment.
5. Product contents under approved chemicals.
6. Products containing recycled contents & non toxic chemical.
7. Products that need not to get tested on animals.
8. Products that have eco friendly packaging i.e. reusable, refillable containers etc.

For effective & efficient implementation of this concept of Green Marketing the factor that plays a major role is the Government. The Government of India has framed & prepared various regulations & legislation to protect the society at large & reduces the production of harmful goods.

The methods / practices of Green marketing are same as Modern marketing, but approaches are different.

Following table shows "Approaches"

Approach of Modern Marketing (Managerial)	Approach of Green Marketing (Ecological)
1. Use planning to minimize cost of local waste disposal.	1. Use life cycle assessment & environmental audits to minimize & re-direct waste management.
2. Reactive approach to waste management.	2. Productive approach to waste management.
3. Focus on Industrial function.	3. Focus of Industrial Process.
4. Customer satisfaction.	4. Customer satisfaction with care of environment.
5. Total quality management.	5. Total quality environmental management.

*Source: Donald A. Fuller, Sustainable Marketing Management - Ecological.*

## 7.0 Green Products in India

There are various business undertaking are following ecological approach in India.

1. Oil & Natural Gas Corporation Ltd. (ONGC), India is largest oil company, has introduced energy - efficient Mokshada Green Crematorium, which saves 60% to 70% of wood & fourth of burning time per cremation.
2. Reva India's Very-own Bangalore based company was the first in the world to commercially release an electric car.
3. Honda India introduced its Civic Hybrid car.
4. ITC has introduced Paper Kraft, a premium range of eco-friendly business paper.
5. Wipro Info tech (Green If) was India's first company to launch environment friendly computer peripherals.
6. Samsung was the first to launch eco friendly mobile handsets (made & renewable materials) W510 & F268 - in India.
7. Suzlon Energy Manufacturers & market wind turbines, which provide an alternative source of energy based on wind power. This green initiative taken by the company is extremely important for reducing the carbon footprint.
8. Indusland Bank installed the country's first solar-powered ATM & thus brought about an eco - savvy change in the Indian Banking Sector.

These are some examples of business companies which are using green marketing. Till date green marketing is very low on the agenda of most business & therefore it's till an under leveraged USP i.e. Unique Selling Proportion.

## 8.0 Kolhapur at Glance

About Kolhapur - Due to the famous Temple of Ambabai, Kolhapur is known as "Dakshin Kashi". The Ambabai temple is believed to have built over a thousand years ago during region of rural 'Chalukyas' in the 7th century A.D. the temple represents the best Hindu architectural model i.e. Hemadpanti method. Kolhapur is also famous for Kolhapuri Saj, one of the very popular ornament, Leather & Jaggery industries. Research study shows that from India about 3000 to 4000 tones of jaggery has exported to America, Canada, England, Pakistan, Saudi-Arabia, Shrilanka and other countries, out of which majority jaggery export from Kolhapur district as "Kolhapur Gul". Kolhapur has a rich cultural, historical & educational veteran political leaders & social thinkers. In the princely state of Kolhapur, His Highness Chhatrapati Shahu Maharaj had gave support to Green marketing in 19th century by allocating special arrangement for rehabilitate "Kumbhar Samaj" (who were expert in "Pottery" making) is known Kumbhar Aali / Lane for identification of skills in pot / cookware & other green products.

## 9.0 Green Marketing at "Swarajya"

The researcher has studied an olitestanding example of Green marketing i.e. earthen cookware & serving pots. The Swarajya Ayufit Wellness Club which has been established in 2014. The 'Swarajya' is franchise owned by Mrs. Vaishali Kadam. The original Ayufit Wellness Club, serving to the society through Nutritional Suppliment, Medicine & also helps to realize from joint pain, muscle pain. The basic mission of 'Swarajya' is to Holistic Wellness. To fulfill the mission of the firm, the owner, is taking pains to educate society about Health Wellness. The team of Swarajya, organized number of exhibitions, free Lectures, counseling sessions, for different segment & age group of people in the society. The main aim to create awareness about "Preventive Health Care" for Healthy & wealthy life. The firm themselves believe on Corporate Social Responsibility. Henceforth entered in Green Marketing in the 2015, with unique type of products i.e. earthen cookware & serving pots. The main supplier of earthen cookware is Vijay Rajpurohit from Rajkot. The products are made by skilled hands of Rajasthani Artisan.

Swarajya Ayufit Club, enter in green marketing two years back but graph of marketing is satisfactory level. The products are cookware of different sizes, i.e. pots / utensils, Tawa i.e. pan of chapatti / roti, frying pans, kadai, Jar, tea-coffee mugs, clay water container, drinking water bottles, and also serving pots such as, mud casseroles, lunch box, plates & spoon, bowls etc. And also gift articles.

From last two years, there is high demand for drinking water bottle & lunch boxes, at the end of January & the important thing is customer tries to keep 'Cool' body temperature by such natural way.

No doubts all products are safe for use & having high nutritional value because with these pot nobody can cook on high flame. It requires high cooking time but maintain nutrient values & helps to enrich taste of meal. The marketer believes on green marketing concept because owner is very environment conscious & believes on purpose, purity & ethics. The organization is very alert about quality, superiority of products, with 'non-toxic'. The firm believe on tag line of firm is Swachha Bharat - Swastha Bharat mission & also activity involve in Swachha Bharat Abhiyan, & spend 2 - 4 hours programme undertake weekly campaign for Health Awareness. The day by day marketer is taking efforts in educate people to be 'Green' customer. And also many activities are planned from franchises to educate all over Maharashtra about their green product & awareness of green marketing concept.

The long term plan is to cover campaign to all over India. Recently earthen cookware are exported to Canada, with due care of eco-friendly packaging system. In developed countries like USA, UK, Denmark, Netherland, Canada, Mauritius, people has great awareness about use of earthen cookware. To take advantage of these, franchise is ready to enter at global market along with their products. Management decided to working in 200+ different fields like natural vegetables, pure products,

made up from Cow Dung & many more. However members of these proprietary firms is ready to face all kinds of challenges to enter into global market with above stated product lines.

There is a constant flow of customer within two years as compared to population. Initially 12% people took interest in purchasing earthen utensils, but due to efforts & arranging various awareness campaigns to educate society, firm bagged & capture more than 28% of customers from the local area.

## 10.0 Conclusion

Although an another 3-4 firms are entered in Green Marketing of earthen cookware at Kolhapur.

1. The study organization started Green marketing from three years. Green marketing involves green technology, green power for which a lot of money has to spend on Research & Development programs for their development & subsequent promotional progress, which ultimately may lead to unorganized utilization of involved cost for promotion campaign, which is very necessary.
2. Urban consumer is getting more aware about the benefits of products. But it is still new concept for the masses. Even middle class feels that these are fashionable items, having high price & much care for maintenance. Hence customer attract towards product but hesitate to purchase easily.
3. The status shows that, Swarajya Ayufit Wellness Club, practicing green marketing, have to strive hard in convincing the stakeholders & many a times it may fail to convince them about long term benefits of their products, as compared to short term expenses.
4. A study shows that, from specific segment / rich people residence area, only high middle & rich customers who are health conscious are ready to pay premium prices for earthen cookware & serving pot. That means current consumption level is too high & are unsustainable.

## 11.0 Suggestions

1. The study organization, make sure that the consumer is aware of & concerned about the importance an use of earthen cookware, a unique product attempts to address.
2. The consumer needs to get educated & made aware of the environmental threats. The organization should plan & initiate green movement, to reach the masses.
3. The green marketing becomes the norm rather than an exception or just a fad. The study organization have to take pain for a shift in consumer's behavior & attitude towards more environment friendly life style.
4. The study organization is charging a premium for their product due to economics of scale & use of high-quality ingredients, make sure those consumers, who can afford the premium, feel it worth.

5. The study organization should combine their approaches for efficient practices, i.e. synchronize both, scientific marketing approach with ecological approach, to enter at global market.

Green marketing will be successful only in long run. Hence the firm needs to plan for long term rather than short term started & profit out of it.

## 11.0 References

1. Dr. A. M. Gurav & Shri P. N. Devali, "Marketing Management in Food Industry". A Case study of Jaggery Marketing, South Asian Journal of Management Research (SAJMR) ISSN0974 - 76 3X, An International Peer Reviewed Research Journal, Vol. 6, No. I, Jan. 2014.
2. R. Shrikanth et al, "Contemporary Green Marketing brief reference to Indian Scenario", International journal of Social Science & interdisciplinary research Vol. I, Jan.2012.
3. Dr. Sarawade W. K., "Conceptual development of Green Marketing in India", Excel Journal of Engineering Technology & Management Science, Vol.I, June 2012.
4. K. Uday Kiran, "Opportunity & Challenges of green marketing with special reference to Pune", International Journal of Management & Social Science research, Vol. I, Oct. 2012.
5. <http://www.businessworld.in>
6. <http://www.business-standard.com>

## Transforming Rural SMEs through Industrial Cluster Involvement: A Comparative Study

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### Abstract

*Micheal Porter (Porter, 1998) argued that industrial clustering help the participating business units to achieve competitiveness by surpassing the limitations of scale and scope through a special engagement which he called as coopetition. The review of the literatures on industrial clusters reaffirms this argument through empirical evidences from various countries. But the critical question here is whether just being in cluster locality would bring competitive benefit to participating firms.*

*The current study is an attempt to identify how mutual interactions and active engagement among/of clustered firms help them to achieve innovation performance. This study analyses the cases of two major industrial clusters in the South Indian state of Kerala ie. the Calicut footwear cluster and Alappay Coir cluster, to draw insights regarding the modalities of involvement and its impact on the local economic milieu. In line with the evidences drawn from the past studies, being in cluster locality should attribute to the competitiveness of firms in these regions. Despite having all the cluster attributes in place and governmental funds being pumped, the coir industry of Alappay-which possess a glorious history- is now slowly dying. Whereas, the footwear industry in and around Calicut is flourishing in a fast pace contributing to the overall economic development of the region. As these two clusters represent two contrasting realities and impact the local economy in distinct ways, it would be worth to assess their underlying aspects to arrive at a framework for successful cluster operations.*

**Keyword :** Rural development. Small firm competitiveness , regional development . sustainable development

### Introduction

The past few decades have witnessed a great rise in interest among academicians and practitioners towards the phenomenon of industrial clustering assuming its potential in enhancing entrepreneurship, small firm competitiveness and rural/ regional economic development. There is a plethora of studies

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showing the positive externalities industrial clusters offer for member firms in terms of competitiveness and innovation performance. It enables small rural enterprises to surpass their diseconomies of scale and scope and equip them to compete with bigger-global organisations in their domain. However, the theoretical and empirical enquiries into this phenomena in semi developed /primitive cluster settings of developing countries are scarce. The proximity of the firms in the cluster and their interactions and engagements with each other through joint actions and business alliances results in knowledge spillovers which help firms to improve their innovation performance. This study is an attempt to address the critical question whether just being in the cluster ecosystem would help the participating firms to achieve innovation performance.

This study analyses the cases of two major industrial clusters in the South Indian state of Kerala ie. the Calicut footwear cluster and Alappay Coir cluster, to draw insights regarding the modalities of involvement and its impact on the local economic milieu. In line with the evidences drawn from the past studies, being in cluster locality should attribute to the competitiveness of firms in these regions. Despite having all the cluster attributes in place and governmental funds being pumped, the coir industry of Alappay-which possess a glorious history- is now slowly dying. Whereas, the footwear industry in and around Calicut is flourishing in a fast pace contributing to the overall economic development of the region

Alappay district of Kerala, India has a significant position in the coir map of the world. The history of coir industry in Alappay dates back to 18th century when British colonial rule existed in India. Alappay possess almost all major characteristics of a typical industrial cluster with large number of related industrial units functioning in a limited geographical proximity. The governments had extended regulatory and policy support on a time to time basis for improving the efficiency of this cluster. Common facilities and coir research institutes were established in Alappay with this objective.

The footwear industry in Calicut is relatively too young. Though the city possesses a glorious history of breeding some of the best timber, match and tiles industrial units in the past, its footwear saga began in early 1980s with the establishment of VKC chappal unit in Feroke. This triggered the knowledge spillover and resulted in the formation of which later become one of the major synthetic footwear hub of India with more than 200 units. Now new organizations with diverse technological innovations and capabilities are joining the race and creating a positive vibe in the industrial map of this region.

## **Literature Review**

The importance of clustering and networking has been recognized in the literature over the last more than 100 years. The pioneering work by Marshall (1920) explained the advantages arising from the concentration of many small businesses of similar character localities which describe the benefits associated with the agglomeration economies and he coined it as industrial districts. Even though initially the concept of clustering got much acceptance in strategic management literature, over the

time it has spanned through diverse range of disciplines, adapting, changing, accumulating theoretical power by discovering application in different fields (Porter ,1990,1998).

The literature on the concepts of industrial districts and clusters shares a common platform. Both these concepts brought the notion of the positive effects of location on firm competitiveness and stressed on the impact of geographic agglomeration on firm's performance. ( Feser and Bergman (2000), Porter and Ketels (2009) and Ketels (2011)). Some scholars from the management discipline use both concepts indifferently (For eg. Schmitz, 1995; Tallman et al., 2004; Bell, 2005).

Micheal Porter who is a pioneer in cluster literature defined Industrial clusters as "Geographic concentrations of interconnected companies and institutions in a particular field. Clusters encompass an array of linked industries and other entities important to competition. They include, for example, suppliers of specialized inputs such as components, machinery, and services, and providers of specialized infrastructure. Clusters also often extend downstream to channels and customers and laterally to manufacturers of complementary products and to companies in industries related by skills, technologies, or common inputs. Finally, many clusters include governmental and other institutions--such as universities, standards-setting agencies, think tanks, vocational training providers, and trade associations." (Porter ,1998) .

Firms in an industrial cluster pursue sustainable competitive advantage by joint action such as horizontal cooperation (i.e. between competitors) and vertical cooperation (i.e. supply chain relationships). The gains of joint action are generated through cooperative and collaborative relations among firms in a wide variety of different institutional forms, such as strategic alliance, business associations and producer consortia, which enable them to share and exchange knowledge and information quickly (Foss, 1996).

The academic literature on coir industry spans over diverse areas like production technology, economics, regional studies, labor studies etc. There are plenty of academic works which studied the problems of coir industry particularly in Alappay district. (Isaac, Pyarilal,1991). Apart from that various agencies under Government of Kerala and Central government have also initiated several studies in this area.

Some of the major studies on clusters including that of the pioneering work of Porter (1998) were done on footwear clusters. This is because it is an industry where entry barrier is less and knowledge spillover is easily facilitated which further makes it a conducive atmosphere for cluster formation and development. But so far, no academic research was done taking the case of Calicut footwear cluster.

### **Statement of the Problem**

Micheal Porter (Porter, 1998) and various other authors argued that industrial clustering helps the participating business units to achieve competitiveness by surpassing the limitations of scale and



scope through a special engagement which he called as coopetition. But it is crucial to analyze whether just being in the cluster ecosystem would help the participating units to achieve competitiveness and innovation performance. Despite having all these cluster benefits in place as well as the governmental funds being pumped, the coir industry in Alappay is slowly dying.

This study takes the case of two industrial clusters and attempt to explore the reasons behind the underperformance of the units in one cluster and consistent improvement in the performance of the other. This study attempts to address why cluster mechanism is failing in bringing fruits to the member units in Alappay coir cluster whereas, the footwear industry in and around Calicut is flourishing in a fast pace contributing to the overall economic development of the region.

### **Objectives of the Study**

1. To assess the regional strength dimensions of Alappay Coir Cluster and Calicut footwear Cluster.
2. To identify whether there is any difference in the innovation performance of firms in Alappay Coir Cluster and Calicut Footwear Cluster and if so the reason behind it.
2. To identify the specific areas of improvement in the existing schemes.
3. To identify the bottlenecks faced by the clustered units in both clusters under study.

### **Research Methodology**

The study adopted an exploratory as well as descriptive methodology. Data was collected from a sample of owners/managers of 108 units in Alappay and Calicut industrial clusters. The study has two dimensions. Firstly, the regional strength dimensions of both clusters were assessed using The European Cluster Excellence Scoreboard Approach to quantify their cluster characteristics. Next, the owners or top managers of the clustered units and other relevant stake holders in the cluster ecosystem were approached, and information was gathered about their perception regarding the prevailing support system and their suggestions in order to improve the operational efficiency of the units.

The scale used for eliciting data on the overall efficiency of the clusters is adopted from The Regional Strength Dimensions Measurement under The European Cluster Excellence Scoreboard Approach.

### **Industrial Clusters in India**

India has nearly 2.5 million small and medium-scale industries, which account for 7 % of the gross national product, 40% of industrial production and 60 % of exports and a major source of job creation. These small businesses are the building blocks of the Indian economy, and the country's economic competitiveness will depend a great deal on the success of its small and medium enterprises (SMEs). An important part in SMEs is played by industrial clusters. It is estimated that there are 350 modern SME clusters in India. In addition, 2,000 artisan-based rural clusters are also in existence. The

industrialized states of Maharashtra, Gujarat, Punjab, Rajasthan, Tamil Nadu and Haryana have the maximum number of clusters. The largest concentration of clusters is in the western parts of the country, in towns and cities.

It is estimated that 90.57 % of the clusters in India have developed naturally, and the remaining 9.43 % are induced clusters that have come up due to the policy initiatives of the government.

## Study Findings

### Measuring the regional strength dimensions of clusters using The European Cluster Excellence Scoreboard Approach

The objective of the European Cluster Excellence Scoreboard (ECES) is to measure the regional environment and its status quo in order to assess and identify under which framework conditions clusters can provide support for the development of emerging industries. In order to obtain results that are comparable across industries, the scoreboard focuses on general indicators that apply to all industries (focus is given on emerging industries), with no particular focus on a specific emerging industry. The scoreboard indicators measure the following three key elements of regional strength in emerging industries.

These key elements are assessed along eight different dimensions: Finance, Industrial, Market, Cultural (including human capital and entrepreneurship), Knowledge, Regulatory & Policy, Support, and Output & Performance.

In this study the respondents were asked to assess the importance of the indicators and their availability in both clusters which are under study.

### Alappy Coir Cluster

**Table 1 : Alappy Coir Cluster Score Board**

Diamensions	Mean Scores				
	Item 1	Item2	Item3	Item4	Total
Financial Characteristics	2.2	2.1	2		2.13
Industrial Characteristics	4.2	3	2.4		3.2
Market Characteristics	2	2.8	1.2		2
Cultural Characteristics	3.8	1.8	2.8		2.8
Knowledge Characteristics	4.4	3.1	4.2		3.9
Regulatory And Policy Characteristics	4	1.1	3.2		2.76
Support Characteristics	2	1.8	2.8	2.4	2.25
Total					2.72

## Calicut Footwear Cluster

**Table 2 :Calicut Footwear Cluster Score Board**

<b>Calicut Footwear Cluster Score Board</b>					
Diamensions	Mean Scores				
	Item 1	Item2	Item3	Item4	Total
Financial Characteristics	2.2	2.3	2		2.1666667
Industrial Characteristics	4.2	4.2	3.4		4.2
Market Characteristics	3.4	3.7	3.2		3.4333333
Cultural Characteristics	3.2	2.8	3.1		3.0333333
Knowledge Characteristics	4.4	2.9	4.3		3.8666667
Regulatory And Policy Characteristics	3	2.1	2.2		2.4333333
Support Characteristics	3	2.1	2.7	2.7	2.625
Total					<b>3.1083333</b>

The assessment of the regional strength dimensions of Alappy coir cluster and Calicut footwear cluster as per the European cluster excellence scoreboard approach shows a mean total score of 2.72 and 3.10 respectively and both are positive indicators. It shows both the Alappy coir cluster and Calicut footwear cluster possess almost all characteristics which a cluster requires to help member firms to achieve competitiveness and deliver high performance.

The concept of clusters is always related to competitiveness or performance enhancement (Porter, 1990). The European cluster excellence framework includes outcome and performance as the 8th indicator of cluster excellence. But measuring firm level performance is always a difficult task due to the lack of well accepted objective mechanism. As the study results reveal that both the clusters possess almost all characteristics a typical cluster requires, it is expected to deliver a positive impact on the participating firms. But the data from both clusters tell a different story. The units in the Alappy coir cluster are struggling for existence despite having presence of almost all physical supporting mechanisms. The age-old glory of coir industry in Alappy is now faded despite having regulatory and policy support from the government. The concept of competitiveness is nowhere in the priority list of these units. Whereas the units in Calicut footwear cluster are improving performance year to year though there are no special policy or regulatory support to the industry from the government.

In order to understand the reason behind this contrasting performance, an in-depth survey was done with the stakeholders of both clusters.

### **Satisfaction of stakeholders on firm performance**

55 out of the 60 respondents who are at the helm of affairs of coir corporative societies in Alappy said that they are not satisfied with the performance of their firm. But 42 out of 48 respondents from Calicut footwear cluster are satisfied with the way they are performing though they believe more improvement need to be achieved in the future. Here the critical aspect is that the units in Alappy are not even in a position to think of performance satisfaction as most of them are concerned about the survival of the unit and they perceive it as an employment generation mechanism. This credit much to the cooperative mechanism prevailing in the industry. As the units in Calicut is driven by profit motive and run on market mechanism even the smallest firms are enthusiastic about new learning and performance improvement.

### **Financial assistance from the government agencies**

A large amount of fund is being pumped to coir industry through various governmental agencies to revive this sick industry. All the coir corporative societies in the Alappy district are receiving/had received financial assistance from various governmental (both central and state) agencies on a time to time basis. These financial assistances may either in the form of

- Income support scheme
- Working capital fund
- Asset development fund
- Production and marketing incentive scheme.

These governmental funds are mainly utilized in the following areas

- to pay off previous losses
- Payments to suppliers of raw materials
- Asset development funds would be used to buy machineries ,godowns etc.

The governmental initiatives in Calicut cluster is nominal and there is no specific financial support scheme for them though District Industrial Centre and other agencies are taking some positive steps for the promotion of the sector.

### **Access to loan and the firm's ability to payback it**

Most of the firms in Alappy district have taken loan from banks for various purposes. Almost all of them who had taken loan are yet to settle it. They are not able to pay off the loans due to poor financial position of the firms. There are few units who are not having any loan, but it doesn't mean that they are of sound financial position. but they are managing to meet expenses though they are not generating profits.

Most of the units in Calicut cluster are smaller in size and they are engaging in some of the activities in footwear value chain. 30 units out of 48 considered for the study had sought bank loan most of which was utilized for installing plant and machinery for manufacturing process. Most of the units which had taken loan are able to make prompt payment and some of them have already settled their loans.

### **Minimum wages for employees**

All the coir cooperative societies are paying the mandatory minimum wages to their employees. As per the statute, a unit which comprises of two employees should produce 20 Kg of coir per day which entitle them with RS 300. As the minimum production quantity for a worker is too small to achieve, every worker easily achieves it.

The units in Calicut footwear cluster are engaging in diverse activities in the footwear value chain. As the bigger organizations engage in almost all activities from R&D to marketing, most of the smaller firm act as the component supplier to these larger organizations. So, the wage practices in Calicut cluster is different in different organizations. We can see smaller units which follow piece rate system to the larger ones who give fixed monthly salary. The average monthly salary of the unskilled factory worker without any prior experience is around 11000 RS. The experience and skill of the employees command higher payment in this sector.

The recent trend of the huge inflow of unskilled workers from northern part of the country to work in the industrial units in Kerala had created a pool of comparatively cheaper work force in Calicut whereas it didn't affect much in Alappay due to labor protective environment facilitated by corporative mechanism prevailing there.

### **Product categories and diversification**

All the coir cooperative societies in Alappay are engaging in any of the three-following product/production activities

- Retting of husk and extraction of fibre
- Spinning of yarn
- Coir mats and mattings

Most of the units didn't implement any diversification process. They are still engaging in the same activities they were engaging since their inception.

We can see a very different picture in Calicut. Almost all units are trying their maximum to follow the international footwear market trends in improve their product categories. Some of the best footwear products in the country is launched in Calicut and they are even able to find export markets. They are also keen in identifying the new technologies which are handy to them and are prompt in

implementing it. The footwear industry in Calicut started with the manufacturing of rubber chappals. In the due course they have travelled through the advancements in synthetic footwear technology and now we can see units engaging in the manufacturing of PVC, Poly Urethane (PU) and Thermo Plastic Rubber (TPR) footwears in this region.

### **Mechanisation in production**

There is a least incidence of mechanization happened in the coir industry of Alappay district. Being it a labor-intensive industry, the fear of probable job loss creates a negative attitude towards mechanisation from various stake holders especially from trade unions. Recent Introduction of defibring machine and Matting machine by few units are the major step in this direction.

The units in Calicut footwear cluster is keen on mechanisation. Even the smallest units are using machines for the production process. Thanks to the knowledge spillover facilitated by industrial clustering we can see units in this cluster who use advanced machines like PUMA and GUSBY and the units which use indigenously adopted version of these machines produced by local talents.

### **Cost reduction**

The prime cost center as far as these coir units are concerned is human resources as this is a labor-intensive industry. There are limitations for these firms in achieving cost reduction as the extend of mechanization is too limited in this industry at least in Alappay district.

As mechanization is involved in almost all activities of the value chain the units in Calicut are able to achieve maximum cost reduction. To achieve competitiveness and to withstand the competition from the larger counter parts who enjoys the economies of scale and scope the smaller units in Calicut forms consortium for collective buying of raw materials and marketing activities.

### **Marketing and sale of the product**

Most of the units in Alappay are engaging in the conversion of husk which is a primary activity in the coir value chain. They follow a made to order policy in production .ie they do it as per the order from their client, in most cases which is Coirboard. So generally, they don't face any marketing issue. Their marketing ambitions are too limited and thus it is easily achievable for them. Those units which is involving in value added product coir products utilize the marketing options governments and other agencies provide them in the form exhibitions and trade fares.

The units in Calicut make use of their cluster proximity in their marketing activities. The established/ leading firms in the Calicut footwear cluster have already found their marketing presence in almost all parts of the country and even in GCC countries. But the smaller firms have to compete with these larger firms as well as other MNC players in order to find their market share. In order to surpass their diseconomies of scale and scope, these smaller firms form consortium to come up with

common branding and shared marketing activities which make them visible across product categories and reduce marketing and advertisement expenditure to a great extent.

### **Procurement of raw materials**

In the earlier days, being in the state of Kerala and proximity of the coastal areas of Alappay made sourcing of quality raw materials easy for the coir units. The leadership position of Kerala state in the production of coconut made Alappay the hub of coir industry in the country. But in the due course the things got worse and the situation gradually changed. Thanks to the pathetic supply chain network for sourcing husk, procurement of raw material from Kerala become literally impractical, though the state still maintains a top rank in coconut production. Now most of the units are relaying on the Tamilnadu for the procurement of raw materials.

The presence of critical mass of footwear manufacturing units in and around Calicut city had prompted big international machinery and raw material suppliers to establish their units in the locality. Now Calicut houses almost all major raw material and machinery suppliers which makes it easier for firms to procure materials with lesser cost and time. The consortia formed by smaller units help them to buy together and achieve the benefits of bulk purchase.

### **Threats and challenges to the industry**

One of the major threat to the coir industry is low priced plastic substitutes of coir products. Apart from this the coir units in Alappay is also facing cut throat competition from Tamilnad where they are employing advanced cost reduction and value addition processes through proper mechanisation.

Initially the major threat faced by units in Calicut was from the cheaper products from china which is available in the market. But now these units have managed to carve their own niche in the market with their products which are price competitive and meet good quality standards.

### **The question of profitability and competitiveness**

Most of the coir units in Alappay are not running profitably. They are not even able to repay their loans. The major reason behind the underperformance of these units are the attitude of its stakeholders towards them. None of its stakeholders views it as a matter of profit making but as of employment generation. The question of competitiveness comes nowhere in the picture. Despite having plethora of working reports on their underperformance, the policy makers are also hesitant to address this issue. So, it continues as a social welfare project where the question of profit is least expected.

Most of the units in Calicut are running profitably. They are able to sell their products to help themselves. Most of them are optimistic about their future and are keen to improve their competitiveness. The active role of Calicut Footwear Association in conducting trade fairs and technical workshop helps these units to get track of the recent trends in the industry and get benefit out of it.

## **Governmental support**

Coir industry in India is a sick industry. Governments have been extending policy support and flooding money to revive this industry since decades. The corporatisation policy adopted by the state as well as the central government for reviving this industry was need of the time. But empirical assessment of the issues pertaining to this industry shows that it is high time for the government to make significant policy changes in the cooperative mechanism prevailing in the coir industry where a system should be brought in place where competitiveness plays the vital role.

The officials of the coir board are having the opinion that governments are in dilemma regarding the policy orientation. The decisions are stuck in between populism and feasibility which results in policy paralysis.

The role of the government in the formation of Calicut footwear cluster is least as it was a natural output of some favorable environment condition. The cluster was formed by the knowledge spillover from the pioneer firms in the locality who first established their units there. Then active involvement of trade associations and chambers of commerce helped it to grow to the next level. Now the government is initiating some proactive steps in this cluster by establishing footwear design institute and other cluster development institutes in the locality.

## **Modernisation**

Alappy coir cluster, or most of the coir hubs in India for that matter- is lagging far behind in modernisation. Even though, Through the institutional frame work they are aware of the technological innovations happening in the industry, implementing them in their unit is out of their priority list. There is a state of the art central coir institute in Alappy which is engaging in the research and development of new coir value added products, the fruits of these research is not reaching to the local units.

The industrial exhibitions conducted in Calicut jointly by government and manufactures associations expose the firms to best practices, latest technology and best suppliers from across the globe.

## **Recommendations to The Policy Makers**

### **Regarding Alappy Coir Cluster**

- The government should rethink about the cooperative framework prevailing in the industry to make it compatible with the highly competitive market standards.
- There should be strong efforts from the government and allied support agencies to implement mechanisation in the coir units.
- Regular training should be given to employees as well as the office bearers of the cooperative units to make them updated with new skill sets and technologies.



- Conducting trade fares and exhibitions would expose the coir fraternity in Alappay to the best practices, suppliers and technology from across the globe. This would also help them to find market overseas.
- Government should enhance the minimum production requirement to improve the total production in the coir units.
- Government should take steps to include the coir workers under National Rural Employment Guarantee Mission and acknowledge coir industry in its scope of activities. This would help to avoid absenteeism among workers as they tend to join for NREGM program during those days.
- Government should ensure maximum corporation among various actors in the industry to make synergic effects.
- Proper linkage between Central Coir Research Institute, Alappay and coir corporative units in the region will help them to acquire skills and develop new products.

### **Regarding Calicut footwear Cluster**

- Calicut footwear cluster is now in a growth track. It is the time the government should intervene and take proactive steps to promote more business in this cluster.
- Government should engage with various stake holders in the cluster to ensure a healthy interaction among the firms to enable more formal linkages and knowledge transfer.
- The government should take steps to promote new entrepreneurship in this sector by providing an enabling environment and improving ease of doing business.
- The government should work with the manufactures association to help them with finding export market.
- The work of proposed footwear design and development institute should be completed at the earliest and convert it as a knowledge hub for the industries in this area.

### **Conclusion**

This study analyzed the cases of two major industrial clusters in the South Indian state of Kerala ie. the Calicut footwear cluster and Alappay Coir cluster, to draw insights regarding the modalities of involvement and its impact on the local economic milieu. In line with the evidences drawn from the past studies, being in cluster locality should attribute to the competitiveness of firms in these regions. Despite having all the cluster attributes in place and governmental funds being pumped , the coir industry of Alappay-which possess a glorious history- is now slowly dying. Whereas, the footwear industry in and around Calicut is flourishing in a fast pace contributing to the overall economic development of the region. As these two clusters represent two contrasting realities and impact the local economy in distinct ways, it was worth to assess their underlying aspects to arrive at a framework for successful cluster operations

The enquiry to the reason behind this contrary result lays in the question of competitiveness in the objective of policy formulation regarding this industry. All the stake holders of the coir cluster are perceiving it as an employee support mechanism rather than an industry which is having potential to generate income and foreign exchange. The industry is relying on governmental grants for its survival and not functioning on market mechanism. Most of the goods produced are procured by governmental agencies on a fixed rate. There isn't much value addition or mechanization happened in the industry here even after decades of operation. This is mainly due to fear of stake holders regarding the potential job loss due to mechanization in this labor-intensive industry. But Calicut footwear cluster is focusing on competitiveness and innovation. The members show interest to engage with other stake holders for learning and improvement. In a nutshell, it can be said that though the Alappay coir cluster possessed all those unique characteristics of a typical industrial cluster a mechanism to trigger synergic action is missing to deliver the intended benefits to the participating firms as well as to the whole industry.

Thus it is visible that the mere presence in the cluster locality may not help the firms to enhance competitiveness but they should pursue competitive advantage by joint actions such as horizontal cooperation (i.e. between competitors) and vertical cooperation (i.e. supply chain relationships). As stated by Foss (1996) The gains of joint action are generated through cooperative and collaborative relations among firms in a wide variety of different institutional forms, such as strategic alliance, business associations and producer consortia, which enable them to share and exchange knowledge and information quickly.

## References

1. Anandan, Anathalavattom., (1997). Report of the Committee for Reviving the Tortured Coir Vyavasaya Co-operative Societies in Kerala. Thiruvananthapuram:
2. BhaskaranUnnithan, K. [1970], Coir Industry in India, with Special Reference toMarketing and Trade, Coir Board, Cochin
3. Feser, E. J., & Bergman, E. M. (2000). National industry cluster templates: A framework for applied regional cluster analysis. *Regional studies*, 34(1), 1-19.
4. Foss, N. J. (1996). Knowledge-based approaches to the theory of the firm: Some critical comments. *Organization science*, 7(5), 470-476.
5. Isaac, Thomas. T. M and Mukharjee, Chandan., (1981).A Review of Estimates of Employment and production in coir Industry, Thiruvananthapuram: Centre for Development Studies.
6. Issac, Thomas, T.M and Raghavan, Pyaralal., (1990). A Policy Framework For Revitalization of Coir Industry in Kerala. Thiruvananthapuram: Centre for Development Studies, Working Paper No. 240.
7. Jose. V.S., (2002).A Study of Coir Vyavasaya Co-operative Societies in Kerala Performance, Problems and Prospects. Cochin: Ph.D. Thesis submitted to Cochin University of Science and Technology.
8. Kannan, K.P and Raveendran, G., (2009). Growth Sans Employment: a Quarter Century of Jobless Growth in India's Organized Manufacturing. *Economic and Political Weekly*, Vol. XLIV., No.10.P83.

9. Kerala Industrial and Technical Consultancy Organization (KITCO)., (2005). Survey on Status of Coir Industry in Kerala: 2010, Cochin: Coir Board.
10. Kerala Statistical Institute., (1997). Survey of Coir Industry in Kerala, Cochin: Coir Board
11. Ketels, C., & Huggins, R. (2011). Clusters and competitiveness: Porter's contribution. *Competition, Competitive Advantage and Clusters: The Ideas of Michael Porter*, 173-191.
12. Marshall, A., & Marshall, M. P. (1920). *The economics of industry*. Macmillan and Company.
13. Nair, G.K., (2004). Raw Material shortage Cripples Kerala Coir Industry. *Business Line*, April 10.
14. Porter, M. E. (1990). The competitive advantage of nations. *Harvard business review*, 68(2), 73-93.
15. Porter, M. E. (1998). Clusters and the new economics of competition (Vol. 76, No. 6, pp. 77-90). Boston: Harvard Business Review.
16. Porter, M. E., & Ketels, C. (2009). Clusters and industrial districts: common roots, different perspectives. *A handbook of industrial districts*, 172-183.
17. Raghavan, Pyaralal., (1995). Dynamics of Industrial Co-operatives: A Study of Traditional Industries in Kerala, Thiruvananthapuram: Ph.D. Thesis, Centre for Development Studies.
18. Ravindranath, Das, Anita., (2001). Biotechnology in Coir Extraction and Waste Utilisation, Central Coir Research Institute, Journal, CORD Vol XVII No.2. pp. 1-9
19. Romulo, N and Arancon, J.R., (2009). Challenges of the Coir Industry. *The COCOMUNITY, Journal*, Vol. XXXIX, No.10, pp.1-5
20. Schmitz, H. (1995). Collective efficiency: Growth path for small?scale industry. *The journal of development studies*, 31(4), 529-566.
21. Sivaraman, B., (1978). Report of the High Level Study Team on Coir Industry, New Delhi: Planning Commission.
22. Tallman, S., Jenkins, M., Henry, N., & Pinch, S. (2004). Knowledge, clusters, and competitive advantage. *Academy of management review*, 29(2), 258-271.
23. Thampan, P. K. "The Coconut Profile of India." Status of coconut research & development in India, Malaysia, Sri Lanka and Tanzania. Kerala Agrl. Univ. Vellanikkara 680654 (1988): 1-22.
24. Thampan, Palakasseril Kumaran. "Profitable coconut growing." (1984).
25. Unnithan Bhaskaran, K., (1970). *Coir Industry in India with special reference to Marketing and Trade*. Cochin: Coir Board.
26. Zaheer, A., & Bell, G. G. (2005). Benefiting from network position: firm capabilities, structural holes, and performance. *Strategic management journal*, 26(9), 809-825.

## Production and Marketing Challenges of Handicraft Products with Special Reference to Wood Craft

– Gopish . G\*

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### Abstract

*Handicrafts sector means those sectors producing products in hands with lower use of technologies and machines . The Indian handicraft sector is majorly labour intensive part of small scale business. The industry is spread all over the country from east to west and from north to south most of the manufacturing units are located in rural and in small towns. The handicraft statistically forms the second largest source of unorganised sector employment in India. Handicraft sector got boost since the new Economic Philosophy of Inclusive Growth has been initiated as a route to success towards sustainability by the government of India. The concept of inclusive growth says for the firmness of Indian economy all sectors of economy including handicraft must be given equal magnitude and for the inclusive growth both rural and urban sector must be given proper attention. While in India rural economy is the backbone as well as the vital of growth of the economy at all so it must be given most priority*

*Keywords: production and Marketing challenges, supports of Government and non Government institutions, export facilities and infrastructure, etc*

### Introduction

Handicraft are a traditional sector industry and products that are producing with in hand made and lower use of machines. They are commonly produced with lower initial capital investment from raw materials available with the country, the designs evince heritage and skills. The labours in this industry is not ionized. Handicrafts are vital productive sector in India and exports variety of products with different abroad countries. The growth of abroad markets for domestic products and increased interest in foreign goods have open up to a variety of business opportunities for artisans. In spite of extensive production, however, there is a lack of common definition of handicrafts, although various attempts have been made to characterize this broad and rather unorganised sector. According to United Nations Educational, Scientific and Cultural Organization/Information Technology Community (UNESCO /ITC) International Symposium on "Crafts and the International Market: Trade and Customs Codification", Manila, Philippines, October 1997: Handicrafts can be defined as products which are produced either completely by hand or with the help of tools. Mechanical tools may be used as long as

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the direct manual contribution of the artisan remains the most substantial component of the finished product. Such products can be utilitarian, aesthetic, artistic, creative, culturally attached, decorative, functional, traditional, religious and socially symbolic and significant'

The most common base on handicraft product is how the product is developed, specially Machine-made vs. Hand- made production; the importance of artistic virtues of the product vs. Simple crafts; and the stimulus for production, which may be entrenched in culture and convention or due to financial reasons.. The global deal in handicraft items occurs typically from the developing countries. The two main reasons could be endorsed to this occurrence:

- If labour costs in the developed nations increase more rapidly than in the developing nations, latter could raise their market share.
- The demand for traditional type products is stirred as incomes in the developed countries rise because of their handmade, heterogeneous qualities.

For the intention of achieving comprehensive growth, India needs to better focus on the farming and agribusiness industries at first as they are main source of employment for the poor who subsist in hopeless poverty. Handicraft sector is one of the indirectly farming linked sectors of rural economy which provides income for the livelihood with the motive to reduce poverty and make India as self-sufficient in handicraft needs.. The industry is of crucial importance to Indian economy and is considered as the second largest employment generating sector after agriculture, i.e., approximately 6 million artisans are linked with the industry who are basically from the backward sections of the humanity and is one of major foreign exchange earners for the country. The estimated value of production also plays a key role in the economy. According to the Export promotion Councils published report 2016 , the world handicraft market is worth US\$ 235 billion, with India's share only 2 per cent as compared to the strong position of China with 18per cent share.

## Literature Review

**Kamala Devi Chathopdhyay** (1985), *The Glory of Indian Handicrafts*, she was described that Art and Artisans are gift of God . So their products are very heritage and most valuable products. These products not compare to other commercial products. Handicraft products express countries culture , status and myths . It is not only a effort of producers but include whole Indians heritages and status. In India handicraft sector not only a business form , also a family heritage. Lot of families engaged in handicraft sector but they forced to rely on other sources of income for their day to day survival, as a traditional family business in handicrafts has failed to generate the necessary income. Indian handicraft sector face lot of problems specially marketing areas.

**P N Sankaran** (2012) in his finding discussed that India should explore and target on new sizable markets such as Britain, china, Italy, Switzerland, brazil, Japan and Hong Kong where our exports are negligible. The study concluded that formerly middlemen (chain of circle) exploited the

artisans leaving them underpaid. The Government initiative to give the artisans their due and to stimulate certain dying arts and crafts. Day to day increase the markets of handicraft products on abroad than India.

### **Statement of the problem**

In India , hand craft sector is a major source of earning for rural peoples employing over five million artisans specially a large number of women and weaker sections of the society .Even though the handicraft industry is expected to be the largest contributor of India's revenues in the non-farm sector, it faces a lot of problems and struggles in the current scenario; especially in the area of production and marketing. The majority of the artisans are forced to rely on other sources of income for their day to day survival, as a traditional family business in handicrafts has failed to generate the necessary income. The study addresses the production and marketing problems faced by artisans as well as marketeers in the handicraft industry and attempts to identify opportunities for its development.

### **Significance of the study**

Handicraft sector occupies a prime face in the Indian economy. It is the largest employer, next to agriculture sector. The sector, while providing livelihood for lot of artisans, provides avenues for achievement of social and cultural dormant of millions of people. The handicraft sector not only provides employment opportunities for the economy but also acts as a sensible artistic approach for artisans' self-expression and development . Handicraft sector is directly related to the economy of the rural India. It means that growth, and downfall is the mirror image of rural economy as well as the economy as a whole. Handicrafts, especially wood craft are a vital part of Kerala's traditional and cultural heritage. The wooden accessories used in the Kathakali dances are a popular form of souvenirs. The ancient and historic landmarks of Kerala, like temples and palaces are a testament to the exquisite woodcraft, in the forms of their carved pillars, doors and ceilings. One such pillar is in the Padmanabhapuram palace, in the form of a tree - it has a base with intricate carved mouldings' and as it rises it becomes slender and branches out at the ceiling. These historic artistic creations are credits of exceptional Kerala artisans. Today well known artisans still exist in Kerala who are rich in artistic talents and have earned well deserved reputation. But in their personal life, they are financially very back word and lead a poor family life. The study aims in identifying major problems in handicraft sector like production problems, marketing problems, as well as financial problems of artisans. The study also tries to come up with strategies and solutions to improve the standard of living of these artisans.

### **Scope of the Study**

The handicraft industry consists of a wide variety of products, because handicraft means hand-plus-craft. Handmade products consisting in this group are clay, cane, wooden ,stone , metal, ivory, glass, bamboo and textiles. The most popular items in Indian handicrafts are carpets, bamboo items,

candles, handlooms, clay products, ivory and other products of paper. This study investigates the problems and prospects of production and marketing field of wood craft artisans and marketers in Trivandrum District. The period of the study is 2016-17.

## Objectives

### Primary Objectives

- 1 To identify production challenges faced by handicraft producers
- 2 To identify Marketing challenges of handicraft products

### Secondary Objectives

- 3 To examine the role of institutions in handicraft product sector
- 4 To identify the different schemes and initiatives introduced by the Government for promoting handicraft products
- 5 To provide practical suggestions for the development of handicraft sector

## Methodology

- **Research design:** descriptive and analytical nature.
- **Sources of Data:** The study is conducted using both primary data and secondary data. The primary data were collected from 100 sample respondent from Trivandrum district through a structured questionnaire. Secondary data were collected as per the requirements of the theoretical framework from the journal, previous articles, magazines, official website of ministry of textiles, Government of India
- **Sample Design:** The population consists of wood craft artisans and marketeers in Trivandrum city. A total of 100 samples were selected of which 50 samples were selected from woodcraft artisans and remaining 50 from marketers. The Purposive sampling method is used to collect the data.
- **Tools for data collection:** structured questionnaire is used for collecting information from artisans.
- **Tools used for data analysis:** Various statistical tools are used for analysing the data collected. The tools used for the study are:
  - Tables
  - Percentage
  - Weighted average

The primary data so collected are appropriately condensed in the form of tables so as to render comprehensible and facilitates easy comparison and were analysed arithmetically and statically.

To find out the production challenges of handicraft products, 7 factors were given and the respondents were asked to rank the reasons 1,2,3,4,5,6,7 according to their priority. Two analyses the hence collected data, each rank was assigned weights.

Rank	1	2	3	4	5	6	7
Weight	7	6	5	4	3	2	1

After that, each factor was taken and the different ranks obtained for the factors were multiplied with respective weight and the aggregate of their products were taken. To analyses the data, hence collected the scores for each factor obtained are compared and then the highest was ranked 1 and next 2 and so on.

## **Operational Definition**

### **Marketeers**

- In this study Marketeers are defined as 'personnel who are engaged in the marketing of Handicraft products

### **Wood Craft of Kerala**

Woodworking is one of the ancient crafts of Kerala. The natural wealth of various types of wood is evident in the prolific woodcrafts of Kerala. Crafted wooden sculptures abound in much historic architecture and skilled carpenters of Kerala create magnificent art in tables, chairs, cabinets, and sofas, apart from the traditional figurines depicting popular animals, designs and gods. The wooden accessories used in the Kathakali dances are a popular form of souvenirs in addition to the dolls. The ancient and historic structures of Kerala, like temples and palaces are a testament to the exquisite woodcraft, in the forms of their carved pillars, doors and ceilings. One such pillar is in the Padmanabhapuram palace, with the form of a tree - it has a base with intricately carved mouldings and as it raises it becomes slender and branches out at the ceiling. Each branch ends with the form of a lotus and equally decorative designs are carved within them. This pillar is over four hundred years old and modeled over the monolithic pillar at Fatehpur Sikri. Wavelike patterns in the carved ceiling of this Palace resemble the foliage of a great tree and it is simply a masterpiece of woodcraft. The heavy wooden doors in the Palace appear to be delicate with their life-like floral designs. Many aspects of architecture of the middle ages have provided excellent opportunities where medieval artisans have immortalized their art in wood, which is also present in the colonial Christian and Jacobin churches in Kerala. These old churches have classical Catholic motifs displaying much religious symbolism, like the naturalist vines to abstract geometric designs in their pulpits. These masterpieces have sadly



remained unnoticed by the outside world. Several wooden miniatures are a part of the altar, which are a delicate and intricate accompaniment to the traditional stained glass windows of churches.

In the inquiry of wooden furniture, the royal cot of Padmanabhapuram palace is a perfect epitome of traditional design, both functionally as well as decoratively. The four legs, as they continue to form the canopy are again themed on the natural image of a delicate plant. The slender posts with their flowing decorations seem as if they have grown out of the bulk of the cot and are deservedly a masterpiece. Delicate screens made entirely out of wood, employ complex symmetric patterns carved with great skill into a delicate layer of wood. Much wonderful timber is indigenous to Kerala, like chrome yellow to deep dark blackish browns of Teak or the dark to light purple complexion of Rosewood or perhaps the gradual ageing of White Cedar from a light dirty grey to a dark lustrous grey. Rosewood and teak hardwoods have been Indian favorites for ages and continue to do so today. The lost art of Marquetry that creates many articles like trays, ashtrays, bowls, plates and vases from numerous pieces of veneer, has indeed received a second wind in the recent decades. Its primary appeal comes from the special visual effect from the different blocks of different woods and the variety of Flora in Kerala makes it easier to accomplish.

The ceilings are generally divided into panels, each bearing a relief carved motif of a lotus, deity or dikpala, guardians of the cardinal directions. The heavy rainfall, harsh sunlight and intense humidity of the local climate have given rise to an architectural vocabulary of tiled sloping roofs with decorated garbles' that rise in two or more super imposed tielrs to create steep pyramidal profiles, latticed shutters and slatted panels of te exterior porches in order to

1. The outer wooden structure, or malaika, of the Taikottaram at the Padmanahapuram Palace; the slats diffuse the intensity of he light and allow air to flow into the inner spaces.
2. Detail of wooden Yali brackets in the Ambari Mukhappu, Padmanabhapuram Palace.
3. Decorative wood carving is incorporated into this entrance porch to the Navaratri Mandapam, Padmanabhapuram Palace.
4. The latticed west wall of the queen`s dressing room, Padmanabhapuram Palace.
5. A teak wood bench with curved headrests at the porch of the Kuthiramalika Palace;

common features of the exterior halls in most traditional upper caste homes, such casual yet austere seating arrangements are usually intended for the use of the male members of the family and their visitors. ensure the drainage of rainwater and the passage of air through the rooms as well as prevent heat from getting trapped. The interiors of the koothambalam, the theatres located within precincts of temples and palaces, have latticed screen like walls on three sided that grant ventilation and diffuse light; specially designed roofs provide excellent acoustics. The fine carving may be seen in many temples and churches of the region - the Mahadeva Temple near Thiruvananthapuram feature and ornate ceiling with a central image of Brahma seated on a lotus and numerous depictions of

warriors wielding swords. Similarly, intricate detailing is present in the local churches where the altar, pulpit and the ceiling above the chancel usually sport carved and glided vines, grapes and wheat.

## **Summary of Findings, Suggestions and Conclusion**

### **FINDINGS**

#### **Production Challenges**

- Majority of the artisans have no higher education. Most of the artisans are uneducated people. Both men and women are equally skilled in handicraft sector.
- Artisans have more than ten years of experiences in the handicraft industry. The main reason for this is that handicraft is not seen as a business, but is carried out as a part of their heritage or family business.
- The traditional pattern of skill transformation and continuity of employment is getting weak in the case of wood carving artisans as revealed by the low percentage of sons of artisans following the profession by tradition.
- The level of unemployment is also found to be very high in artisan households.
- Majority of the artisans buy raw materials on credit and the amount to meet this credit is raised from financial institutions.
- Income earned from handicraft businesses is not enough to meet expenses, because of high raw material cost, equipment cost, market cost, transportation costs etc.
- Expenditure change time to time due to inflation, shortage of materials etc.
- There is not uniformity on the fixation of selling price as it depends on market demand, intermediaries, cost of production etc
- Majority of the artisans are dissatisfied over supply of raw materials. for which they formalities of buying craft wood in forests, fixation of quota and priority to registered artisans. Artisans buy materials from Handicraft Development of Kerala ( HDCK), TICCA, local markets and middle men etc. HDCK provide raw materials only to registered artisans and also get subsidies and loans for procurements of materials. But non registered artisans don't get these facilities. They commonly depend upon local markets and other dealers.
- The artisans have reported interventions of middlemen in the industry and their nexus with vested interests. It is indeed shocking to find that majority of the artisans have reported underselling of art goodies for want of either money or alternative income supporting schemes.
- Artistic quality of craft goods continues to be the dominant marketing criteria in the wood crafts industry.
- Most of the artisans are still interested in traditional designs even though they are aware of modern designs and process.

- Tourism plays vital role in handicraft sector.
- In Kerala, for the past two years no exports have been carried out by SMSEs and government. Only some individual artisans were able to accept orders from foreign customers and send the finished goods directly.
- Recently Export promotion council plays a silent role in handicraft sector, the main reason being red-tapeism, delay on procedures, formalities etc.
- Central as well as State Governments have launched and initiated fund based and non fund based policies for development of registered artisan's life, (Ambedkar Hastshilp Vikas Yojana by Central government and Entrepreneur Assistance Scheme in Handicrafts by State government) but majority of artisans are not aware about it.
- HDCK provide maximum two lakhs of financial loans to artisans, only on the basis of mortgage securities like salary certificates, documents of house property, consignment of production and sales etc. So these loan facilities cannot be utilized by artisans due to lack of collateral securities and procedural bottlenecks.
- The formalities of loans of HDCK are similar to other banks (Example: mortgage, payback periods, etc.) So compared to other financial institutions, nobody gets any additional benefits from HDCK.
- Employees of Government approved handicraft development authorities are PSC recruited or recruited by other Government agencies. These employees are Handicraft artisans. These employees are completely unaware about handicraft sector and the present conditions of artisans. They work according to government rules just like other government employees.
- HDCK has no proper records about artisans and follow paper filing method. Use of computer and data base is very less in this organization.

### **Marketing Challenges**

- A majority of the respondents (marketers) agree that Market trend of handicraft products is decreasing.
- Marketeers agree that higher demands are placed by foreign customers rather than domestic customers.
- Recently opportunities for exporting are very low as they don't receive any help from the government in exporting handicrafts products. Only a few marketeers collect international orders directly.
- In domestic markets, tourist destinations create more demand compared to other areas like local markets, temples and festivals. After tourism sector, temples and festivals create more demands.

- Approved institutions like HDCK, SMSM organize product promotion programs like exhibitions.
- Marketeers get standard quality products from artisans but when compared to past years output; quality of products has undergone distinguishable change.
- New comers use machines and modern technologies for production due to lack of proper knowledge and experience. Senior craftsmen use traditional technologies hence creating higher quality products
- Social media play a vital role on handicraft product promotions.
- Now online marketing and stores support handicraft product sales, but compared to other products, the role of digital marketing is very low.

### **Suggestions**

In the light of the finding from study conducted; the following suggestions may be implemented for developing the handicrafts sector.

- Organizing marketing network of Handicraft products
- Copy right of handicraft products
- Price uniformity in similar handicraft products
- Research and development in Handicraft:
- FDI with designers and artisans:.
- Development and modernisation of existing infrastructure
- creation of Museums and Design Development Centres to build upon local crafts with a view to sustaining and popularizing them.
- Request corporate companies to support artisans belonging to handicraft sector as a part of their CSR activities.
- Government should take initiatives for encouraging Foreign Direct Investment in Handicraft sector.
- Handicraft sector designed on PPP model.
- Give Autonomous power to Handicraft Development Commission
- Increase schemes and funds for handicraft sector and artisan development.
- Provide adequate pension schemes, PF etc. to artisans.
- Reduce number of staffs in handicraft development offices and increase quality of services to artisans. Because one employee's salary and other perquisites are higher than the development

cost of handicraft sector. So only sufficient employees with good knowledge on the handicraft sector maybe appointed.

- Reduce Complex Export formalities.
- Government should start production units and appoint skilled artisans. This will help in creating employment opportunities to artisans attain quality products for exporting.
- Conduct more and more national and international festivals and exhibitions for development of handicraft products.
- Create and develop more artisans' trade union, groups, community arts for protection and promotion of artisans' welfare.
- The government should take more initiatives to supply raw materials.
- The government should provide separate warehouse facilities to artisans.
- The government should give more loans facilities without mortgage, subsidies etc.
- Government should take additional efforts for registering all artisans and issuing an ID card.
- Government should try to digitalize handicraft sector; especially form a data base about artisans. Computerise offices and avoid the use of paper filing system.
- Give more amount of tax reduction for handicraft business or make investment in handicraft sector tax-free.
- Popularising Scheme of Artisan Credit Card (ACC)
- Awards/scholarships for young crafts persons should be introduced to encourage and give recognition to young generation crafts persons

## **Conclusion**

Handicraft products create a large foreign demand and foreign reserve. But recently they face lot of problems especially in production and marketing of handicraft products. Lack of availability of, sufficient raw materials, funds, insecurity in life, poverty etc are some examples. The Government has taken a lot of initiatives to balance handicraft sector. Unfortunately these schemes end up in the wrong hands hence denying support to the needy artisans. Lot of problems are faced by artisans in this field, such as unemployment, inflated price on raw materials, exploitation from intermediaries, difficulty on raising fund etc. Majority of the artisans are not interested in bringing his children's into this field. Indian Handicraft sector is one of the which can contribute to the Success of Make in India mission. India is one of the major exporter of craft products and has shown its importance for so many years. However , there are some setbacks which need to be addressed by the Government , Local Bodies, and Non Governing Organisation's. Despite of all of this, we can say that handicraft sector has potential to grow, and people willing to be the part of this sector. All they need is the help from the

central organisation , which can effectively contribute to the establishment and development of business, and make more employment and stability in Indian economy specially backward areas.

## **Bibliography**

### **Books**

1. Upadhyay (1973), Economics of Handicrafts Industry, Sultan Chand New Delhi
2. Kamala Devi Chathopdhyay (1985), The Glory of Indian Handicrafts, Indian Book company, New Delhi
3. P.N Sankaran(2005), Artisans in wood carving, Institutional intervention in Handicraft Promotion, Artisans federation of India

### **Journals**

1. Peppas, Lynn (2005). Life in Ancient Greece. Crabtree Publishing Company. p. 12. ISBN 0778720357. Retrieved 6 January 2017.
2. Nagyszalanczy, Sandor (2000). The Art of Fine Tools. Taunton Press. p. 131. ISBN 1561583618.
3. Aitha, K.R., (2012), "Marketing channel length in rural India: Influence of the external environment and rural retailer buyer behavior" International Journal of Retail and Distribution Management Volume: 40 Issue: 3
4. Choobineh, A., Lahmi, M., Shahnavaz, H., Jazani, R. K., & Hosseini, M. (2004). Musculoskeletal symptoms as related to ergonomic factors in Iranian hand-woven carpet industry and general guidelines for workstation design. International journal of occupational safety and ergonomics : JOSE, 10(2), 157-68
5. Sharma, T. P., & Borthakur, S. K. (2010). Traditional handloom and handicrafts of Sikkim. Indian Journal of Traditional Knowledge, 9(April), 375-377.
6. Sarvamangala, D. R. (2012). Challenges and Opportunities for Rural Cottage & Handicraft Industries in India (ISSN 2250-1991). Paripex - Indian Journal of Research , 1 (9), 9-10.
7. Indian Handicrafts: Growing or Depleting? IOSR Journal of Business and Management (IOSR-JBM) e-ISSN: 2278-487X, p-ISSN: 2319-7668 PP 07-13 [www.iosrjournals.org](http://www.iosrjournals.org)

### **Websites**

1. <http://www.indianhandicraftexporter.com/handicraft-stat.htm>
2. [www.indiahandicraftstore.com/](http://www.indiahandicraftstore.com/)

3. <http://www.indiamart.com/unique-handicrafts-delhi/>
4. [www.texmin.nic.in/.../Outcome\\_Budget\\_15\\_16\\_b\\_and\\_a\\_section\\_20](http://www.texmin.nic.in/.../Outcome_Budget_15_16_b_and_a_section_20).
5. <http://www.craftsofindia.com/>
6. Handmade in India: A Geographic Encyclopaedia of India Handicrafts [Hardcover]
7. [http://www.ksidc.org/userfiles/industrial\\_\\_\\_commercial\\_policy\\_2015\\_\\_\\_approved\\_\\_\\_may\\_6\\_\\_\\_2015-old16-9-2015.pdf](http://www.ksidc.org/userfiles/industrial___commercial_policy_2015___approved___may_6___2015-old16-9-2015.pdf)
8. [http://texmin.nic.in/pdf/ar03\\_c09.pdf](http://texmin.nic.in/pdf/ar03_c09.pdf)
9. <http://www.cicr.org.in/pdf/press/29-12-2015.pdf>
10. <http://ncdpd.in/BROCHURE-Exports-of-Indian-Handicrafts-&-International-Craft-Exchange-Programme.pdf>

## Entrepreneurship for Women Self Help Groups

– Dr. V. Siva Sankaran\*

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### Abstract

*The purpose of any SHG is generating income and employment opportunities for the poor and marginalized women. Technology helps the Self Help Groups members in various ways. The research mainly concentrated on the need for empowering the rural poor women and generating employment for them. The primary data was collected from various Self Help Groups from Chennai with a sample size of 200. The sampling technique adopted for the study is Simple Random Sampling. Initially a Pilot study was conducted. The data collection instrument used for the study is Questionnaire. The liker scale and objective type questions were framed in the questionnaire. The results of the study showed that knowledge, skill, attitude and Training programmers play a key role for becoming an entrepreneur. The self help group members were economically empowered and motivated. It will help for the regional economic development of our country.*

**Keywords:** *Entrepreneurship, Employment, Attitudes, knowledge, Regional economic development.*

### Introduction

The important functions of a Self-Help Groups are (a) to encourage and motivate its members to save money (b) to persuade them to make a collective plan for generation of additional income in order to manage the cost of living and (c) to know the formal banking and its services. Self-Help Groups have emerged as the most effective mechanism for delivery of micro-finance services to the poor. The range of financial services may include products such as deposits, loans, money transfer and insurance. It helps for developing the qualities like attitude and decision making capacity. Women are participating training programmes conducted by various institutes in India. Empowering and motivating rural poor women is an asset to the community and it leads to the value of our nation's development.

### Review of Literature

A.Anitha (2013) stated as the present status of women like capability, intelligent and willing to work. Women can achieve anything if she properly motivated and empowered.

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Jessica Schicks (2013) investigated that the benefits of micro finance for the poor. The importances of microfinance, procedure, functions are clearly explained.

Lauren Herman (2012) said that the necessity of providing microfinance and the benefits to the self help groups.

Jackiebauer & Tanjameier (2012) pointed out that the Micro Finance Institutions functions and providing services for starting the business with low rate of interest.

### Objectives of the Study

- To study the background of self help groups.
- To analyze the General Attitude of self help groups.
- To analyze the Effectiveness of training programmes of self help groups.

### Research Methodology

Sampling Technique: Simple Random Sampling

Research Instrument: Questionnaire

Statistical Tools used: percentage analysis, chi-square test, one way Anova test.

### Research Methods & Interpretations

**Table-1 Personal Background**

Particulars	classification	Respondents	Result
Age	1)Below 29	40	20
	2)Between 30-39	100	25
	3)Between 40-49	40	20
	4)Above 49	20	10
	Total	200	100
status	1)Single	120	60
	2)Double	60	30
	3)Others	20	10
	Total	200	100
Education	1) up to 5th	80	40
	2) 6 <sup>th</sup> to SSLC	90	45
	3) SSLC to HSC	30	15
	Total	200	100
Income	1)Between 2000-4000	30	15
	2)Between 4000-6000	110	55
	3)Between 6000-8000	60	30
	Total	200	100

From the above table, out of 200 respondents majority of the respondents are under the age group of 30-39 years, 60 percent are single, 45 percent of the respondents are secondary school qualified and Fifty five Percent respondents are earning between Rs.4000 to 6000.

**Table-2 Teams present in self help groups**

S. No.	groups	Respondents	Percentage
1.	0-11	80	40
2.	12-14	80	40
3.	15-17	20	10
4.	18-20	20	10
Total		200	100

From the above table, Majority of the respondents (40 percent) with 11 members, and the other 40 percent with 14 members, 10 percent with 17 members and another 10 percent with 20 members.

**Table-3 - Need for Financial assistance**

S. No.	Particulars	Respondents	Result
1.	To become an entrepreneur	90	45
2.	To modernize the existing business technology.	80	40
4.	Rate of interest is less.	30	15
Total		200	100

From the above table, 45 percent of respondents have taken the loan for becoming an entrepreneur, 40 percent to modernize the existing business technology and 15 percent says as a low interest.

**Table-4 - Various business options**

S.No.	Particulars	Respondents	Result
1.	Hotel	30	15
2.	Retail shop	20	10
3.	Covering Jewellery making	30	15
4.	Flower selling	40	20
5.	Coloring	10	5
6.	Parlor shop	10	5
7.	Chips making	20	10
8.	Tailor	40	20
Total		200	100

The above table shows that, majority of the respondents are flower sellers and tailoring.15 percent doing hotel business and covering Jewelry making, 10 percent of them are running retail shops and chips making.

**Table-5 Savings amount by self help group members**

S. No.	Savings	Respondents	Result
1.	Rs.60	40	20
2.	Rs.110	80	40
3.	Rs.160	50	25
4.	Rs.210	30	15
Total		200	100

From the above table, Majority the respondents saving Rs.110. 25 percent save Rs.160, 20 percent save Rs.60.15 percent can save Rs.210.

### Hypothesis: 1

There is no significance difference between training programmes and development of business.

There is a significance difference between training programmes and development of business.

**Table-6 Training Programmes and Development of business.**

	Calculated value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	13.067 <sup>a</sup>	4	.011*

From the above table, the calculated value is 13.067, the significant value is 0.011. The analysis reveals that there is a significant difference between training and development of business.

### Hypothesis: 2

There is no significant difference between the age and the repayment of loan.

There is a significant difference between the age and the repayment of loan.

Table-7 Age and the repayment of loan.

Age	Respondents	Mean	Standard Deviation	F Value	Significant Value
Up to 29	40	1.30	1.30	0.165	0.906
30-39	100	1.27	1.27		
40-49	40	1.28	1.28		
50 and above	20	1.50	1.50		

From the above table, the F value is greater than 0.05, null hypothesis is accepted at 5 percent significant level. Hence there is no significant difference between the age and the repayment of loan.

### Findings

- Majority of the respondents are under the age group of 30-39 years
- Most of the respondents (40 percent) with 11 members group.
- It is clear that majority of the respondents (45 percent) had taken the loan for becoming an entrepreneur.
- 40 Percentage of the respondents are selling flowers.
- Majority of the respondents saving Rs.110. It leads to the saving habit of the members.
- It is identified that training programmes helps to improve the business with good profits.
- It is clear that there is no significant difference between the age and the repayment of loan.

### Suggestions

- The respondents move independently for obtaining loan.
- The state Government shall simplify the procedure of giving loans.
- The members of self help groups should be trained about the strategies and prices according to the demand.
- The district officers shall monitor and control the functioning of Self Help Groups regularly.

### Conclusion

The microfinance plays a major role in Self Help Groups for generating women entrepreneurs. Training programmes are conducted to improve the skill, knowledge and decision making ability of women entrepreneurs. Generating employment opportunity for the poor women and creating income which ultimately shows an impact and regional development of our country's economy in terms of employment and empowerment. The research reveals that, self help group not only providing employment for poor women it also helps to the rural development of our country.

## References

1. A.Anitha (2013), "Women empowerment and self Help Groups" ISBN 978-93-82570-14-1, Volume-II, Published by Hikey Media,
2. Jessica Schicks (2013) "The Over-Indebtedness of Microfinance Customers -An Analysis from the Customer Protection Perspective." Centre for European Research in Microfinance (CERMi) Solvay Brussels School of Economics and Management Université libre de Bruxelles
3. Lauren Herman (2012) "My Guide to Microfinance Lending" Article from Property of the University of California, Berkeley.
4. Jackiebauer & Tanjameier (2012), "Competition in Microfinance & Over- Indebtedness."

## Information Security Threats Faced by the Indian Banks - An Exploratory Study

– Nisha Ann Jacob\*

– Dr. George V. Antony\*\*

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### Abstract

*The concept of social engineering has been gaining importance in the modern business environment as almost fifty percent age of the Indians are techno kids, who are of age less than twenty five years. Recent research initiatives report an accelerated use and adoption of social engineering mode of communication among individuals and organizations. Social engineering activities have posed numerous challenges to enterprises especially to those operating in the financial services industry. Attacks on the privacy and security of information not only expose the inherent vulnerabilities of the organizational systems, but it adversely affects the goodwill and reputation of the enterprise. Therefore, the research paper examines the social engineering information security related threats faced by the banking organizations in India.*

**Keywords:** *Banking, information security, social engineering, information security threats.*

### Introduction

Banks in India made tremendous growth since the liberalization of the economy in 1990s. Banks are at the forefront in innovation and successful implementation of new technologies. These advances however increase the levels of vulnerabilities within the banks and increases the avenues for exploitation considering the increasing threats and effects of insider attacks. It is now imperative for the banking industry to re-imagine information security as the insider threats increase in magnitude and complexity. According to a global economic survey GECS (2011), carried out in 78 countries to provide a global picture of economic crime, revealed that cases of information security breaches are on the rise. There are more opportunities to commit fraud and more pressure to do so. Ernst and Young's Security survey crime statistics show that a total of 84,842 white-collar crime cases were reported between April and March 2009/10, in the leading banks in India marking a 56% increase from 2006. Information security breaches and fraud are increasingly proving to be lucrative opportunities as they now cost the global corporate sector an estimated \$388 billion annually. While the larger portion of this cost goes towards the security infrastructures that mitigate the threats, an estimated over 30% is direct cash lost through the information breaches and fraud (Standard Digital, 2012).

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## **Background of the study**

Banks operate on the trust they built in their customers which takes years to be built but a single incident of security breach could ruin it. Information security breaches not only causes monetary losses but also has a great business impact on the bank's reputation, goodwill and trust. Banking analysts infer that fraud and cyber-crime are the most apprehensive issues facing banks today. In the present banking environment, the relevance of Information Security Threats is very high because today banking operations rely on technology and also offers alternate channels for providing services. The business impact of such breach incidents is very high.

## **Review of literature**

The business environment today is undergone with tremendous transformation for the past few years. These accelerated transformations are highly visible in the financial services industry and banking in particular. There are many empirical research initiatives carried out on the technological adoptions in the banking sector. Further, Ashban and Burney (2001) and Bradley and Steward (2002) explained the relative adoption of tele banking and internet banking among the banking customers. Some of the research initiatives on information security explain the acceptance of technological adoptions by the younger generations. However, very less evidence is available about the high level of awareness of these young population on information security related threats and risks. It is also understood that the poor awareness of these user groups and their passive approach towards information security exposes them to many social engineering related issues.

The recent research initiative and the critical analysis on information security research by Mario and Andrea (2014) reviewing over one hundred and sixty four theories and about six hundred and eighty four publications reveal that majority of the studies are subjective and argumentative category. The study also identifies the existing gaps and suggested areas for the future research. The body of knowledge on information security research shows few studies on social engineering related information security threats and risks. Stefan et al. (2014) investigated the latest challenges in information security risk management to provide an insight about the current risk management approaches and brings out the commonalities and differences of the different approaches. The study concludes that the identified risk management approaches are not fully support mechanisms to help decision makers while deciding on risk and cost trade-off. , Petros et al. (2005) explored the sources of information systems security knowledge and the critical role of information systems security management systems in the organisations. The study points out that the successful security management of an organization strongly depends on the active involvement of the users and other stakeholders while planning, analyzing, designing and implementing the organizational information system. Suhazimah and Ali (2012) conducted a study on assessing information security maturity in the Malaysian context using quantitative approach. It reveals that the two variables risk management and individual perception are found to be discriminating between the enterprises that have high and low levels of information security management practices.

Majority of the studies on information security conducted in the recent times elaborately discuss the sophistication of social media and points out the fragileness of the social media in terms of cyber related attacks. Wu (2013) administered a recent survey on information security risks of mobile social media through blog mining and extensive literature search. The study categorically identifies various risks related to mobile social media and further suggests good practices that would be useful for enterprises while mitigating the information security concerns and associated risks related to social media attacks.

### **Information Security Threats Faced by the Indian Banks**

The Table 1.1 explains the information security threats faced by the Indian banks. The study tried to categorise the information security threats into various aspects primarily to understand in terms of three broad dimensions namely,

- a. Human related information security threats,
- b. Technology related information security threats, and
- c. Organisational vulnerability related aspects.

Seventeen different aspects has been identified and the details of the analysis is discussed Even though banks initiate various measures to mitigate information security threats, it is seen from the study that almost every banking organisation face information security threats. However, the number of occurrences and severity differ.



**Table 1.1 Occurrence of Information Security Threats in the Indian Banks**

No	Threats	No of occurrence			
		0	1 to 5	6 to 10	> 10
1	Mobile devices and BYOD	87 (69.6)	38 (30.4)	(0)	(0)
2	Malware & spyware	32 (25.6)	71 (56.8)	22 (17.6)	(0)
3	Application / middleware vulnerability	46 (36.8)	66 (52.8)	13 (10.4)	(0)
4	Poor patching of applications & OS	59 (47.2)	38 (30.4)	24 (19.2)	4 (3.2)
5	Organized crime in digital domain	45 (36)	61 (48.8)	19 (15.2)	(0)
6	Disgruntled employees	78 (62.4)	41 (32.8)	6 (4.8)	(0)
7	Data leakage (internal)	86 (68.8)	34 (27.2)	5 (4)	(0)
8	Outsourced partner breaches	92 (73.6)	33 (26.4)	(0)	(0)
9	Lack of Information Security awareness of employees	46 (36.8)	46 (36.8)	27 (21.6)	6 (4.8)
10	Irresponsible employee behaviour towards information security responsibility	56 (44.8)	38 (30.4)	26 (20.8)	5 (4)
11	Social engineering threats	54 (43.2)	60 (48)	11 (8.8)	(0)
12	Purposeful negligence of employees towards information security	40 (32)	59 (47.2)	23 (18.4)	3 (2.4)
13	Sharing of user id and password	55 (44)	28 (22.4)	31 (24.8)	11 (8.8)
14	Computer virus	26 (20.8)	59 (47.2)	33 (26.4)	7 (5.6)
15	Lack of adequate training and education	59 (47.2)	56 (44.8)	10 (8)	(0)
16	Poor information security culture within the bank	74 (59.2)	44 (35.2)	7 (5.6)	(0)
17	Inadequate management support	87 (69.6)	38 (30.4)	(0)	(0)

*Values in the brackets are percentages*

### **Business Impact of the Information security Threats to Banks**

The risk element of the information security threats has been normally identified in terms of its business impact on the organisation. The study tried to understand the business impact of various information security aspects in three dimensions namely low, medium and high level of business impact.

It is seen from the Table 1.2 that aspects lack of information security awareness of employees, sharing of user ID and passwords, irresponsible behaviour of the employees towards information security, lack of proper training, use of personal mobile devices and computer virus attacks are observed as threats that caused high business impact on banking organisations.

Table 1.2 Business Impact of Information Security Threats faced by the Indian Banks

No	Threats	Impact on the bank		
		Low	Medium	High
1	Mobile devices and BYOD	67 (53.6)	41 (32.8)	17 (13.6)
2	Malware & spyware	66 (52.8)	54 (43.2)	5 (4)
3	Application / middleware vulnerability	68 (54.4)	49 (39.2)	8 (6.4)
4	Poor patching of applications & OS	68 (54.4)	50 (40)	7 (5.6)
5	Organized crime in digital domain	62 (49.6)	54 (43.2)	9 (7.2)
6	Disgruntled employees	70 (56)	47 (37.6)	8 (6.4)
7	Data leakage (internal)	71 (56.8)	46 (36.8)	8 (6.4)
8	Outsourced partner breaches	81 (64.8)	40 (32)	4 (3.2)
9	Lack of Information Security awareness of employees	57 (45.6)	50 (40)	18 (14.4)
10	Irresponsible employee behaviour towards information security responsibility	65 (52)	43 (34.4)	17 (13.6)
11	Social engineering threats	68 (54.4)	49 (39.2)	8 (6.4)
12	Purposeful negligence of employees towards information security	67 (53.6)	50 (40)	8 (6.4)
13	Sharing of user id and password	67 (53.6)	40 (32)	18 (14.4)
14	Computer virus	80 (64)	32 (25.6)	13 (10.4)
15	Lack of adequate training and education	71 (56.8)	38 (30.4)	16 (12.8)
16	Poor information security culture within the bank	64 (51.2)	52 (41.6)	9 (7.2)
17	Inadequate management support	66 (52.8)	41 (32.8)	18 (14.4)

*Values in the brackets are percentages*

### Relationship between Occurrence of Information Security Threats and Business Impact

The study examined the correlation between the number of occurrences information security threats and its business impact in the responding banks. It is revealed from the Table 1.8 that information security due to poor patching of applications and OS have created more business impact than other

types of information security threats. Poor patching or application and OS is highly correlated to OT at 0.602\*\* and  $p < 0.01$ . It is also observed that the threats due to organised crime in the digital domain is also correlated to the business impact at .459\*\* and  $p < 0.01$ .

**Table 1.3 Relation between occurrence of information security threats and Business impact**

Threats	Business Impact on bank due to			
	Technology Related Information Security Threat [TRIST]	Human Related Information Security Threats [HRIST]	Organizational Vulnerability Related Information Security Threats [OVRIST]	Overall Treats [OT]
Mobile Devices and BYOD	0.085	0.046	0.06	0.019
Malware & Spyware	0.149	0.09	0.127	0.108
Application / Middleware Vulnerability	0.417**	0.406**	0.426**	0.407**
Poor Patching of Applications & OS	0.654**	0.598**	0.562**	0.602**
Organized Crime In Digital Domain	0.477**	0.456**	0.406**	0.459**
Disgruntled Employees	0.272**	0.194*	0.230**	0.227*
Data Leakage (Internal)	0.395**	0.275**	0.293**	0.317**
Outsourced Partner Breaches	0.099	0.008	0.016	0.025
Lack Of Information Security Awareness Of Employees	0.359**	0.329**	0.447**	0.353**
Irresponsible Employee Behaviour Towards Information Security Responsibility	0.356**	0.319**	0.407**	0.334**
Social Engineering Threats	0.118	0.076	0.103	0.117
Purposeful Negligence Of Employees Towards Information Security	0.079	0.08	0.073	0.101
Sharing Of User Id And Password	0.054	0.044	0.089	0.074
Computer Virus	0.055	0.095	0.136	0.106
Lack Of Adequate Training And Education	0.087	0.102	0.048	0.094
Poor Information Security Culture Within The Bank	0.268**	0.211*	0.272**	0.239**
Inadequate Management Support	0.057	0.004	0.024	0.035

\* Significant at 0.05 level; \*\* significant at 0.01 level

## Conclusion

From the analysis of data it is seen that the issues related to lack of awareness on information security, irresponsible approach of the employees towards their information security responsibility and the threats due to computer viruses and malware related issues cause threats that has greater business impact to banking organisations. Since the concept of social engineering related information security threats has growing importance it would be appropriate if Reserve Bank of India can initiate a project to create awareness on information security, especially about social engineering related information security issues among the banking employees and customers as it is primarily a social concern.

## References

1. Ashban, A. A. & Burney, M. A. 2001. Customer adoption of tele-banking technology: the case of Saudi Arabia. *International Journal of Bank Marketing*. Vol. 19 (5), pp. 191-200.
2. Deepa Mani , Kim-Kwang Raymond Choo , Sameera Mubarak , (2014) "Information security in the South Australian real estate industry: A study of 40 real estate organisations", *Information Management & Computer Security*, Vol. 22 Issue: 1, pp.24 - 41
3. Stefan Fenz, Johannes Heurix, Thomas Neubauer, Fabian Pechstein, (2014) "Current challenges in information security risk management", *Information Management & Computer Security*, Vol. 22 Issue: 5, pp.410 - 430
4. PetrosBelsis, Spyros Kokolakis, EvangelosKiountouzis, (2005) "Information systems security from a knowledge management perspective", *Information Management & Computer Security*, Vol. 13 Issue: 3, pp.189 - 202
5. SuhazimahDzazali, Ali Hussein Zolait, (2012) "Assessment of information security maturity: An exploration study of Malaysian public service organizations", *Journal of Systems and Information Technology*, Vol. 14 Issue: 1, pp.23 - 57

## Digital Buyer Behaviour in B2C Model - An Empirical Research Study in Trichirappalli District of Tamil Nadu

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### Abstract

*The growth of the internet provided a virtual platform putting the buyers and sellers to make the sales through their websites. This enabled the people with different diversity, languages and reduced the distance by sitting at their places, E-Commerce emerged without any boundaries. Indian consumers who believe in touch and feel of the product now it has changed and accepted this technology to find and search their need and wants in digital mode. The study focused on the digital buyer behavior (B2C Model) helps the rationale for the consumers to select a product, to understand the response of the consumers towards the product and motivate the consumers to buy in turn to know their views in product innovations. Embarking the current scenario, the present study has been undertaken to assess the Digital Buyer Behavior in Tiruchirappalli district. The study adopted convenient sampling technique to get perception on digital purchase on the researcher's convenience and sample size under study constitutes 224 online buyers by using a well structured interview schedule. The present study focuses on the demographic variables, socio-economic conditions, findings related to internet purchase, findings related to website factors and the overall satisfaction towards digital purchase. The study found through factor analysis that the two factors "Security and privacy is maintained during Online Shopping by websites" and "Sites help to find out the lowest price in online shopping" were highly correlated and was named as security concerns and low price identification respectively. The consumers perceived a positive behavior towards digital purchase. Digital platform will alone run the business especially mobile-commerce in the years to come so online marketers should understand the consumers and do the best to get more satisfied consumes and sustain their consumers.*

**Keywords:** Digital Buyers, B2C, E.Commerce, online Shopping, Satisfaction

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## **Introduction**

Internet marketing is the need of the hour. Digital marketing or online marketing had offered helping hands to avoid unwanted chaos and confusions in day to day life. The success of the digitalization can be proving with the increase in the number of internet users in the world. About 1,938,075,631 Asians are using the internet, contributing 49.9 per cent of the world internet users. China is ranked first with 738,539,792 internet users; India ranks second with 462, 124,989 internet users in June 2017(Internet users in Asia June 2017). The convenience, time saving, any time shopping had made a commended growth to online shopping all over the world. The facilities of internet access through computers, laptops, smart phones, tablets and increasing number of search engines, payment services have proved much convenient for the individuals to shift from the offline shopping to online shopping.

## **Review of Literature**

Factors influencing online shopping intention and attitude were assessed with the help of various variables by Momal Rafique et al., (2014) towards online shopping is affected by perceived usefulness and perceived ease of use. The positive attitude is observed between attitude and future intention to shop online. The study concluded that trust is assured by usefulness and easy use of the online shopping system.

International university students' online shopping behavior was evaluated by Eman Alyamimand Louise Spilteri (2015). Entertainment and perceived usefulness were the significant factors that motivated the students to make an online purchase. Prior experience on the online shopping and gender was positively related to the attitude of online buyers. The students living in a foreign country were emotionally bound and had good fun and enjoyed through online shopping.

The motivational factors underlying online purchases was analysed by Ajay Kumar and Yashwant Singh Thakur (2016). The study found that the information search was the highest motivating factor as it is cheaper source of information related to product like warranty and guarantee, price and availability. The convenience factor was identified as the next motivating factor due to the easy accessibility and there was no traffic jam, crowd and queues at counter for payment in online shopping. The knowledge of these factors will increase the number of satisfied shoppers.

## **Statement of the Problem**

A study on Consumer Behavior is much complex as it deals with human beings who behave and act differently in different situations. Due to its dynamic nature, the understanding of consumer behavior poses a great challenge for the marketers to design and produce products to cater to the needs of the consumer and to gain their loyalty. Hence it is essential to understand the consumer and produce goods and services that are up to the expectations of the consumer. A basic knowledge of using the internet is often sufficient to buy products online. This consumer switching behavior has to be analyzed and interpreted considering the demographic and socio-economic profiles, website factors which influence

the consumer and the level of satisfaction they derive from online shopping to have a clear picture. Hence the following objectives were formed.

### **Objectives of the Study**

The following are the objectives of the study based on which the research was conducted.

1. To study the demographic, socio -economic profile of the sample respondents.
2. To assess the relationship between the demographic and socio economic factors and consumer satisfaction of digital buyers.
3. To analyze website factors that influence online shoppers.

#### **Research Methodology and Sampling**

The present study is conducted based on descriptive research through survey method. In order to study the behavior of the consumer, the present research is focused to know the relationship between demographic, socio - economic factors and study the website related factors that influence the internet purchase.

Convenient sampling technique was used to determine the sample size and data collected based on the researcher's convenience whoever used internet purchase. The study was conducted in Tiruchirapalli district of Tamil Nadu. The total sample size of the study constitutes 224 samples.

### **Sources of data and tools used for data collection**

The present study is carried out with the help of primary source and secondary sources of data. The primary source of data was collected from the field directly from the respondents as the first hand information through an interview schedule from the respondents who had made online shopping and the secondary sources of data were collected from already published articles, journals, books, research reports, websites and unpublished reports related to consumer behavior.

### **Data Analysis**

Collected data were coded, classified, and tabulated with the help of Statistical Package for Social Sciences (SPSS). Appropriate statistical techniques namely Chi- square test and ANOVA technique were applied to bring out a relevant output. In addition, exploratory factor analysis and Multiple Regression were used to identify factors influencing the respondent's behavior.

### **Major Findings of the study**

- Male constitutes 51.3 percent and female respondents are 48.7 percent while analyzing the level of satisfaction based on the gender, no significant relationship was found among the respondents of the sample districts.

- The study found that majority of the respondents fall in the age group of 26 - 35 years. Chi - square test was used to test the null hypothesis there is no relationship between age and the level of satisfaction of the respondents towards online shopping.
- Majority (32.1 percent) the number of the respondents who have completed their Post graduation is more in number. Using the chi-square test it was found that there is a significant relationship was observed.
- There is no significant relationship established in relation to the level of satisfaction towards online shopping based on the consumer's occupation.
- 55.8 percent of the respondents had monthly income between Rs 10,001 and Rs 20,000. ANOVA technique was used and the results proved that there is no significant relationship with regard to the income of the respondents.
- It was proved from the factor analysis that the factor "Security and privacy is maintained during Online Shopping by websites" is highly correlated. This statement reflected the security concerns of the consumers while making online purchase. This segment has been marked as "Security concerns ".The second factor is "Sites help to find out the lowest price in online shopping" is the next highly correlated factor and the researcher named the segment as "low price identification" in both districts.

**Table 1 : Age, Gender and Educational qualification Vs Level of satisfaction towards Online shopping (Chi –square test)**

Factor	Calculated $\chi^2$ value	Table value	D.f	Remarks
Gender	7.030	9.488	4	Not significant
Age	26.463	26.296	16	Significant at 5% level
Educational qualification	35.768	31.410	20	Significant at 5% level

In analyzing the chi-square for the gender of the respondents, the calculated value 7.030 is less than table value 9.488 and the result is not significant at 5% level. Hence, the null hypothesis is accepted and alternate hypothesis is rejected which proves that there is no significant relationship between gender and level of satisfaction towards online shopping.

The calculated chi-square value 26.463 is more than table value 26.296 and the result is significant at 5% level. Hence, the null hypothesis is rejected and the alternate hypothesis is accepted and it is inferred that there is a relationship between the age of the respondents and their level of satisfaction towards online shopping.



It is found that the calculated chi-square value 35.768 is greater than table value 31.410 and the result is significant at 5%. Hence the null hypothesis is rejected and the alternate hypothesis is accepted. It is concluded that the hypothesis "educational qualification of the respondent and their level of satisfaction towards online shopping" holds good in sample district.

### Occupation of the Respondents

To analyze further on the difference in the average score between occupation and the level of satisfaction towards online shopping ANOVA was applied.

**H04:** There is no relationship between Occupation and the level of satisfaction towards online shopping.

**Table 2 : Occupation Vs Level of satisfaction towards Online Shopping**

Occupation	Sum of squares	Df	Mean square	F	Sig
Between Groups	5.933	4	1.483	.654	.624
Within groups	496.455	219	2.267		
Total	502.388	223			

Table value of F at 5 per cent significance level for  $V_1 = 4$  and  $V_2 = 219$  is 2.41 and the calculated value is 0.624 which is less than table value 2.41 in sample district. Hence the null hypothesis is accepted and alternate hypothesis is rejected. Hence it is inferred that there is no significant relationship between occupation and the level of satisfaction towards online shopping. The occupation of the respondents did not determine the level of satisfaction in online purchase.

### Monthly income of the respondents

The income level of the respondents determines the frequency and the purchasing power parity of the respondents. The income level further leads to the nature of the product purchased both in the traditional and online shopping methods.

**H05:** There is no significant relationship between income and level of satisfaction towards online shopping

**Table 3 : Monthly income Vs level of satisfaction towards online shopping**

Income	Sum of squares	Df	Mean square	F	Sig.
Between groups	1.372	4	.343	.350	.844
Within groups	214.842	219	.981		
Total	216.214	223			

The calculated value is 0.350, which is less than table value is 2.41 for  $V_1 = 4$  and  $V_2 = 219$  at 5 per cent significance level. Hence null hypothesis is accepted and alternate hypothesis is rejected. So it is found that there is no significant relationship between income and the level of satisfaction towards online shopping in the present study.

### Factor Analysis

To find out the fundamental or latent effects which create communality among the statements, factor analysis technique has been applied. Factor analysis helps to reduce the number of statements in terms of relatively few categories, which are known as factors and such factors are selected and analyzed.

**H06:** There is no relationship between the website factors and the level of satisfaction towards online shopping.

Table 4 : Total variance

Comp onent	Initial eigen values			Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	% of variance	Cumulat ive %	Total	% of variance	Cumulative %	Total	% of variance	Cumulat ive %
1	9.189	54.054	54.054	9.189	54.054	54.054	5.721	33.651	33.651
2	1.087	6.394	60.447	1.087	6.394	60.447	4.555	26.796	60.447
3	.982	5.778	66.225						
4	.703	4.134	70.359						
5	.666	3.919	74.278						
6	.624	3.670	77.949						
7	.519	3.053	81.002						
8	.512	3.013	84.015						
9	.460	2.704	86.719						
10	.453	2.663	89.383						
11	.412	2.421	91.804						
12	.330	1.942	93.745						
13	.278	1.635	95.380						
14	.256	1.508	96.888						
15	.226	1.329	98.217						
16	.164	.962	99.179						
17	.140	.821	100.000						

*Extraction method: principal component analysis*

**Table 5 : Rotated component matrix**

	Statements related to website factors	Component	
1	Security and privacy of transactions in online shopping	1	2
2	Sites help to find out the lowest price during online shopping	.518	.516
3	Website product features are attractive	.364	.668
4	Reliable and trustworthy information provided by websites	.675	.321
5	Website layout helps to identify the right product	.344	.671
6	Familiarity of the website affects the choice of the website	.045	.875
7	Easy accessibility of the website	.432	.616
8	Reviews regarding the product provides additional information	.774	.214
9	Procedure for product purchase through website is easier	.812	.205
10	Help features of the website provides easy navigation	.445	.670
11	Grievances and complaints are properly addressed	.190	.260
12	Cancellation/return of the product can be made easily	.633	.527
13	Ease in downloading of applications	.800	.324
14	Information on status of product in transit	.567	.377
15	Watch the website for daily offers	.691	.524
16	Feeling of high attachment to the website	.574	.534
17	Curiosity towards online shopping has increased over the time	.582	.587
		.745	.334

*Extraction method: principal component analysis.*

*rotation method: varimax with kaiser normalization. A. Rotation converged in 3 iterations.*

**Table 6 : Component transformation matrix (Tiruchirapalli district)**

Component	1	2
1	.756	.654
2	-.654	.756

*Extraction method: principal component analysis.*

*rotation method: varimax with kaiser normalization.*

After a factor collusion have been obtained, in which all variables have a significant loading on a factor, the researcher made an attempt to obtain some meaning to the pattern of factor loading. The variable with higher loading are considered more important and have greater influence on the name or label selected to represent a factor. Researcher examined all the underlined variables for a particular factor and placed a greater emphasis on those variables with higher loading to obtain a name or label to a factor that accurately reflected obtained by the factor analysis in computer program: rather the label is intuitively developed by the analysts based on its appropriateness for representing the underlining

dimension of a particular factor. All the factors have given appropriate name on the basis of the variables represented in each case.

The component transformation matrix in which the extracted factors are assigning a new naming related together. From the above analysis it is noted that all the loading factors which are having loading value less than 0.50 are rejected from the analysis.

- a) Factor 1 is the most important factor which explains 54.054 per cent of the variation. The factor "security and privacy is maintained during online shopping by websites is (0.756)" is highly correlated. This statement reflect the security concern of the website while making online purchase then the segment is named as "security concern".
- b) The second factor explains 6.394 per cent of the variance. In this segment the researcher took one variable "sites help to find out the lowest price when online shopping is made" (0.756) is highly correlated. This segment is named as "low price identification".

### Overall satisfaction of the respondents

Satisfaction refers to the need fulfillment status of the consumers. The satisfied consumers alone will go for repeated purchases. The level of satisfaction may differ from individual to individual and from time to time. Satisfaction is an important and difficult factor to be assessed. It is a qualitative aspect to analyze what level of satisfaction is felt by the individual.

**Table 7 : Overall satisfaction level of the respondents towards online shopping**

Level of satisfaction	Sample (Tiruchirapalli) District	Percentage (%)
Highly satisfied	45	20.0
Satisfied	122	54.5
Neutral	32	14.3
Dissatisfied	19	08.5
Highly dissatisfied	06	02.7
Total	224	100.0

*Source: Compiled from field data*

Majority 54.5 per cent of the respondents are satisfied with online purchase and 20.1 per cent of the respondents highly satisfied with the online shopping. The time saving, easy payment and quick delivery, product features available in the website, convinced pricing than offline are significant factors that influenced the respondents satisfactorily.

### Suggestions

The possible suggestions were provided to make the online marketing even more effective.

- Cash on delivery is a preferred mode for majority of the buyers it is not always possible to make cash payments. This would encourage the buyers to make repeated purchases in future. Consumer database should be kept confidential because of account hacking is possible while using card payments. Website designers should frame applications or create blockers to prevent hacking software. Efforts should be made to reduce the scam while making online transactions.
- New website entries, specific product websites, reviews and comparative prices are much focused by the online shoppers. Hence the online marketing firms should have a competitive advantage over the other firms. Moreover the consumers feel that adequate products should be made available when the offers or discounts are provided by the online marketers.
- The website states the product cannot be delivered at that location sometimes. This creates a state of disappointment for the consumer to choose the website to make repeated purchases again and goes for the next website. The online marketer should consider it as a challenge and make the product delivery even at the remote places catering to the needs of the consumers.

## Conclusion

The consumers exhibited a positive behavior towards the products purchased in online. The main feature the consumer focused with regard to the product related features is security and privacy factor which is to be perceived as significant by the online marketers. The adequate efforts should be made by the consumer advocacy organizations and the online marketers to ensure the safety of transacting in online. The other website feature focused by the online consumer is the low price product identification. The novel online shopping concept enables the individual to make price comparisons and identify the product that meets the price including the product availability. The respondents showed a satisfied response with regard to online shopping which pays success to online marketers.

## References

1. Rafique, M. Rizwan, M. Batool, A. and Aslam, F. (2014). Extending TAM, in terms of Trust and Attitude towards the Online shopping intention. Journal of Public Administration and Governance, online 4(3).p90. Available at [http://www.macrothink.org/journal/index.php/jpag/article/view/5851/\\_34](http://www.macrothink.org/journal/index.php/jpag/article/view/5851/_34) (Accessed 20th Apr.2016)
2. Alyami, E. and Spiteri.L.(2015). World Journal of Social Sciences, online. 5(3). pp 227-243.Available at [https://www.researchgate.net/publication/308515594\\_International\\_University\\_Students'\\_Online\\_Shopping\\_Behaviour](https://www.researchgate.net/publication/308515594_International_University_Students'_Online_Shopping_Behaviour). (Accessed on 5th Sep.2016)
3. Kumar,A. and Yashwant, T. BVIMSR's Journal of Management Research, 8(1).pp 31-36.
4. Gupta, C.B. and Nair, N.R. ( 2010). Marketing Management. 12th ed. New Delhi: Sultan Chand & Sons
5. Krishnaswami, O.R., and Ranganatham,M.(2016).Methodology of Research in Social Sciences.6th ed. Mumbai: Himalayan Publishing House.
6. Internet Users in Asia 2017. (online). Available at [www.internetworldstats.com](http://www.internetworldstats.com).

## **A Review of Human Resource in Kerala Tourism & Hospitality Industry**

– Sreejith Nair\*

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### **Abstract**

*Indian Tourism industry is substantial and vibrant. It plays a vital role as a profit maker for the nation. India had been ranked the 14th for the best tourist destination and for its natural resources, 24th for its cultural resources. Kerala the Gods own country and most popular for its Eco-Tourism destinations and Backwaters enhances the tourism potentials of India. Kerala is regarded as a destination with highest brand recall.*

*Human resources are often seen as the part and parcel of the tourism and hospitality industry. This paper focuses on the challenges faced by the Kerala Tourism and hospitality industry in regard with human resources. This paper examines the strategic issues like lack of operational and managerial staff. The issue of staff turnover, the unwillingness of graduates to enter the industry and staffing of non-tourism professional in various government and private sector. The main objective of the study is to identify the reasons behind the lacking of competent professionals in tourism industry of Kerala. The methodology used to collect information is secondary data.*

**Keywords:** Brand recall, Eco -tourism, Backwaters, Hospitality

### **Introduction**

One of the main ingredients that ensure the progress of any tourism industry is the human capital. Employees play a crucial role in rapid growth of the Indian tourism industry and promote a sector's competitiveness.

In recent years, tourism has become one of the most dynamically developing priority directions of Kerala's economy. The God's own country fetches the attention and attracts tourists from various parts of the world due to the country's unique diversity of natural resources, cultural and historical and favourable geographical locations and many other positive factors.

The hospitality industry in Kerala is an important employment generating sector and a significant source of foreign exchange for the State. Due to the increase in tourism with rising hotel restaurant industry has grown in the State.

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The tourism and hospitality industry can only sustain and develop if and only if the human resources employed in the industry are satisfied and motivated. The services provided by the industry would only find meaning if the provider is satisfied and motivated by his/her job. The professionally trained personnel's working in the industry shows a drastic efficiency in working.

In tangibility and inseparability of the tourism industry make it unique from other industries. The services provided by the industry should be felt in the heart of the people (guest).so apart from giving importance to the infrastructural development of the destinations it is also indeed important to enrich and motivate the human resource working in these industries.

### Kerala Tourism Statistics- 2016

Month wise Foreign and Domestic Tourist arrivals during the year 2016 are as shown below:

SL No.	Month	Foreign	Domestic
1	January	136539	1077231
2	February	141143	1006111
3	March	107037	960467
4	April	78099	1012844
5	May	37994	1206350
6	June	37368	891614
7	July	56666	913886
8	August	81070	1043362
9	September	62599	1129260
10	October	82551	1337191
11	November	96155	1187620
12	December	121198	1406599
<b>Total</b>		<b>1038419</b>	<b>13172535</b>

*(Kerala Tourism Statistics -2016)*



Year	Foreign Exchange Earnings (Rs. In Crores)	Percentage of Increase	Total Revenue generated from Tourism (direct & Indirect) (Rs. In Crores)	Percentage of Increase
2007	2640.94	32.82	11433.00	25.28
2008	3066.52	16.11	13130.00	14.84
2009	2853.16	-6.96	13231.00	0.77
2010	3797.37	33.09	17348.00	31.12
2011	4221.99	11.18	19037.00	9.74
2012	4571.69	8.28	20430.00	7.32
2013	5560.77	21.63	22926.55	12.22
2014	6398.93	15.07	24885.44	8.54
2015	6949.88	8.61	26689.63	7.25
2016	7749.51	11.51	29658.56	11.12

*(Kerala Tourism Statistics -2016)*

In the present scenario the importance of Human Resource Development for Tourism Industry is increasingly being realized. There is a need to mobilize the human resource with the purpose to enable them to participate in the task of organizational development and nation building. Mobilization would include the need to develop the human resource, their skills, knowledge, attitudes, so that they can achieve competently the pre-determined goals. Obviously the efficient and professional management is pre-requisite of successful tourism development. Having equal importance, however, is the quality of staff training, which is often relatively neglected during the early stages of tourism sector development. Tourism basically being a service business, a developing destination must take the necessary steps to build a pool of efficient trained people to fill various jobs, which will be created subsequently. A variety of Jobs will have to be created to look after and manage various tourist services. Special attention, therefore, will have to be given to the needs of manpower and personnel to be trained and rendered qualified for the various tourism professions.

## Review of Literature

Human Resource Management (HRM) is become an inseparable aspect of the hospitality and tourism field for several reasons including increasing demand for high quality staff, increasing consumer demand for high end services, etc. It is not surprising that one of the industry's biggest challenges is a continuous shortage of qualified and willing labour (Powell & Wood, 1999; Kusluvan, 2003; Kukreti, 2004). Agarwal, Nair Banerjee in his book entitled "Human Resource Management" (2004) has mentioned that the purpose of this book is to assimilate new insights from human resource management and behavioural sciences into established concepts. In order to make this more interesting, the authors have utilized the concept of formulating the plan to divide the book contents into small units. Attempts have been made to stress empirically to the practical problems. Tourism has a high need for human

capital and offers diversity of jobs in a variety of operations of varied sizes and types (Szivas, Riley, & Airey, 2003 ). Nevertheless, a division, amplified by poor communications, exists between academics and practitioners in tourism (Briedenhann & Wickens, 2004; Jenkins, 1999).

Kusluvan (2003) provided a comprehensive review on HR practices in the hospitality industry including employment in-stability, high levels of employee turnover, perception and/or predominance of jobs being unskilled and semiskilled, weak internal markets limiting pro-motion opportunities, training opportunities, pay differentials, evaluations of employee performance, and nature of jobs open to the external labor market. Mok (2002) argued that globalization of businesses has created a demand for employees who could better understand the emerging multicultural customers.

## **Research Methodology**

The methodology used to collect information is secondary data collected from Report on Hotel & Restaurant Survey, Department of Economics & Statistics, Kerala and also from various related articles.

## **Objectives**

- To analyse the difference in number of male and female population employed in managerial posts with hotel management degree and with experience only.
- To analyse the district wise number of employees working in hospitality industry as Chef.
- To study district wise number of employees working in hospitality industry as Commis (trainee Chef)
- To analyse district wise number of employees working in hospitality industry as Waiters.

## **Kerala Tourism Policy -2017**

Kerala Tourism Regulatory Authority (KTRA) is established by the department of Tourism Kerala, to provide quality service for tourists and to eradicate unpleasant practices in this sector. The Department of tourism in cooperation with local bodies decided to solve the key issues such as waste management and road renovations as a way to Green Protocol at all touristic destinations of Kerala.

Kerala tourism Department with a motive to improve and promote state's tourism decided to strengthen its overseas campaigns. A Public-Private participatory model of tourism development is decided to be undertaken.

The green protocol has been decided to be implemented and more importance is given to Responsible tourism concept. The tourism department of Kerala has also decided to implement a Barrier Free Tourism for making tourism more accessible and friendly for old and differently abled people and even special consideration were provided for transgender.

The government of Kerala has decided not to compromise with the quality of service provided by the health resorts and massage and spa centres.

### Employment Qualification details of Human Resource engaged in Hospitality Industry

**Table: A District wise No of Employees working in Hospitality Industry Employee type: Managerial**

Sl. No	District	Employees Passed Hotel management Courses		Employees having only Experience	
		Male	Female	Male	Female
1	Kasargod	15	4	1,215	103
2	Kannur`	30	1	1,328	118
3	Wayanad	17	0	858	71
4	Kozhikode	65	6	2,035	119
5	Malappuram	70	7	3,175	111
6	Palakkad	23	3	3,144	176
7	Thriissur	70	7	2,977	213
8	Eranakulam	216	18	2,586	245
9	Idukki	13	8	1,391	120
10	Kottayam	133	11	1,405	149
11	Alappuzha	40	7	1,730	167
12	Pathanamthitta	11	2	836	163
13	Kollam	29	1	1,724	209
14	Thiruvananthapuram	51	10	4,570	391
	Total	783	85	28,974	2,355

*(Report on Hotel & Restaurant Survey, Department of Economics & Statistics, Kerala.)*

The above table shows the district wise number of employees working in managerial posts after completion of hotel management course and also the people working on behalf of their experience in industry. The number of male and female employees engaged in managerial posts after number completion of hotel management course is higher in Ernakulam. The table also indicates least number of males working in managerial posts after completion of hotel management course is in Pathanamthitta. The table also indicates that the highest number of male and female employees working in managerial posts of hotel industry on behalf of their experience is in Thiruvananthapuram.

**Table: B District wise No of Employees working in Hospitality Industry Employee type: Chef**

Sl. No	District	Employees Passed Hotel management Courses		Employees having only Experience	
		Male	Female	Male	Female
1	Kasargod	12	3	977	350
2	Kannur`	25	3	1852	627
3	Wayanad	11	2	549	371
4	Kozhikode	79	2	2682	673
5	Malappuram	17	2	2962	420
6	Palakkad	19	4	1602	1095
7	Thrissur	88	1	2351	809
8	Ernakulam	230	15	2882	679
9	Idukki	27	3	918	582
10	Kottayam	102	20	1451	430
11	Alappuzha	74	8	1506	620
12	Pathanamthitta	26	4	1167	517
13	Kollam	25	7	2051	876
14	Thiruvananthapuram	58	3	3500	1693
	Total	793	77	26450	9742

(Report on Hotel & Restaurant Survey, Department of Economics & Statistics, Kerala.)

The table shows the district wise employees working as Chef in hotel industry after completion of hotel management course and on behalf of their experience. The table also indicate the highest number of employees working as chef after completion of hotel management course in Ernakulam district and highest number of female chefs working in hotel industry after completion of hotel management in kottayam district. The table indicates male and female chefs working in hotel industry on behalf of their experience is higher than those working with hotel management course.

**Table: C District wise No of Employees working in Hospitality Industry Employee type: Commis (Trainee Chef)**

Sl. No	District	Employees Passed Hotel management Courses		Employees having only Experience	
		Male	Female	Male	Female
1	Kasargod	4	0	139	9
2	Kannur`	14	0	193	37
3	Wayanad	2	0	50	20
4	Kozhikode	27	0	300	57
5	Malappuram	0	1	293	21
6	Palakkad	5	3	138	11
7	Thrissur	38	0	335	30
8	Ernakulam	96	7	477	92
9	Idukki	6	3	46	12
10	Kottayam	55	9	420	82
11	Alappuzha	16	0	62	21
12	Pathanamthitta	9	2	80	26
13	Kollam	1	0	311	65
14	Thiruvananthapuram	15	0	500	159
	Total	288	25	3,344	642

*(Report on Hotel & Restaurant Survey, Department of Economics & Statistics, Kerala.)*

The table shows the district wise employees working as trainee Chef in hotel industry after completion of hotel management course and on behalf of their experience. The table also indicate the highest number of employees working as trainee chef after completion of hotel management course in Ernakulam district. The table also indicates that the highest number of male and female employees working as trainee chef in hotel industry on behalf of their experience is in Thiruvananthapuram. The table indicates that the employees working as trainee chef on the basis of their experience outnumbered than the employees who have passed the hotel management course.

**Table: D District wise No of Employees working in Hospitality Industry Employee type: Waiters**

Sl. No	District	Employees Passed Hotel management Courses		Employees having only Experience	
		Male	Female	Male	Female
1	Kasargod	3	0	1,054	125
2	Kannur`	14	2	2,302	297
3	Wayanad	11	0	593	88
4	Kozhikode	12	0	2,774	275
5	Malappuram	16	0	2,917	166
6	Palakkad	13	5	2,512	270
7	Thrissur	28	0	2,562	142
8	Eranakulam	130	6	3,843	239
9	Idukki	3	0	985	61
10	Kottayam	50	0	1,624	122
11	Alappuzha	46	1	2,201	391
12	Pathanamthitta	13	0	1,165	206
13	Kollam	10	0	1,259	158
14	Thiruvananthapuram	7	1	2,982	270
	Total	356	15	28,773	2,810

*(Report on Hotel & Restaurant Survey, Department of Economics & Statistics, Kerala.)*

The table shows the district wise employees working as waiters in hotel industry after completion of hotel management course and on behalf of their experience. The table also indicate the highest number of employees working as waiters after completion of hotel management course in Ernakulam district. There are no female waiters in Kasargod, Wayanad, Kozhikode, Malappuram, Trissur, Idukki, Kottayam, Pathanamthitta and Kollam districts who have passed Hotel Management Courses.

### Summary of Findings

- The Ernakulum district has highest number of males and females working in managerial posts after completion of hotel management course.
- The Wayanad district shows no female employees working in managerial posts after completion of hotel management course.
- Kottayam district has highest number of female employees working as chefs after the completion of hotel management course.
- The male and female chefs working in hotel industry on behalf of their experience outnumbered than those working after passing hotel management courses.

- The Thiruvananthapuram district shows the highest number of male and female trainee chefs working in industry on the basis of their experience only.
- The trainee chef both male and female employed in industry on the basis of their experience outnumbered than those who are employed after passing the hotel management courses.
- The highest number of employees working as waiters after completion of hotel management course is in Ernakulam district.
- There are no female waiters in Kasargod, Wayanad, Kozhikode, Malappuram, Trissur, Idukki, Kottayam, Pathanamthitta and Kollam districts who have passed hotel management courses.

## Conclusion

As part of this study it was clearly analysed that the HR practices still lack professionalism in tourism industry; less salaries, long working hours, improper career path, and lack of professional growth, lack of training & development, quality of work life are the key issues in tourism industry. Proper manpower planning, job description & specification are required at all the level of the organizations. The study proves that the persons employed in various positions in tourism industry only have experiential knowledge and do not have any graduation or post-graduation in hotel management.

## References

1. Kerala Tourism Statistics 2016- Government of Kerala Tourism Department.
2. Lashley .C. and Taylor .S. (1998) "Hospitality retail operations types and styles in the Management of Human Resources", Journal of Retailing and Consumer Services.
3. Lindsay .C. and Mc Quaid, R. W. (2004) "Avoiding the "McJobs": Unemployed job seekers and attitudes to service work", Work, Employment and Society.
4. Marchington, M. and Grugulis, I. (2000), "Best practice" Human Resource Management: Perfect Opportunity or dangerous illusion?" International Journal of Human Resource Management.
5. Mrudula .E. (2007), Talent Crunch: Issues and Perspectives, The ICFAI University Press, Hyderabad.
6. Nickson .D. and Wood. R. C. (2000) "HRM in the hotel industry: a comment and response", Human Resource Management Journal.
7. Riley, M., Gore, J. and Kelliher, C. (2000) "Economic determinism and Human Resource, Management practice in the Hospitality and Tourism Industry", Tourism and Hospitality, Research.
8. Report on Hotel & Restaurant Survey, Department of Economics & Statistics, Kerala.
9. Sarkar & Arun Kumar (1998), action plan & priorities in Tourism, Saujanya Books, New Delhi.
10. Talwar & Prakash (2006), Travel & Tourism Management, Isha Books, New Delhi.

# **An Empirical Study on Lean-Kaizen initiative in Indian Small and Medium Enterprises leading to Carbon Emission Reductions**

– Thirumani Muniswami Iyer Venkateshan\*

– Dr. Gowtham Kumar Kundu\*\*

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## **Abstract**

***Purpose:** SMEs( Small and Medium Enterprises) in manufacturing and service sector have been employing many ways to arrest climate change by reducing their carbon foot prints through various innovative processes. This paper describes through a set of Case Studies from different Industries how Indian SMEs have addressed this issue of carbon emission through Lean-Kaizen initiatives.. SMEs embracing Lean-Kaizen initiatives to reduce carbon emissions will be able to support the Government of India in achieving its target on carbon emission*

***Design/Methodology:** Design :Case study from different industries ranging from Forging to Food process industries including service operations are taken for evaluation. Methodologies contribute in this paper are Basic rules for Kaizen, Lean Management tools, Muda, Muri and Mura, TMB (Time Based Maintenance), and . 9 'waste' in Lean*

***Findings:** This case study leading to studies from six different industries to save carbon emissions of 1151.93 MT/annum apart from inspiring on-time delivery, customer satisfaction, both tangible and intangible outcomes. The findings submitted are only a fraction in the outcomes expected from SME in India.*

***Originality Value:** There are many papers published on the carbon emissions by different authors. But this paper is focused on Lean-Kaizen initiative towards carbon emissions which is a maiden attempt.*

***Keywords:** Empirical Study, Small and Medium Enterprises, Lean-Kaizen, Carbon Emission, Reductions.*

## **1. Introduction**

### **1.1. Objectives**

The primary objective of this case study is to disseminate the knowledge, the knowledge towards achieving the progress on carbon emission reduction through Lean-Kaizen activities in Small and

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Medium Enterprises in India. Live case studies generate interest in the practitioners mind in the Manufacturing and Service Industry. The secondary objective is to realize the tangible and intangible outcomes generated as a result of Lean-Kaizen initiatives towards customer satisfaction in the business & Environment concerns.

## **1.2. Contents**

Apart from carbon emission status in India, tools applied for Lean implementation methodologies, are case studies (10) on Lean and Kaizen, application of Muda, Muri, Mura and 9 'waste',. . Detailed explanations on calculations for carbon emission are given ,...followed by summary on studies, findings, discussions and conclusions at the end

## **1.3. SMEs in India**

The total population of Industries in SME sector (Small and Medium Enterprises) in India are 44 million in numbers, employing 59 million men and women generating 45% of the total manufacturing output. On the export front Indian SMEs contribute about 35% in terms of value . (<https://bee.india.gov.in/contente/SME>). India is poised to touch 9.6 trillion US dollars GDP in 2020, from the present 2.45 trillion dollars now @ 6th place (Kenneth Rapoza-Forbes-Contributor, May 26, 2011). The above statistics indicates that the role of Indian Economy at Global level cannot be ignored. At this juncture Indian SMEs have tremendous opportunities for growth

## **1.4. Lean-Kaizen in SMEs**

Indian SMEs are posed with biggest challenges at this point of time from the world's second largest economy, i.e., China in terms of Quality, Cost and Delivery (QCD). Indian SMEs, typically face constraints to access adequate and timely financing on competitive terms. In order to overcome this situation it has to follow adoption of Lean-Kaizen techniques successfully adopted by Japan during 1950s. Japan could overcome similar challenges in their manufacturing sectors through adoption of Lean-Kaizen employing human capital. For Japan this has become a working culture not only at workplace, but everywhere. The skills on Lean-Kaizen are taught to Japanese children at school level itself. For Indian SMEs to fight both challenges of QCD and access to adequate and timely availability of finance at competitive terms, Lean-Kaizen is the right weapon for the industry. Japan has proved this concept of employee participation in managing industry through TPS (Toyota Production System). This culture is a part that glues an organization to become one (Nicholos 1993). Peter Drucker (1977) a famous Management guru says that Kaizen culture will instill in the people an understanding that they learn to do better already that they know how to do well.

## **1.5. Carbon Emission**

Carbon emission is defined as the formation of Green House Gas (GHG) because of release of Carbon-di-oxide (CO<sub>2</sub>) and Methane in the atmosphere, which forms as GHG. GHG, by itself is not

harmful as it protects the surface temperature by 15oC instead of -15oC. But concentration/accumulation of GHG due to CO<sub>2</sub> and Methane are harmful as it increases the Global Temperatures by trapping Solar Energy in the atmosphere.

As early as 1896, a Swedish scientist Svante Arrhenius (1896) has predicted that human activities would interfere with the way Sun interacts with the Earth, resulting in Global warming and climate change. His prediction has become true and eliminate change is disrupting environmental stability because 80% of the carbon-di-oxide emission comes from fossil fuel combustion. (Education Seattle.pi.com/consequences/carbon-emission-humans-4138) ([www.climate change and energy.com/reducing /emissions](http://www.climate change and energy.com/reducing /emissions))

At present India is contributor by 6th position in CO<sub>2</sub> emissions beyond China which is the second largest contributor. The interesting fact is that our per capita CO<sub>2</sub> emission is 0.92 tons/annum as against the world average of 3.87/tons/annum. 55% total emission comes from energy sector and the Lean-Kaizen study is to demonstrate as to how it helps to bring the energy consumption by conservation, efficient methods, which in turn can bring down the CO<sub>2</sub> emissions, is the objective of this study.

## **2. Literature Review**

### **2.1. Define Lean-Kaizen**

#### **2.1.1.What is Lean?**

To eliminate "waste" in any process is defined as Lean. This is applicable to both Manufacturing and Service industry. Whether delivery of pizza to a customer or delivery of manufactured automobile, the time to manufacture and delivery is an essential component in this process. Removing all the "wastes" in the process and order to delivery and realization of cash recovery with lowest cycle time is defined as Lean. The lesser the cycle time from order to realization of cash after delivery gives a different experience to a buyer. This is possible by training the employees in the industry. (Robinson and Schroeder, 1993). Toyota Production System (TPS) successfully implemented Lean-Kaizen in their industry and they had an impeccable record of profit and growth constantly for the last three decades.

#### **2.1.2.What is Kaizen?**

According to (Cane, 1996) Kaizen is a continuous improvement work culture. Meaning of Kaizen is from two Japanese words. They are Kai-Change, Zen-Good. It is defined that if an improvement is needed in any process there has to be a change. [Six Sigma, LLC, 2004]. W.Edward Deming from America developed to this further and trained Japanese technicians. He confirmed that through Kaizen, products and services can be elevated to a consistently at higher quality. Basic principle is when the process is controlled the product automatically gets into quality mode. Kaizen is a process focus rather than problem focus (Nagarettinam, 2003). There can be three kinds of Kaizen according to (Berger, 1997). They are

- (1) Management Kaizen
- (2) Group or Team Kaizen
- (3) Individual Kaizen.

Management Kaizen deals with the total value chain through Value Stream Map. This needs top management support, since several departments are to be taken into confidence. The second one is Group Kaizen or Team Kaizen deals with team members of 5 or 10. This is applicable for dedicated Kaizen Event [Quality circle] focused activity for 4/5 days. The third type Individual Kaizen, which is equivalent to suggestion system. The individual focuses on his work place improvement and has limited progress due to knowledge constraint in an individual.

### **2.1.3. Lean-Kaizen Characteristics**

H. Edward Deming (1986) in his book described 14 fundamentals to be followed by a organization to embrace Continuous Improvement through Lean-Kaizen culture. The steps are forming the foundation for the changed culture in an institution when they have decided to go for a change. Though at the outlook seems to be simple, not a challenge provided one has determined to achieve.

- (1) The work environment shall be such when process improvement focused, Product becoming competitive at the cost of not losing jobs.
- (2) Leadership shall lead by example by challenging the employees to open up to do the job better.
- (3) By making the process a robust one the inspection can be done away with.
- (4) Cost reduction focused on product and service quality.
- (5) Training considered an investment and a continued affair.
- (6) People and equipment shall always be supported
- (7) Work environment will be such that employees shall not be under fear.
- (8) Decisions taken in the organization shall be transparent and involve everyone.
- (9) On-the-job-training a culture.
- (10) Poor quality may not be all the times within the scope of employees.
- (11) HR department developing organizational Development through Education & Training.
- (12) Pride of the employees shall always be kept in mind.
- (13) Low price shall not be the criteria all the time for selection of products purchase and vendors shall also be considered for life time association.
- (14) Transformation shall not be the responsibility on one individual or the management. It shall be everybody's job

#### **2.1.4. Lean-Kaizen Principles**

(Kusar et.al, 2005) defined the 9 fundamental tools on Lean-Kaizen. They are SMED, TPM, Poka-Yoke, 5S, Value Stream Mapping, Visual Control, Andon, Pull/Kanban, Cell Production. The above 9 tools are supported by the fact that in any manufacturing process/service process, Muda (waste) Muri (strain), Mura (variation) do exist. There are seven wastes from the earlier literatures, Ibrahim (2005), but subsequent researchers have added further two "waste" resulting in 9 "waste". They are identified as

- (a) Waiting
- (b) Overproduction
- (c) Rework
- (d) Motion
- (e) Over Processing
- (f) Inventory
- (g) Transportation
- (h) Talent or Intellect
- (i) Energy loss

When detailed activities are investigated the "waste" identified are as explained.

- (a) Waste of Waiting: Machine waiting for power, operator, raw material, spares for maintenance service or tools are all in this category. Sometimes due to waiting there are energy losses.
- (b) Waste of Overproduction: When the product or service made ready too early or too late for the client, then it becomes idle inventory and therefore it is defined as waste.
- (c) Waste of Rework or Rejections: Defective parts production resulting in waste of Energy, Material and labor cost.
- (d) Waste of Motion: This can cause strain and titled under "Muri"
- (e) Waste of Inventory: Inventory is a locked up cash causing interest burden to the industry.
- (f) Waste of Processing: Over processing causing additional energy consumption, cycle time increase, additional lead time to manufacture and supply.
- (g) Waste of Intellect: Under utilization of the talent of the man power is defined as waste.
- (h) Waste of Transportation: Additional movement of goods causing energy loss for transportation
- (i) Waste of Energy loss: This is relevant for this paper, resultant of process, inefficient operation

of equipment, compressed air, steam, water, leakage, transmission loss, insulation losses are all defined under "waste".

## **2.2. Literature Surveys on Carbon Emission**

### **2.2.1. What is Carbon Emission**

Carbon is shorthand for Green House Gas Emission including CO<sub>2</sub>, Methane, Nitrous Oxide and F.Gas (Source: Guardian.com).

Economic growth in a nation will obviously increase energy consumption correspondingly CO<sub>2</sub> emission also increases. If carbon emissions to be restricted it shall have a impact on the growth of economy (Ching-Chihi-Chang, 2010). Author Xing Ping Zhang, 2009 said that neither carbon emission nor energy consumption leads to economic growth - is another opinion in China. He said that China has to pursue a policy on Carbon Emission reduction in the long run without impeding economic growth. Historically US has been the world largest CO<sub>2</sub> emitter from fossil fuel combustion and cement production (Marland, et al, 2009) but China has surpassed United states for the first time in 2006.

Income is the most significant variable in explaining the Carbon Emissions in Turkey followed by Energy Consumption and foreign trade (Ferada-Halicioglu(2008) Md.Shariff Hossain, (2011) says in Japan that Newly industrialized countries (NIC) to adopt solar energy as the substitute for oil to control CO<sub>2</sub> emissions. Japan in their pioneering effort on emissions indicated that energy requirement and life cycle emissions were roughly reduced by two-thirds due to an intervention in silicon PV module in Photo Voltaic System (Kazuhiko, 1998). In Hydro power Plants the emission factors of CO<sub>2</sub> is only 15g of CO<sub>2</sub> equivalent Kwh which is 30/60 times lower than fossil fuel (Luc-Gagnon, 1993). Fossil fuel is coal or gas or oil that is formed from the decayed remains of plant or animals. In a research paper from IEA (International Energy Association) it has presented the data on Motor systems in Industries alone can save 143-191 Mtoe/annum resulting in CO<sub>2</sub> emission savings by 340-750 Mt CO<sub>2</sub>/annum from adoption of best practice in commercial technologies. Similarly, in Energy recovery area alone a recovery of 36-55 MToe/annum and a CO<sub>2</sub> emission reduction by 80-190 MT CO<sub>2</sub>/annum.

### **2.2.2. Outcomes on Lean-Kaizen**

There are many cases studies available in SMEs. In a machine vice manufacturing industry the reduction in process time by 44% and by recovering 80 square feet working area a savings of Rs 64,000/-. Improvement in the form of working flow has also been achieved (Arya and Jain, 2013). A leading pharmaceutical manufacturer supplying globally from Australia improved OEE (overall equipment effectiveness) from 45% to 75% OEE is the product of Availability X Performance X Quality (source: <https://txm.com/>). Between the period of 1992-1998, events in NSC (Nippon Steel Corporation, Japan) has improved the quality of products by bringing down defective level from 15.2% to 10.8% and

Energy Consumption reduced from 4.2% to 3.6% and maintenance cost reduction from 29.1% to 24.3% (Brunet and New, 2003).

Sanobar Hanif (2015) points out that manufacturing operation from a case study in pharmaceutical industry employing 400 people and exporting to European market, Lead Time reduction by two days, Inventory reduction by 37% and Layout redesign saved floor movement by 284 minutes. A major international pharmaceutical quality control operation has achieved the Lead Time to manufacture reduction from 25 days to 16 days. Due date performance improved by 20%. In North America, in an automotive industry (Roderick Bock Miller, 1994) in his paper mentioned Kaizen Events from Jan 1992 to December 1993 improved productivity by 50%. As per (Arya and Choudhary, 2015), the total time for throughput of product reduction by 46.06%. Also in this case study the outcomes in a SME inventory access time is reduced up to 87% and total travel time reduced by 43.75%. In a research paper on Carbon Emission about Thailand energy emission prediction at 2010, 25281 K toe to a level by 2050 - 9873g K toe, and Emission reduction from 2005 level at 74881.4 K ton CO<sub>2</sub> to a level by 2050 - 3,77,808 K ton CO<sub>2</sub>

(Selvakumaran, et al, 2013), United Kingdom (UK) seen reduction in industrial energy use while continuing to increase its output in economic terms. Industrial sector accounts for 21% total delivered energy and 29% CO<sub>2</sub> emissions (Graffin, et al, 2016). By 2050 UK determined to bring down 80% of 1990 levels. About 350 combinations of sub sectors, devices and technologies are being identified for energy efficiency improvement and carbon reduction.

### **3. Methodology and Design**

The topic of the paper is about Lean-Kaizen initiative in a Indian Small and Medium Enterprises leading to Carbon Emission reductions. The methodologies applied are

- (a) Case Study Design.
- (b) Methodologies of 'Kaizen' case study sheets
- (c) Methodologies for 'Lean' tools relevant to Energy Conservation in industry
- (d) Method of arriving at Energy Conservation and steps for calculations
- (e) Method for Carbon Emission calculations resulting out of energy conservation in Indian SME

#### **3.1 Kaizen Case Study Design**

Robert-Yin (2014), Author on the book Case Study Design and Methods indicates that when comparing to other methods, the need to establish the strength of Case Study method. Case study method is its ability to examine in depth a 'case' within its 'real life' context. There are three methods of case studies according to the author. They are

- (a) Descriptive type
- (b) Explanatory type
- (c) Exploratory type

This paper deals with explanatory type case study. Case Study method is best applied when research addresses descriptive or explanatory questions and aims to produce a firsthand understanding of people and events. A good case study design will be mimic the role of a good detective. He has no control on what happens. This follows the steps for a case study.

- (a) Documents
- (b) Archival records
- (c) Interviews
- (d) Direct observation
- (e) Participant observation
- (f) Computer print outs

In a case study two questions need to be addressed. How and Why? Case study research design is also useful for testing whether scientific theories and model actually work in the real world. Sometimes it is necessary to understand the broad picture approach to the study.

In these case studies after documenting the steps to be followed for calculating energy conservation models through Kaizen case studies ,Lean case studies, models and they are focused on energy savings in the industry on account of Lean/Kaizen tools applications. Then the detailed methods for calculations or savings achieved due to Lean Kaizen in terms of Energy in Kwh/annum. The carbon emission (CO2 Emission) savings on account of energy conservation are tabulated.

## **3.2 Methodologies for 'Kaizen'**

### **3.2.1 Evaluation of Baseline**

Normally Kaizen Idea on Energy Conservation are from a Kaizen Blitz or Kaizen Event for simple process improvement leading to savings. This calls for no investment or little investment. Kaizen Idea is generated for energy conservation normally an output of Group Kaizen or Team Kaizen. Once the idea location is identified the Base line figures have to be captured. This is required in order to establish the quantum of improvement .For Example when there is a Kaizen idea for improvement on the steam pipe by improving insulation and energy savings of steam then the base line is the temperature on the surface, so that after improvement investigate the reduction in surface temperature to arrive the quantum of improvement. The Base line figures are important to measure the quantum of improvement achieved in this Kaizen Idea.

### **3.2.2 Basic Rules for Training**

Step 1: The participants undergoing training shall be briefed that they should discard their conventional thinking. This will open their mind and start thinking out of "The box."

Step 2: Start questioning every step in a process. Develop an attitude of why it cannot be done?

Step 3: If they find any mistakes, it should be corrected immediately without waiting for instructions from top management.

Step 4: Participants develop the skill of 5 Why and identify the root cause for the given problem.

Step 5: Participants shall always look for wisdom from many people instead of looking for solution with a single individual.

Step 6: Participants to realize that benefits are infinite. When Kaizen idea is generated many results are generated. For example knowledge increases the morale of the organization apart from solving problems.

Step 7: When employees are challenged, then new ideas gets initiated. Ordinary people will do extra ordinary things. Global ear is not labor intensive or not just material intensive but knowledge intensive. Leadership is very important to create this atmosphere.

Step 8: Participants shall be advised for Kaizen ideas not to spend money.

Step 9: Even 50% of the results that are targeted in the Kaizen idea, it shall be acceptable. This shall improve the morale of the employees and form a culture of employee participation.

Step 10: Check the result with that of Base Line and record and recognize. Ensure communication of Kaizen idea is spread to all the departments to inspire everybody.

### **3.3 Methodologies for Lean**

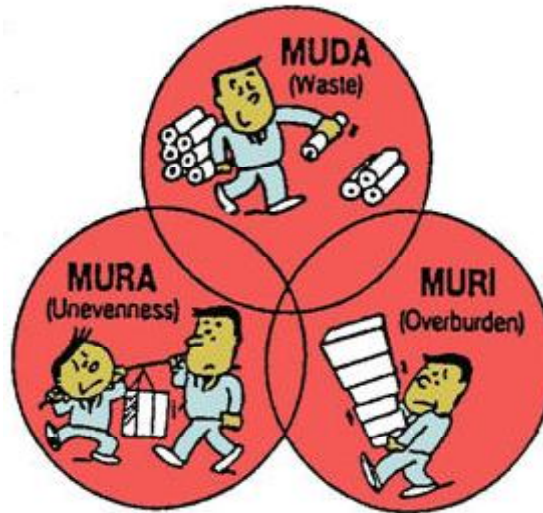
(Relevant to Energy Conservation resulting in carbon emission is covered)

"9" Waste already explained in any process. They are

- (a) Waiting
- (b) Overproduction
- (c) Rework or Rejection
- (d) Motion
- (e) Over Processing
- (f) Inventory
- (g) Transportation
- (h) Talent or Intellect
- (i) Energy Losses



Out of the above nine "waste", Waiting, Rework or Rejection, Over Processing, Transportation, Energy Losses are directly or indirectly causing energy losses and these tools are used in the study.



**Figure 1. Muda, Muri, and Mura (Source: Google)**

Another effective Lean tool relevant to Energy Conservation is TPM (Total Productive Maintenance).

This is based on 8 pillars. They are

- (a) Autonomous Maintenance
- (b) Focused Improvement
- (c) Quality Maintenance
- (d) Planned Maintenance
- (e) Office TPM
- (f) Safety, Health and Environment
- (g) Development Management
- (h) Education and Training.

All the 8 pillars of TPM are one way or other a useful tool for energy conservation resulting in Carbon Emission. (Thirumani, 2016)

There are 8 pillars addressing 16 losses. They are

- A. Seven major losses that impede overall equipment efficiency. They are :
  - 1) Failure loss

- 2) Setup and Adjustments loss
- 3) Tool change loss
- 4) Start up loss
- 5) Minor stoppage & Idling loss.
- 6) Speed loss
- 7) Defect & rework loss
- B. Loss that impede equipment loading time.
- 8) Shut down loss
- C. Five major losses that impede man efficiency
- 9) Management loss
- 10) Motion loss
- 11) Line organization loss
- 12) Distribution loss
- 13) Measurement & Adjustment loss
- D. The three major losses that impede efficient use of production subsidiary resources
- 14) Energy loss
- 15) Die/Jig and Tool loss
- 16) Yield loss

Losses under Heading 'A' - classified 7 losses contribute to losses due to energy in an industry.

### **3.4 Methodologies on Energy losses and steps for calculation: (Source: [www.beeindia.in](http://www.beeindia.in))**

For taking up the study the participants receive training on Ten Basic Steps for Kaizen, and losses on TPM pillars, Condition Based Monitoring (CBM), Time Based Maintenance (TBM), and the Lean tools such as Muda, Muri, and Mura. Apart from this it is necessary to impart some basic knowledge on energy savings concepts through a structured training program. It is recommended that the following knowledge are introduced to SMEs. The depth of the topic shall be extended based on the size of the industry. The topics suggested

- (a) Energy Scenario.
- (b) Renewable and Non renewable sources

- (c) Thermal energy, including
- (d) Electrical energy system including HVAC(Plant) (Heating, Ventilation and Air-conditioning system)
- (e) Calculation of energy savings, Payback. ROI

### **3.5 Method of arriving carbon emissions calculating out of energy losses in Indian SMEs**

Carbon emissions arriving out of production and consumption of electricity and burning of fossil fuel such as coal, oil, and gas (fossil fuel that are formed from the decayed remains of plants & animals). In this paper the discussions of formation of CO<sub>2</sub>, Methane, and formation in the GHG (Green House Gases). One liter of diesel produces 2.75 kg of CO<sub>2</sub> whereas heating of oil/liter produces 3.0 kg of CO<sub>2</sub>.

(Electricity produces 0.8 MT/MWh ( though variations among the grids, taken this for calculation sake) and where as LPG produces 3MT/MT of LPG used. Carbon Emissions are calculated for the coal used 2.86 tonnes of CO<sub>2</sub> / tonne of coal used, (Source: [www.bee.india.org](http://www.bee.india.org))

## **4. Case Studies**

In order to establish the Quantum of carbon emission reduction per annum from sample industries chosen are

- (1) Forging Industry
- (2) Steel Rods Manufacturing Industry
- (3) Sea Foods Processing Industry
- (4) Pharmaceutical Industry
- (5) Food Processing Industry
- (6) Software Industry (Service Industry).

All the industries chosen were SMEs. These industries chosen are those willing to take up the Lean, Kaizen knowledge with a view to save energy, save money and also Carbon Emissions for the country. For confidentiality purpose the name of industries were withheld. Lean Tools such as SMED for change over, Muda (meaning Waste), Over processing, Process Cycle Efficiency, Value Stream Mapping, Time Based Maintenance, and Simple Observation are all followed to identify the scope of energy savings in the process. These industries were willing to get trained and learn and demonstrate the will to change. They were willing to share the knowledge for the benefit of other Industries.

Kaizen ideas generated in the process which many times do not require investment or no investment. Even when there are investments the pay back periods are immediate, and in one case it is less than 4.7 months. Without Lean Tools no Kaizen ideas can be generated and vice versa.

Lean and Kaizen, both are complimentary to each other. In the case studies generated from six industries which are explained in the Heading 4.1.1 to Heading 4.1.10. The savings in terms of Electrical Energy and savings in terms of Coal, Furnace oil saved are indicated in the Heading 4.1.1 to Heading 4.1.10. Corresponding Carbon Emissions as prescribed in ([www.beeindia.gov.in](http://www.beeindia.gov.in)) are calculated and submitted in the bottom of each case study.

## **4.1 Summary on Case Studies**

From Heading 4.1.1 to Heading 4.1.10. data are tabulated to arrive at the total Carbon Emissions savings per annum arrived from the six industries that were chosen and presenting ten Lean-Kaizen case studies. The industries chosen are Software industry (service industry), Forging industry, Steel Rods manufacturing, Pharmaceutical industry, Food Processing industry, and Sea Food Processing industry. The first two case studies are from Service Industries under the ECBC Code (Energy Conservation Building Code) addressing Carbon Emissions through Energy Savings of Air Conditioners. In fact in ECBC Code the Air Conditioning Power is having the highest contribution. Both Case studies 1, 2 require the least investment. Next three Case studies numbering 3, 4, and 5 are drawn from Forging Industry. These Case studies are on change over from Furnace Oil to Electrical System to save energy of Furnace Oil which requires idle running to attain the required temperature. The next one through cycle time improvement and Lay out arrangement through Muda, Mura, Muri introducing Root Cause Analysis. The 6<sup>th</sup> Case study is from Steel Rods Manufacturing is about Batch Size in feeding of Raw Material in de shaped Condition to increase the Capacity of the Furnace. Case studies 7 and 8 are from Pharmaceuticals Industry using SMED Tool. These concepts are 5S, Muda, Muri, Mura where in the Internal Set up time (meaning the time for change over activities after the equipment is shut down from Production) is reduced by shifting some of the possible activities to External Set up time (meaning the change over activities incurred when the equipment Operations are On). The next study on improving insulation thereby saving Steam Energy Losses, in turn savings on coal energy resulting in carbon emission reduction. Case study 9 deals with energy efficient equipment i.e. motors for a continuous process industry. The savings are substantial as it is a 24x7 process industry. The pay back is almost immediate. The 10<sup>th</sup> Case Study on electrical energy Savings on lighting in a shrimp export processing Industry resulting in carbon emission Reductions

### **4.1.1 Lean-Kaizen Case Study : 1**

Industry : Software Industry



Title : Energy Savings in Air Conditioners

Tools Adopted: Lean, TBM (Time Based Maintenance)

Description : In a SME (service sector) more than 100 split Air Conditioners are installed for providing air conditioning in the software industry. The computers installed are all in operation on 24x7 basis for five days a week. By introducing TBM (Time Based Maintenance) the air conditioning filters

are cleaned once in a month based on the working condition, location of the building and pollution in the vicinity. These TBM services are interlocked with Maintenance Department server systems. When TBM activity is completed actions are fed into the system. This has lead to the electrical energy savings to the tune of 8% of the energy consumed. Energy efficiency improved by elimination of filters chocking due to dust.

**Figure 2. Introduction of Time Based Maintenance.**Source: Google

<i>Before</i>	<i>After</i>
 <p>Window Air condition</p>	<p>One point Lesson Equipment: Air conditioner</p>  <p>Responsibility : Mr. XYZ Dept : ABC Monthly : First Friday 3 pm to 3.30 pm Note: Failure to clean filter will lead to excess power consumption. Clean with blower, No water.</p>

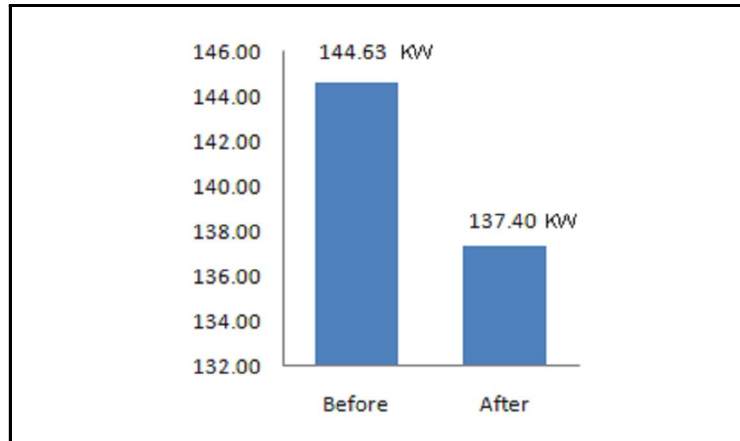
#### 4.1.2 Lean-Kaizen Case Study : 2

Industry : Software Industry

Title : To introduce Roof insulation to reduce Energy required for Air Conditioning equipment

Tools Adopted: Lean - Muda - Kaizen

Description : Outsourced software industry employing more than 200 engineers were installed with centralized air conditioning system. The Fan motor input = 28.43 KW. Pump Motor input = 116.2 KW. No of hours in operation is 10 hours and 300 days of working days. By introducing the roof insulation the inside office temperature reduction achieved was 3oC to 4oC. This has resulted in 5% energy reduction for the air conditioning plant. Total power consumption/hour = 144.63 KW has come down to 137.40 KW.



**Figure 3. Total power consumption/hour**

Calculations:

Energy Savings : 21694.50 KWh/annum

Energy savings : 21.694 MWh/annum

Carbon Emission reduction @ 0.8 MT/MWh = 21.694 x 0.8

CO2 Emission reduction/ annum = 17.35 MT

#### **4.1.3 Lean-Kaizen Case Study : 3**

Industry : Forging Industry

Title : To save Heat Energy by switching over from furnace oil furnace to electrical furnace.

Tools Adopted: Lean - Muda - Waiting.

Description : This forging industry is having 12 hours operation/day. They heat the billets to an elevated temperature of 1100°C before feeding to the forging press. For this a furnace oil fired furnace is being used. The production shift starts at 7 am and ends at 7 pm every day. After the shift operations are completed the Furnace operations are shutdown and the next day morning the furnace oil is pumped at least 3 / 4 hours idle( with out production ) before beginning of the shift. The 3 / 4 hours of furnace oil running @ 50.5 kg/hour is the 'muda' or waste in the industry. By switching over to the electrical induction furnace 3 / 4 hours of idle running is eliminated.

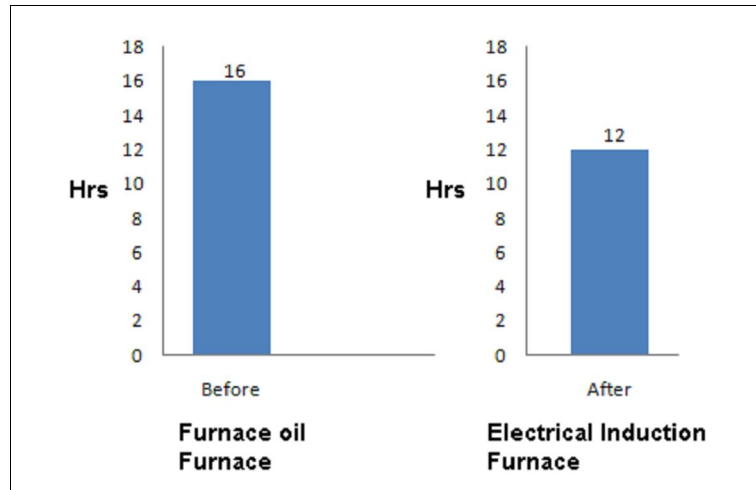


Figure 4. Furnace operation

Calculations:

No. of Hours furnace oil pumping idle	= 3 / 4 hours
Total number of days in operation / annum	= 300 days
Furnace oil pumping per hour	= 50.50kg / hour
Total oil pumping into furnace without production / annum	= 4 x 300 x 50.5
Energy Savings in terms of Furnace Oil	= 60,600 kg = 60.6 MT/annum
CO2 emission / annum @ 2.6 MT/MT of furnace oil	= 60.6 x 2.6
Co2 emission / annum	= 157.56 MT

#### 4.1.4 Lean-Kaizen Case Study : 4

Industry : Forging Industry

Title : Improve productivity by debottlenecking in trimming operation in forging industry.

Tools Adopted: Value stream mapping, Root cause analysis.

Description : In this forging industry the cycle time for the sequence of operations.

Operation 1	Induction heating	: 15 seconds / piece.
	Forging process	: 20 seconds / piece
	Trimming	: 27 seconds / piece
	Coining	: 15 seconds / piece

Using Value Stream Mapping identified the bottleneck operation (Trimming). By eliminating the Muda and using root cause analysis the cycle time at trimming brought down to 20 seconds. This is done for balancing the cycle time.

This has led to improve productivity = 25.92%. By improving productivity by 25.92% the energy saved/annum on the entire equipments are:

Forging press : 50 KW,

Induction heating : 240 KW,

Ancillary equipment: 40 KW Total = 330 KW

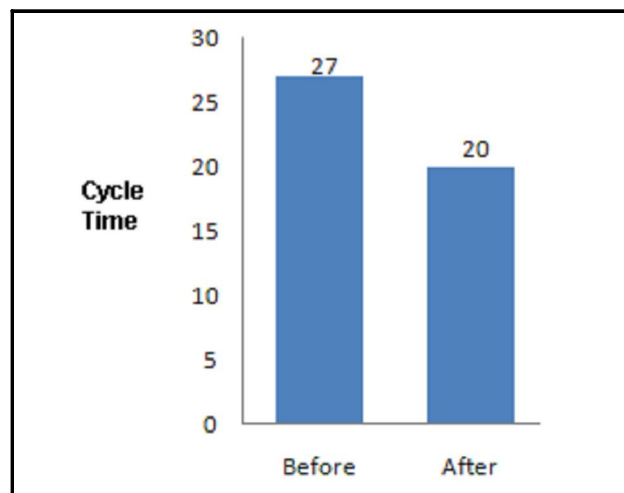


Figure 5. Cycle time in seconds

Calculations:

$$\begin{aligned} \text{Energy saved per hour} &= 330 \text{ KW} \times 300 \text{ days} \times 12 \times \\ &= 3,07,920 \text{ KW} = 307 \text{ MW} \end{aligned}$$

$$\text{CO}_2 \text{ Emission saved/annum} = 0.8 \text{ MT of CO}_2 / \text{MWh} = 307 \times 0.8$$

$$\text{CO}_2 \text{ Emissions saved / annum} = 246.34 \text{ MT / annum}$$

#### 4.1.5 Lean-Kaizen Case Study : 5

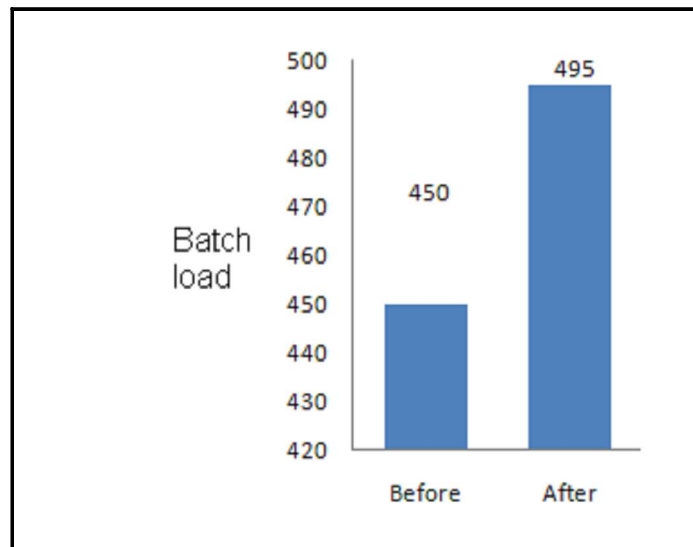
Industry : Forging Industry

Title : To introduce Zig Zag loading in the furnace at heat treatment process.

Tools Adopted: Root cause analysis, Muda, Muri and Mura.



Description : The components to be subjected to the Heat treatment process are having different configurations. By introducing Zig-Zag loading into the Heat treatment furnace 10% increase in output were achieved. The Heat treatment processes are batch type of process and is running on a single shift of 8 hours. The batch load was 450 kg and the Zig-Zag loading lead to an increase to 495 kg / batch. The Heat treatment furnace operated by 250 KW capacity and number of batched in operation is 7 / day. The industry runs for 300 days in a year. Energy saved =  $250 \times 7 = 22.72 \text{ KW} / \text{batch}$ .



**Figure 6. Batch load**

Calculations:

Energy savings / annum =  $22.72 \times 7 \times 300 = 47712 \text{ KWh} / \text{annum}$

CO2 Emission Savings / annum =  $47.712 \text{ MWh} \times 0.8 \text{ MT of CO}_2 / \text{MWh}$

CO2 Emission Savings / annum =  $38.16 \text{ MT} / \text{annum}$

#### **4.1.6 Lean-Kaizen Case Study : 6**

Industry : Forging Industry

Title : Capacity improvement in Steel Melting Furnace using scrap as raw material.

Tools Adopted: Lean - Muda - Root Cause Analysis.

Description : In as steel melting furnace capacity for Melting is 1250 Kgs. Since the raw material supplied is from scarp, the sizes are odd and not uniform. Because of this reason the furnace could accommodate for melting for each charge only 1000 Kgs. The raw material supplier has been advised to install a Hydraulic Press to de-shape the scrap and make it a bundle and uniform in shape. This results in loading to the full capacity of 1,250 Kgs. There are 20 charges / day. Additional output

of 5,000 Kgs or 5 MT improving the productivity = 25%. The specific energy consumption for the furnace = 600 KW/MT and after improvement is 480 KW/MT saving 120 KW/MT.

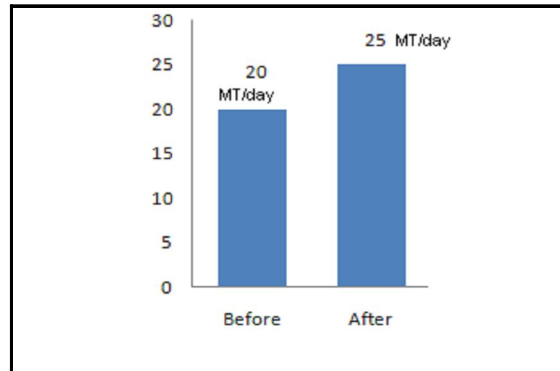


Figure 7. Improvement in MT per day

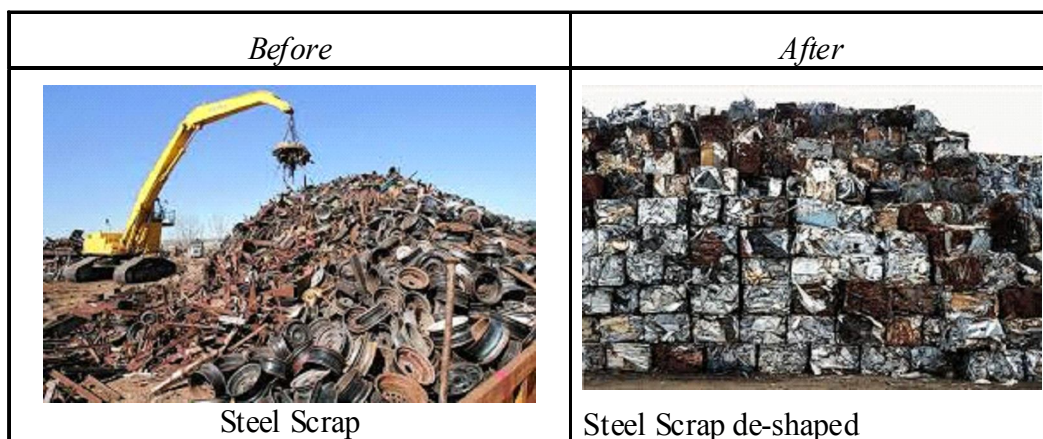


Figure 8. Source: Google

Calculations:

For 300 working days @ 25 MT/ day the total improvement achieved is

5 tonne/day x 300 days = 1500 tonnes.

Energy savings = 1500 x reduction in specific energy consumption

= 1500 x 120 KW = 180 MWh

Carbon Emission CO<sub>2</sub> = 0.8 MT/MWh

CO<sub>2</sub> Emission Saved = 180 x 0.8

= 144 MT

#### 4.1.7 Lean-Kaizen Case Study : 7

Industry : Pharmaceutical Industry

Title : Effective Insulation of steam pipe to save energy.

Tools Adopted: Lean - Muda, Root Cause Analysis.

Description : In a pharmaceutical industry noticed that steam pipes carrying a temperature on the pipe surface at 90°C to a length of 100 metres. This is muda, special application thermal insulation point applied in its surface on pipes of 150 mm diameter which has characteristics to temperatures between -30 °C to 180 °C. The insulation paint developed on the principle of Nano Technology. After the insulation the surface temperature reached 25°C. (Muda eliminated).

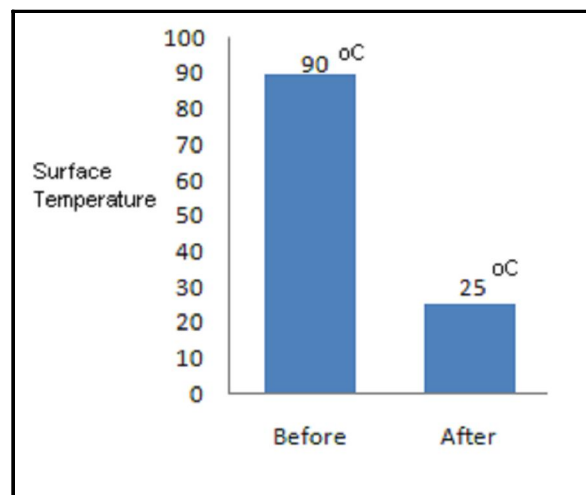


Figure 9. Surface temperature reduction

$$\text{Formula for Heat Losses as per BEE} = \left(10 + \frac{(T_s - T_a)}{20}\right) \times (T_s - T_a)$$

Calculations:

$$\begin{aligned} \text{Surface Heat loss in Kcal/hr m}^2 &= \left(10 + \frac{(T_s - T_a)}{20}\right) \times (T_s - T_a) \\ &= \left(10 + \frac{(90 - 25)}{20}\right) \times (90 - 25) \\ &= 861 \text{ Kcal/m}^2 \text{ hr} \end{aligned}$$

$$\begin{aligned} \text{Surface area} &= \pi \times 0.150 \times 100 \\ &= 47.115 \text{ m}^2 \text{ (150mm diameter} \times \text{100 metre long)} \end{aligned}$$

$$\text{Surface Heat loss} = 861 \times 47.11 = 40566 \text{ Kcal/hr}$$

$$\text{Boiler Efficiency} = 80\%$$

$$\text{Heat Loss} = \frac{40566}{0.80} = 50707.50 \text{ kcal/hr}$$

$$\text{Gcv of coal used} = 4100 \text{ kcal/Kg}$$

$$\text{Coal saved/ hr} = \frac{50707.501}{4100} = 12.36 \text{ Kg/hr}$$

$$\text{Coal saved/annum} = 12.36 \times 300 \times 24 = 88.92 \text{ MT/annum}$$

$$\text{CO}_2 \text{ emission due to coal} = 2.68 \text{ MT of CO}_2/\text{MT of coal used}$$

$$\text{CO}_2 \text{ emission/annum saved} = 238 \text{ MT/annum } (2.68 \times 88.92)$$

#### 4.1.8 Lean-Kaizen Case Study : 8

Industry : Pharmaceutical Industry

Title : Savings in Auxiliary power due to change over time reduction.

Tools Adopted: Lean Tool SMED (Single Minute Exchange Die)

Description : In a formulation process whenever there is a changeover of product in the process the total time taken is 300 minutes (5 hours) and during this period the principal equipment is shut down but the auxiliary services such as Compressors, Pumps, Refrigeration machines are all in operation. This being a common facility. By applying SMED (Single Minute Exchange Die) tool technique by shifting activities of Internal Setup time to External Setup time the change over time reduced from 300 minutes to 210 minutes. This 90 minutes reduction has resulted in savings of auxiliary power consumption. Total changeover happening/month is 10 and no. of processes are 5. Total time saved

are  $\frac{5 \times 10 \times 90}{60} = 75$  hours. Total auxiliary power = 24 KW.

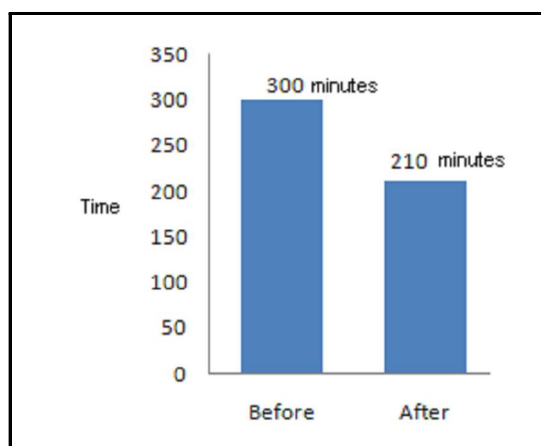


Figure 10. Changeover time Reduction

Calculations:

Total savings of Energy due to reduction

in change overtime and Auxiliary power =  $24 \times 75 \times 12$

$$= 21600 \text{ KW}$$

$$= 21.6 \text{ MW}$$

CO<sub>2</sub> emission @ 0.8 MT/1MWh electricity works out to

CO<sub>2</sub> emission/annum saved are = 17.28 MT

#### 4.1.9 Lean-Kaizen Case Study : 9

Industry : Food Processing Industry

Title : Replace Energy Efficient Induction Motors in place of Rewound Induction Motors

Tools Adopted: Muda

Description : The food processing industry using 250 KW induction motor for the process and the motor is a rewind once. The efficiency of the rewind motor is 84% and obviously draws excess power consumption. The process plant is operating for 300 days in a year. As per the Continuous Process Improvement proposal it was replaced with energy efficient new motor whose efficiency is 94%. The percentage loading for the motor is 80%.

Calculations:

$$\text{Electrical Power savings} = 250 \times 0.80 \times 300 \times 24$$

$$= 1,82,304 \text{ KWh}$$

$$= 182 \text{ MWh}$$

$$\text{Payback period} = \frac{\text{Investment}}{\text{Saving}} \text{ (Cost of Power Rs 7/KW)}$$

Cost of energy efficient motor new one Rs 5.0 lacs)

$$\text{Payback Period} = \frac{5.00 \text{ lakhs}}{182304 \times 7} = 4.7 \text{ months}$$

Note: Whenever there is a continuous process industry where the number of hours of running is high the payback is faster. If the Motor runs only for few hours in a day and not a continuous once, then it is not economical to replace with energy efficient motors.

CO<sub>2</sub> Emission is 0.8 MT/MWh , Now the savings are 182MW =  $182 \times 0.8$

CO<sub>2</sub> Emission saved = 145.6 MT

#### 4.1.10 Lean-Kaizen Case Study : 10

Industry : Sea Food processing Industry

Title : To introduce sensors for savings electrical energy

Tools Adopted: Lean - Muda - Kaizen

Description : The sea food (Shrimp) processing industry has been processing and exporting packed in containers. The products are to be stored at a controlled temperature of -20oC in cold storage before processing and after processing. The cold storage used were two in numbers. They are illuminated 24x7 with 80W LED lamps of 40 numbers in each cold storage. The reason was the cold storage is totally dark when opened and to avoid any accident the illumination was kept on 24x7 basis. The plant is operational 365 days in a year. The option suggested was to introduce sensors for the doors, so that when the door opens only illumination will happen. This has saved 80% electrical energy.

Calculations:

$$\text{Electrical Energy Saved per annum} = \frac{365 \times 24 \times 0.80 \times 2 \times 80 \times 40}{1000}$$

$$= 44851 \text{ KW}$$

$$= 44.851 \text{ MW}$$

$$\text{Carbon emission Saved / annum @ } 0.8 \text{ MT/MWh} = 0.8 \times 44.851$$

$$\text{CO}_2 \text{ emission Saved/annum} = 35.88 \text{ MT}$$

**Table 1. Carbon emission under various Case Studies**

<b>S.No</b>	<b>Line of Activity</b>	<b>Fuel or Elect saved/annum</b>	<b>Carbon emission</b>
1	Software (Case study 1 and 2)	161.39 MW	129.11MT
2	Forging industry (Case study 3,4,5)	60.6 MT furnace oil + 354.712 MW	442.06 MT
3	Steel Rod manufacturing industry (Case study 6)	180 MW	144.00 MT
4	Pharmaceutical industry (Case Study 7 and 8)	88.92 MT coal 21.6 MW	255.28 MT
5	Food Processing industry (Case study 9)	182 MW	145.60 MT
6	Sea Food Processing industry (Case study 10)	44.85 MW	35.88 MT
	Carbon emission Total =		1151.93 MT

## 5. Conclusion

### Conclusions and Recommendations for future research

The detailed live Case Studies comprising of ten case studies from different industries have shown the ample scope available for carbon emission reduction in Indian Small and Medium Enterprises through Lean-Kaizen initiatives. These initiatives do not call for investment or huge investment.

Diverse industry results in Lean-Kaizen approach can inspire practitioners not only from industries referred, but from other industries also. Other industries which are not covered in this study are auto-component manufacturing, electronic component manufacturing, casting, fabrication and also in service industry sectors such as health care industry and hospitality sector which are all in the growing trend. For this Indian industries should believe that training in these knowledge areas is an investment and not expenditure. In the process of achieving carbon emission Reduction, SMEs also received tangible outcomes in terms of Electricity, Fossil Fuels such as Coal, Furnace Oil which are all falling under non-renewable energy category. When Lean-Kaizen simultaneously supports the bottom line of the industry, it also opens up avenues for growth through development, expansions, employment, export and research potential. This opportunity is for a bright future for SMEs in India. This also places the industry on more competitive front among the developing nations, and especially from the World's second largest and fastest growing economy "China" is based on "Manufacturing" focus. SMEs supporting Lean-

Kaizen initiatives leading to reduction in Carbon Emission are directly aligned with the vision to reach the target on carbon emissions by Government of India. Scope for further research work in SME sectors on other areas such as waste heat recovery, electrical lighting load, compressors and other energy consuming. Devices in these industries and particularly in process industries with 24x7 operations are all can be addressed in future studies. If with a sample study in six industries out of 44 million SMEs in India could generate 1151.93 MT carbon emission reductions, then this study is a curtain raiser from the rest of SMEs in India on the potential opportunities.

## References

1. Arya, A.K., and Choudhary, S. (2015), "Accessing the application of Kaizen principles in Indian small-scale industry", *International Journal of Lean Six Sigma*, Vol.6., No.4, 2015, pp.369-396., Emerald Group Publishing Limited., DOI 10.1108/IJLSS-11-2014-0033.
2. Arya, A.K., and Jain, S. (2013), "Impacts of Kaizen in a small-scale industry of India: a case study.", *International Journal of Lean Six Sigma*, Vol.5 No.1, 2013, pp.22-44, Emerald Group Publishing Limited 2040-4166, DOI 10.1108/IJLSS-03-2013-0019.
3. Selvakumaran, B., B.Lumecechokchai, T.Msai, T.Hanoka, Y.Matsuka (2015), "An explorative analysis of CO2 emissions in Thai industry under low carbon scenario towards 2050", *International Conference on Alternative Energy in Developing Countries and Emerging Economies*
4. Berger, A. (1997), "Continuous improvement and kaizen: Standardization and organizational designs", *Integrated Manufacturing Systems*, 8(2), 110-111.
5. Berger, A. (1997), "Continuous improvement and kaizen: Standardization and organizational designs", *Integrated Manufacturing Systems*, 8(2), 110-111.
6. Brunet, A.P. and New, S. (2003), "Kaizen in Japan: an empirical study", *International Journal of Operations & Production Management*, Vol.23, No.12, pp.1426-46.s
7. Cane, S. (1996). "Kaizen Strategies for Winning Through People". London: Pitman Publishing.
8. Ching-Chih-Chang, 2010, "A multivariate causality test of Carbon-di-oxide Emissions, Energy Consumption and Economy Growth in China", 2010.05.004, <https://doi.org/10.1016/j.apenergy>
9. Deming, W. E. (1986), "Out of the Crisis", Cambridge: Massachusetts Institute of Technology, Center for Advanced Engineering Study.
10. Ferada-Halicioglu(2008), "An Economic Study of CO2 emissions, Energy consumption and foreign trade in Turkey", Department of Economics, Yeditepe University, 34755, Istanbul, Turkey.
11. Griffin.W.Paul., Geoffrey. P.Hammond, and Jonathan. B. Norman. (2016), "Industrial Energy use and Carbon Emission Reduction, A.V.K. Perspective", *WIREs Energy Environ*, DOI: 10.1002/wene/212
12. Ibrahim, A. (2005), "A model for the assessment of waste in job shop environments", *International Journal of Operations & Production Management*, Vol.25 No.8, pp.800-822.
13. Kazuhiko Kato. (1998), "Payback time and life cycle CO2 emission of residential Pv Power System with silicon Pv Module", Energy Technology Division, Electro-Technical Laboratory - AISI - MITI-Omezono Tsukuba - Ibarki - 30s-8568-Japan



14. Kusar, J., Berlec, T., Duhovnik, J., Grum, J., Starbek, M. (2005), "Finding and exploiting the hidden logistic potentials in a company. *Strojniski vestnik*", *Journal of Mechanical Engineering*, 51(6): 304-329.
15. Luc-Gagnon, (1996), "Hydro Qubec, Environmental Department, Green house Gas Emission from Hydro Power", *The state of Research*, 75- Rene Levesquare. W.Montreal, Canada, H22-LA4
16. Marland, G., Bordan, T.A., Andres, R.J. (2001), "Co2 accounts for open economics. Producer on consumer responsibility", *Energy Policy*, 29-327-334
17. Md.Sheriff Hussain, (2011), Department of Economic Engineering, Faculty of Economics Kyushu University, 6-19-1-Hakozaki Highshi-Ku-Fukazoda-812-8581-Japan
18. Nagaretinam, M. (2005), "Implementing Kobetsu Kaizen Steps in a Manufacturing Company Goodway Rubber Industries (M) SDN BHD", National Technical University College of Malaysia, 2005.
19. Nicholas, J. (1998), "Competitive Manufacturing Management: Continuous Improvement, Lean Production, Customer-focused Quality," Irwin/McGraw-Hill, New York, NY.
20. Peter Drucker (1977) "People and Performance", The Best of Peter Drucker on Management Harper Collins Canada Limited 1977 Business Economics -366 pages
21. Robinson A.G and Schroeder .D.M (1993), "Training continuous improvement and human relations The US TWI programs and the Japanese Management style", *California Management Review*, 35.35
22. Svante Arrhenius (1896), [www.Climate change and energy .com/reducing/emissions](http://www.Climate change and energy .com/reducing/emissions).
23. Thirumani M.V and Goutam, K.K. (2016), "Need for Kaizen deployment initiative in Indian industries", *ICTACT Journal*, [http://ictactjournals.in/html/IJMS/Volume\\_2/V2I1](http://ictactjournals.in/html/IJMS/Volume_2/V2I1)
24. Xing-Ping-Zhang, (2009), "Energy Consumption, Carbon Emission and Economic Growth in China", <https://doi.org/10.1016;2009-05-04>
25. IDEA - International Energy Association, Head of communication and Information office, 9 rue de-la Federation, 75739, Paris 15, France ECD/IEA/2007," Tracking Energy Efficiency and Co2 emissions.
26. iSixSigma LLC. (2004), "Six Sigma quality resources for achieving Six Sigma results dictionary", available at: [www.isixsigma.com/dictionary/kaizen-42.htm](http://www.isixsigma.com/dictionary/kaizen-42.htm) (accessed April 20, 2006)
27. <https://www.theguardian.com/environment/2011/industries-sectors-carbon-emission>.
28. [https://txm.com.au/casestudies/leanmanufacturing-for-OEE-improvement in pharmaceutical](https://txm.com.au/casestudies/leanmanufacturing-for-OEE-improvement-in-pharmaceutical), Sanobar Hariff.
29. Kenneth Rapoza-Forbes-Contributor, May 26, 2011
30. [www.climate change and energy.com/reducing /emissions](http://www.climate change and energy.com/reducing /emissions)
31. [www.bee.india.org](http://www.bee.india.org)

## **Linchpins for Sustainability and Scalability of Hotel Industry: Amma Unavagam An Empirical Research**

– Dr. A.R .Nithya \*  
– Ms. M. Bagyalakshmi\*\*  
– Mr. R. Karthick\*\*\*

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### **Abstract**

*Design/methodology/approach - Basically the research is qualitative out of which empirical study was made.*

*The researcher has adopted the descriptive research design for this study.*

*Data collection : Primary and Secondary data collection was made, on which primary data was collected through structured questionnaire.*

*Findings - From our research we are here to conclude that Hotel Industry is an upcoming sector, sustainability will be gained through Cost of the Product.*

*Originality/value - This paper communicates the consumer's opinion about Amma Unavagam*

*Keywords: : Amma Unavagam, Sustainability, food industry.*

*Paper type - Empirical Study method.*

### **Introduction**

Amma Unavagam (Tamil: -----) is a food subsidisation programme run by the Government of Tamil Nadu in India. Under the scheme, municipal corporations of the state run canteens serving subsidised food at low prices. The literal meaning of the name of the scheme Amma Unavagam is Mother's canteen. Amma translates to mother in Tamil, but is also a reference to Chief Minister J Jayalalithaa, who introduced this restaurant chain as part of government schemes aimed at aiding economically disadvantaged sections of society.

Amma Unavagam refers to a chain of subsidized restaurants/canteens started in February 2013 by the Chennai Corporation and municipalities. The foundation behind this social welfare scheme was to shield the urban poor from food insecurity in the face of spiraling prices and food inflation by

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offering a cheaper and nutritious substitute to the expensive food sold by private restaurants and street eateries. Amma Unavagam is a carefully thought out constructive intervention designed with some innovative features to meet the main objective of overcoming food insecurity for a sizeable segment of urban poor migrants working as daily wage earners, besides a tool for generating employment to poor women slum dwellers.

### **Objectives of this Study**

- Consumers satisfaction about Amma Unavagam.
- Factors influencing for sustainability of food industries.

### **Review of Literature**

The Indian Hotel Industry is growing at a fast pace. This is due to the intervention by Government of India to facilitate the business through economic reforms, changes in different taxation policy, allowing foreign direct investment etc. This paper traces the development of the Indian Hotel Industry in India right from colonial times so that readers are familiarized with its different stages of development. This paper also highlights the role the Government of India has played in the development of this Industry at different stages of history and the forces that shaped those decisions. The role played by Indian hotel entrepreneurs in establishing the Hotels and taking those hotels to global markets has been discussed. The challenges posed by entry of foreign hotels in India and what it means for Indian Hotel Industry shall make readers acquainted the dynamics of Globalization. The means and methods they use to enter global methods and the reasons have been extensively discussed. The historical concept of Hotel classification in India and how it has taken the present form and what media has reported about it has been discussed. The paper discusses the literature review from the variety of sources to establish the essence of Hotel Industry and its dynamics in twenty first century .

The professional hotel Industry in India was established by the British during colonial times in cities like Calcutta, Mumbai and Delhi. The hill resorts of Shimla & Mussourie also witness setting up of Hotels for tourists looking for cooler destinations in summers. The Hotels that were built in early eighteenth century include Chales Ville in 1861 and Savoy in 1895 in Mussourie. In Shimla Clarkes Hotel was established in 1898 and Savoy Hotel was established in 1902(Bond 2003).

Jamshedji Tata the founder of Tata Empire in Mumbai established the hotel on a grand scale in 1903 and this hotel is the first ever hotel to be built by Indian entrepreneur in India (Allen 2008). In 1934, Rai Bahadur Man Singh, the founder of Oberoi Hotel Chain took over Clarkes Hotel (earlier known as Carlton Hotel) in Shimla and Delhi and in 1938; he took over Grand Hotel of Calcutta. Other important hotels that were built during Indian British period were The Rugby, Matheran (1876), The Grand Calcutta 1930, The Cecil, Mussoorie (1936).

Post-Independence, Jawaharlal Nehru, the First Prime Minister of India recognized the need to build hotel for the foreign dignitaries and this led to the building of the first Government invested Hotel

Ashok in New Delhi. India witnessed a tremendous growth on economic front after independence. The Government of India established Indian Tourism Development Corporation (ITDC) in 1966 with the aim of establishing and operating hotels across India (theashokgroup, 2014). In 1982, India hosted Asian games and to accommodate the visitors many hotels were built. ITDC alone built seven hotels which include Kanishka, Ashok Yatri Niwas, Akbar Hotel, Lodhi Hotel, Hotel Ranjit and Qutab Hotel (Davendra 2011).

The Government of India granted license to Taj Palace, Asian Hotels-Hyatt Regency, Le Meridien, and Surya Sofitel hotels which were built in New Delhi. Another giant leap which led towards the growth of Hotel Industry in India was the transformation that took place. India which was typically a socialist country started the economic reforms in 1990's to become attractive destination for investment. This led to massive growth of the Hotel Industry.

## **Amma Unavagam**

### **Design of the Scheme**

The scheme is creatively designed to solve two important concerns with one strategic solution through cooperative management. Amma Unavagam's innovative feature is by co-opting the local self help groups which are operating from slum settlements of the city for running and managing this budget chain of restaurants. Each of the outlets is managed by 12-16 women members of a self help group or a mix of 2-5 groups. All the SHG members were trained by the Chennai Corporation for managing the different activities of the canteen and servicing the customers. Training of the SHG members also included cooking specifications in terms of quantity of different ingredient to be used for cooking each dish on a large scale for maintaining taste, nutrition and quality across the city outlets. Many locally recruited SHGs and their members are currently working as employees by the Chennai (Municipal) Corporation and each woman member earns a monthly remuneration of Rs 9000 (plus food). The SHG members work and manage the operations of their respective restaurant outlets on division of labour through their SHG principle of democratic decision making and reciprocal agreement, two key pillars of cooperative management. The SHGs, in each of the Amma Unavagam outlets, manage various job responsibilities ranging from kitchen work (vegetable cutting, cooking, and other top up kitchen jobs), servicing the customers (issuing tokens, serving food) and cleaning and related activities on a rotating shift system to cater to the three meal schedule. Normally, the sub groups rotate their allotted work on a regular basis to relieve the monotony as well as to lessen some of the strenuous activities in the kitchen. The SHG women members work on average for 6-7 hours a day in a single shift. By and large, the cash and accounts are handled by the group leaders. Each member takes a weekly day off by mutual understanding among the group members. As SHGs are known for group solidarity and group cohesiveness, a majority of the SHG women members perceived that their membership in SHGs has enabled them to democratically decide on work related matters including choice of weekly off days; besides, they felt that this mutual arrangement was convenient to their personal needs.

Their low prices for the nutritious food served has been attracting large segments of the poor living in Chennai to eat from Amma Unavagam outlets at less than 1/3rd of what they were spending earlier from private eateries or street vendors. The canteens serve food for more than 2 lakhs (20000 million) people every day and have employed 4,000-5,000 SHG women members to run them<sup>21</sup>. Amma Unavagam scheme's low cost nutritious and hot food also has seen modest numbers of middle class white collar workers<sup>22</sup> eating in outlets that are proximate to their office complexes. In any social welfare scheme, universally targeted at the poor, there is a scholarly acceptance that it is practically difficult to weed out the miniscule percentage of non poor-s participation. Though the State government is seized with this issue, however, it is optimistic that the scheme can be scaled up efficiently like it did with some of its earlier schemes in the social sector.

### **Reaching Out with Affordable Food for the Urban Poor**

Within two months after launch of the scheme, nearly 10 percent of the low income population in Chennai city gained by eating low cost food from these canteens across the city. By October 2014, the official estimates showed that nearly 0.3 million residents ate healthy food at economical prices from the 207 branches of Amma Unavagam. It has been reported that Amma Unavagam's clientele are predominantly the urban poor and constitute a little over 50 per cent coming from casual and contractual labourers; and no less than of 25 per cent of them are children from low income households<sup>24</sup>. Amma Unavagams are currently estimated to feed about 20 % of the city's 6, 50,000 (or 65000 million) Below the Poverty (BPL) population.<sup>25</sup>

There are 451 canteens across the State now after it was extended to 9 other cities<sup>26</sup>. The growth of outlets and the customers since the first canteen began as a pilot project in February 2013 is indicative of the scheme's popularity because it has ensured affordable, good quality food served in hygienic conditions across all the outlets across the city. Though the scheme met with derision and criticism, the scheme has been considered a boon for the urban poor - the targeted beneficiaries. As the footfalls in Amma Unavagams rose rapidly, the scheme was expanded fast. Starting February 2013 from its pilot phase, from 15 branches it grew to 39 within a week, to 73 in two, and finally 200 branches by April of its launch - one each in each Municipal ward of the city. Encouraged by the resounding response from the urban poor (as well as some segments of the non poor), the state government of Tamil Nadu has announced that it plans to increase the number of Amma Unavagam outlets to 1000 in the coming year across the state.

### **Outcomes From Amma Unavagam Budget Canteens**

**Food Prices-** An important offshoot of Amma Unavagam has been in curbing high prices charged by private food vendors/canteens in the city and halting the food inflation. This was expressed by many low income customers. Besides, many of the private restaurants were compelled to revise their prices or were seen offering discounts in kind (for instance, additional side dish) to retain existing customers.<sup>27</sup> Rajendran (2013) also corroborates that while private eateries have slashed down their

prices but the small street vendors located near Amma Unavagam canteens have closed down due to lack of customers. Further, the customers also expressed that their ability to manage their food expenses within their limited income flow has been possible due to the low prices of food sold by Amma Unavagam branches enabling them to find some consumer surplus in their hands. By comparison, prior to Amma Unavagam, they were spending higher money on food expenses as the private restaurants as well as street vendors charged high prices on food, thus leaving them with little surplus money. This has been corroborated by some studies as well (Ashok and Krishna, 2013).

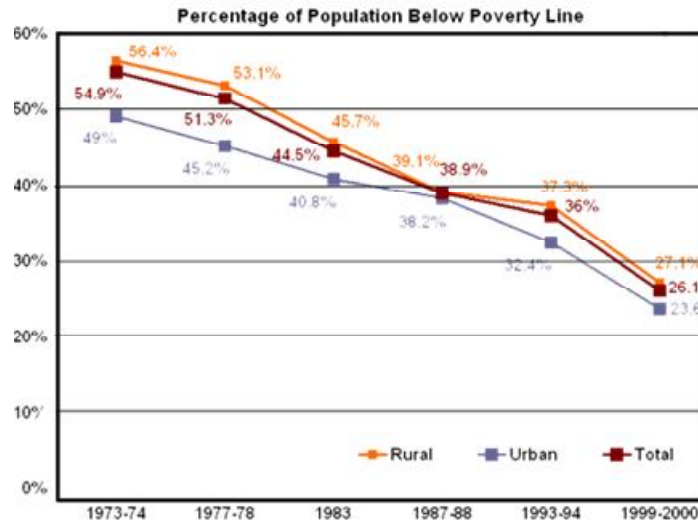
**Employment Generation - Window of Opportunity for Slum Women.** Amma Unavagam was primarily launched with the goal of tackling food insecurity for the urban poor through a strategic design based on cooperative management by involving Self Help Groups. As a result, Amma Unavagam scheme has become a double edged tool for mitigating food insecurity as well as generating employment for women slum dwellers. As 45 % of Tamil Nadu's poor population lives in the slums and slum clusters<sup>28</sup>, the scheme has been designed, as stated earlier, to engage local women's self help groups operating from the slum settlements for running and managing these canteens. This design feature has acted as a catalyst in enabling a large number of SHG members to find a regular employment on a remunerative wage, thus shifting them away from insecure tenure occupations like domestic work, construction, scavenging, street vending etc to formal sector employment. In Chennai city, during the first phase of launch of the scheme, nearly 2800 to 3000 women members from the local SHGs drawn from major slums under the care of Slum Housing Board, Government of Chennai were engaged as regular employees of nearly 207 branches<sup>29</sup> of Amma Unavagam on a remunerative monthly pay of Rs.9000. Another estimate based on.

## **Death Due to Hunger in India**

There are 820 million chronically hungry people in the world. It is estimated that a person dies of hunger or hunger-related causes every ten seconds, as you can see on this display. Sadly, it is children who die most often.

10 million people die every year of chronic hunger and hunger-related diseases. Only eight percent are the victims of hunger caused by high-profile earthquakes, floods, droughts and wars.

Over 7000 Indians die of hunger every day. Over 25 lakh Indians die of hunger every year.



**The India State Hunger Index (ISHI)** is a tool to calculate hunger and malnutrition at the regional level in India. It is constructed in the same fashion as the Global Hunger Index (GHI) 2008 and was calculated for 17 states in India, covering more than 95 percent of the population.

The ISHI was developed by the International Food Policy Research Institute (IFPRI) and presented for the first time 2008 in conjunction with the Non-Governmental Organization Welthungerhilfe and the Department of Economics, University of California.

### Key Findings

- ISHI 2008 scores for Indian states range from 13.6 ("serious") for Punjab to 30.9 ("extremely alarming") for Madhya Pradesh, indicating substantial variability among states in India. Punjab is ranked 34th when compared to the GHI 2008 worldwide country ranking, while Madhya Pradesh is ranked 82nd. In this state more people suffer from hunger than in Ethiopia or Sudan. 60 percent of the children are undernourished.
- All 17 states have ISHI scores that are well above the "low" and "moderate" hunger categories. Twelve of the 17 states fall into the "alarming" category, and one into the "extremely alarming" category.
- ISHI scores are closely aligned with poverty, but there is little association with state level economic growth. High levels of hunger are seen in states that are performing well from an economic perspective.
- Inclusive economic growth and targeted strategies to ensure food sufficiency reduce child mortality and improve child nutrition are urgent priorities for all states in India.

## Research Methodology

**Research design:** Descriptive (empirical) research design.

**Data collection method:** Primary data collection method is used through by way of structured questionnaires.

**Sampling design:** convenience random sampling method is used.

**Sample size:** 50 samples.

**Data Analysis:**

**Mann-Whitney Test**

Ranks				
	Gender	N	Mean Rank	Sum of Ranks
Cost for food	Male	175	130.86	22900.00
	Female	75	113.00	8475.00
	Total	250		

Test Statistics <sup>a</sup>	
	Cost for food
Mann-Whitney U	5625.000
Wilcoxon W	8475.000
Z	-3.443
Asymp. Sig. (2-tailed)	.001
a. Grouping Variable: gender	

From the above analysis it can be interpreted that gender has significant relationship with cost of the food, Obviously Male and female have difference opinion toward cost of the food.

## Chisquare Analysis

Maritalstatus * Messtimings Crosstabulation							
Count							
		Messtimings					Total
		strongly agree	agree	neither nor	disagree	strongly disagree	
maritalstatus	Married	35	25	30	55	5	150
	Unmarried	25	15	20	30	10	100
Total		60	40	50	85	15	250



Chi-Square Tests			
	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.402 <sup>a</sup>	4	.248
Likelihood Ratio	5.309	4	.257
Linear-by-Linear Association	.090	1	.765
N of Valid Cases	250		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.00.			

The variables taken for the analysis it indicates that Marital status of the consumers does not have significant association with mess timings provided.

### Factor Analysis

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.806
Bartlett's Test of Sphericity	Approx. Chi-Square	1324.504
	Df	10
	Sig.	.000

Total Variance Explained									
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.783	75.652	75.652	3.783	75.652	75.652	2.657	53.134	53.134
2	.741	14.817	90.470	.741	14.817	90.470	1.157	23.140	76.274
3	.328	6.555	97.025	.328	6.555	97.025	1.038	20.751	97.025
4	.096	1.926	98.951						
5	.052	1.049	100.000						

Rotated Component Matrix <sup>a</sup>			
	Component		
	1	2	3
Tastesatisfaction	.868	.343	.297
Cost for food	.204	.957	.201
Ammaunavagam cleanings	.928	.158	.274
Food economical	.456	.279	.845
Food supplysatisfaction	.891	.145	.347
Extraction Method: Principal Component Analysis.			
Rotation Method: Varimax with Kaiser Normalization. <sup>a</sup>			
a. Rotation converged in 4 iterations.			

Component Transformation Matrix			
Component	1	2	3
1	.806	.382	.453
2	-.459	.886	.069
3	.375	.263	-.889
Extraction Method: Principal Component Analysis.			
Rotation Method: Varimax with Kaiser Normalization.			

From the above analysis, the following factors have considerable influence in consumer's satisfaction, they are Cost, Taste and the availability of the food to the consumers.

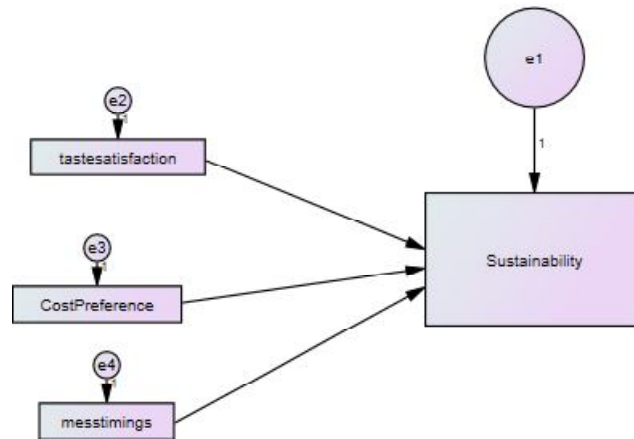
### Weighted Average Analysis

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
hyigenesatisfaction	250	1	5	2.74	1.524
Tastesatisfaction	250	1	5	2.88	1.034
Costforfood	250	1	2	1.10	.301
Foodadulteration	250	1	5	3.00	1.473
balanceddietmenu	250	1	5	3.00	1.473
Messtimings	250	1	5	2.82	1.294
ammaunavagamcleanings	250	1	5	3.66	1.127
costworthforfood	250	1	5	2.24	1.292
foodeconomical	250	1	5	2.02	1.125
foodsuppliesatisfaction	250	02	5	3.68	1.106
quantityoffoodsatisfaction	250	1	5	2.48	1.435
Valid N (listwise)	250				

In the above analysis the availability of the food in time when demanded by the consumers plays a significant role, Hotal food Industries should focus about supply of the food to the consumers satisfaction is must for their sustainability.

Coefficients <sup>a</sup>						
Model		Un Standardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.222	.163		7.510	.000
	CostPreference	2.341	.044	.958	52.598	.000
2	(Constant)	.750	.070		10.671	.000
	CostPreference	1.258	.037	.515	33.789	.000
	messtimings	1.450	.043	.514	33.715	.000
3	(Constant)	1.051E-013	.000		.000	1.000
	CostPreference	1.000	.000	.409	77326773.271	.000
	messtimings	1.000	.000	.354	60915954.282	.000
	tastesatisfaction	1.000	.000	.283	49445871.724	.000

a. Dependent Variable: Sustainability



From the above influential analysis it is found that Consumer's taste satisfaction, Cost of the food, availability of the food in time have its significance in the hotel industries sustainability.

## Conclusion

On his turn, Kirzner stated that in economic development "the entrepreneur is to be seen as responding to opportunities rather than creating them; as capturing profit opportunities rather than generating them" (Kirzner, 1973, p. 74). Later, Gilder (1980) considered that the entrepreneur is a superman who knows the hidden laws of economy and who contributes to progress. Also, he fights against poverty by creating new jobs. Other researchers adopted different approaches as follows: "Entrepreneurship is a purposeful activity to initiate, maintain and develop a profit oriented business." (Cole, 1968, p. 65) "Entrepreneurship is the set of behaviours that initiates and manages the reallocation of economic resources and whose purpose is value creation through those means." (Herron and Robinson, 1993, p. 283) "Entrepreneurship is the resource, process and state of being through and in which individuals utilize positive opportunities in the market by creating and growing new business firms." (Gries and Naudé, 2011, p. 217) However, a quasi-general accepted, and now popular, process and people oriented definition of entrepreneurship has emerged in the business literature: "Entrepreneurship is a process that involves the discovery, evaluation, and exploitation of opportunities to introduce new products, services, processes, ways of organizing, or markets" (Shane and Venkataraman, 2000, p. 219).

Entrepreneurship is the ways and means for the economic development, in our study we confirm the same. Hotel Industry is the Zone where entrepreneurs can dwell their talents by introducing blue ocean strategy. In our study model we conclude that by introducing blue ocean strategy in the consumer satisfaction factors such as taste and quality, Cost, availability of the food will provide the sustainability for the Industry in this Competitive scenario.

## **A Study on Corporate Governance in SSK Cooperative Society: with Special Reference to Member's Satisfaction**

– Netravathi. K\*

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### **Abstract**

*Corporate governance is not only a special term also includes a vast meaning. Satisfaction of stakeholders in industry is called as corporate governance. The paper objective is to measure the stakeholder's satisfaction. In spite of not having innovative products and services community cooperative societies were attracting more number of customers.*

*Members of these societies are fascinated towards the cooperative society's transactions. As per the survey there are innovative products and services in nationalised, private and public banks, but still people more are interested in opening an account in cooperatives also for different purpose. SSK cooperative society has been taken has a sample of our study. It is a community development cooperative society. Questionnaire has been drafted to collect the data from stakeholders. The results interprets that in spite of innovative banking trends in private, public and nationalised banks, customers still depended upon the cooperative societies. Corporate governance and comfort system is only the reason where members still has a great confidence on the cooperative operations.*

*Keywords: corporate governance, cooperative society, governance parameters*

### **Introduction**

Cooperative societies were a form of business where Individuals belongingness to the same class stretches their hands for the promotion of their common goals. These are the many voluntary associations formed to meet or satisfy the common economic, social and cultural needs through a jointly owned and democratically controlled enterprises.

Indian cooperative society 1912 defines a cooperative as a society which has its objective the promotion of economic interest of its member's in accordance with cooperative principles.

According Shri V.L. Mehta, a Vetern in the field of cooperation in India believed that, cooperation is only one aspect of vast movement which promotes voluntary associations of individuals having common needs who combine towards the achievement of common economic needs.

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Cooperative societies are spread throughout the world based on certain core, principles, and values rules of action conduct.

For the first time in modern cooperative founded in Rochdale, England in 1844. Whatever the principles founded were adopted by the officials in the International cooperative alliance (ICA) in 1937 as the Rochdale principles of cooperation.

Cooperative movement in India is more than a hundred years old. In India first cooperative movement concentrated on agriculture and allied industries, which led to enactment of cooperative credit society's act 1904. Subsequently whenever changes required the act was amended for the development of other important industries like non-agricultural sector, handloom weavers. Likewise Karnataka cooperative societies act enacted on 1959 having 15 chapters. This act amended many times for the development of society, recently the amended in the year 2014.

We assume that without innovative banking services we are unable to survive, but the embarrassing truth here is almost 75% of the respondents transacting only in cooperative societies.

It is a voluntary association by choice and not by chance. Members prefer cooperative banks, hence membership is open to all with common interest. Minimum numbers of members is 10 to start the society and no restriction on the maximum numbers of members. There is nothing like suspension of membership, they may be a life time members. Entry and quit of membership is completely by their will state registration is required and statutes, rules and bye-laws formed to protect the interest of members. Democratic management is another scope of the study and it directly leads to the corporate governance. Management governed by a managing committee of BOD who were selected by the members of the society. These societies specially established to provide service to its members. Cooperative societies are a separate legal entity with limited liability of its member's continuity of membership till death, insolvency or lunacy. Cooperative societies distribute profits earned among members based on their share investment. SSK cooperative societies have 12000+ memberships from same community members, having the objectives like rendering services not for profitability, mutual help, and creation of self-help groups not depending upon others. This is nothing but a instance of existence of corporate governance in SSK cooperative society.

### **Profile of Karnataka State Souharda Federal Cooperative Limited (KSSFCL)**

The beginning of mankind the concept of cooperation has been the foundation for harmonious existence. Mahatma Gandhi once said that cooperatives are the gateway for economic development; by effectively implementing this philosophy KSSFCL has successfully achieved an environment that is conducive for the growth of souharda cooperatives in Karnataka, India.

In 1959, the Karnataka souharda cooperative society act introduced and in this new era which changed the perception of cooperative society among members.

## **Evolution of Corporate Governance in Banking System**

In May 1991, the London stock exchange set up a committee under the chairmanship of Sir Arian Cadbury to help raise the standards of corporate governance and the level of confidence in financial reporting and auditing by setting out clearly what it sees as the respective responsibilities of those involved and what it believes is expected of them.

Contemporary corporate governance started in 1992 with the Cadbury report in the UK. Cadbury was the result of several high profile company collapses and was concerned primarily with protecting weak and widely dispersed shareholders against self-interested directors and managers.

As prelude to institutionalize corporate governance in societies, an advisory group on corporate governance was formed under the chairmanship of Dr. R. H. Patil, gave the recommendations, in March 2001, under the chairmanship of Dr. A.S. Ganguly with a view to strengthen the internal supervisory role of the boards in societies in India. This move was further reinforced by certain observations of the advisory group on banking supervision under the chairmanship of Shri. M.S.Verma submitted report in January 2003. Keeping all these recommendations in view and the cross country experience, the reserve bank initiated several measures to strengthen the corporate governance in the Indian banking sector.

## **Review of Literature**

**Shifler and Vishny (1997)** define corporate governance as the methods by which suppliers of finance control managers in order to ensure that they earn return on their investment.

Gopal (1998) argued that the increasing efficiency of capital markets and global mobility of funds across the world means that the opportunity cost of shareholders' funds is increasing

Ciancaneli and Gonzales (2000) in their research paper state that in banking sector the regulation represent external corporate governance mechanism.

Aravan (2001) suggested that corporate governance is basically a system of making directors accountable to the stakeholders for the effective management of the companies, with concerns for ethics and values.

La Porta (2002) studied firms performance from 27 developed countries, they find evidence that there is higher valuation of firms in countries with better protection of minority shareholders.

Nam (2004) suggests some aspects that should be concerned in the internal mechanism of corporate governance, including its independence and structure, function and activity, compensation and other relevant responsibilities of board of directors.

S.bhaskaran (2005) studied the changing faces of Indian Banking. This article mainly speaks about the changes that have taken place in Indian banking sector since the reforms started.

Fernando. A. C.(2006) states in his book "corporate governance, principles, policies and practices". Societies and corporate governance must have following minimum criteria: the objective of governance should be safe guarding depositors money and optimising shareholders' interests.

Sharma Geetha & Kawadia Ganesh(2006) in their research paper"efficiency of Urban cooperative societies of Maharashtra: ADEA Analysis". Discussed the cooperative banking sector in India has received a series of shocks in recent years, resulting in a significant number of bank failures and upsurge in bank merger activities, both voluntary and arranged by RBI. The paper analyses and analyzes and measures the performance and efficiency of the urban cooperative bank of Maharashtra.

Pati, Ambika Prasad, Feb 2006, in his working paper, mentioned that societies being the most influential institutions in the financial sector their governance is of crucial importance.

Eduardus Tandelilin, hermeindito Kaaro, putu anom mahadwartha, Supriyantna,(2007) in this working paper no.34 provides a conceptual model called Triangle Gap Model(TGM) and then test it in an empirical study. The idea of this research is to investigate the relationships among corporate governance, risk management and bank performance in Indonesian banking sector.

Gopinath, shyamala(2008) " corporate governance in the Indian banking industry, this paper makes a case for corporate governance as an internal mechanism in societies, and therefore influenced by cultural issues, to dovetail with the overriding compulsions of prudential regulations, that sets the boundaries for systematic stability.

Shilaja V. Kheni, (2009), defined corporate governance as asset of systems, processes and principles which ensures that a company is governed in the best interest of all the stake holders," this paper also states that corporate governance is a system by which companies are directed and controlled and it is about promoting corporate fairness, transparency and accountability.

Indian societies, 5th May 2010, Urban co-operative societies with strong corporate governance get approval to open approval to open ATM's, this article states that if urban cooperative societies is eligible as per the new norms, they do not have to seek prior approval from RBI to set up offsite ATM's.

Bhagat kishori (2010), in his paper " issues of urban Cooperative societies in India, has highlighted problems of capital inadequacy, growing NPA's lack of professionalism in the management, etc and made a few open suggestions. Cooperative societies act as a very important channel for credit allocation to the small borrowers.

"Report of the expert Committee on licencing New Urban Cooperative societies" RBI(2011), with a view to increase the coverage of banking services amongst local communities, it was proposed in the annual policy statement for the 2010-11 to set up a committee comprising of all stakeholders for studying the advisability of granting new urban cooperative banking licences under section 22 of the Banking regulation Act 1949.



Dr. K.V.S.N Jawahar & Muniraja selkhar(2012) in their research article " the emerging urban co-operative societies (UCB's) in India-problems and prospectus" revealed that the urban societies are important purveyors of credit to small borrowers and weak sections of the society but are not coming out with any supportive policies that can strengthen the role of UCB's

Dr. Summet Giram( July 2014) author in his research paper A Study performance of urban cooperative societies in Beed District states that development of a country depends on the industrial and agricultural development of the country depends which requires proper supply of funds at proper time.

Vidhyadar anakr(2015) in his article"cooperative societies financial position and RBI actions," states that RBI cannot take actions immediately, RBI gives sufficient times to societies for development and control the financial position of societies.

### **Objectives of the study**

1. To examine the members perception about cooperative societies
2. To study the corporate governance in SSK Co-operative society
3. To check the corporate governance practices leading towards members satisfaction and significance role played by the cooperative societies towards the development of nation.
4. To find out the reason why the members still prioritise the community cooperative society when there is revolution of digital banking era.

**Table 1 : Growth trends of KSSFCL & its constituent member Souharda Cooperatives in Karnataka during 2001 & 2016**

Growth Trends, Year wise	Coop. Banks.	Types / Category of Souharda Cooperatives					Total Souharda Coops.
		Credit Coop	Self Help Coop.	Housing Coop.	Coop. Unions (Okkuta)	Other Cooperative	
31 Mar. 2001	18	40	-	8	-	9	75
2001-2002	17	43	-	8	-	8	76
2002-03	21	113	1	23	-	14	172
2003-04	22	200	3	56	-	28	309
2004-05	22	227	5	94	-	10	498
2005-06	21	357	5	111	-	128	622
2006-07	19	468	5	139	-	173	804
2007-08	19	574	5	145	-	214	957
2008-09	19	692	5	148	-	266	1130
2009-10	19	826	5	149	-	348	1347
2010-11	19	988	5	153	-	489	1654
2011-12	18	1165	5	156	1	663	2008
2012-13	18	1343	5	156	2	905	2429
2013-14	18	1471	4	156	2	1101	2752
2014-15	18	1701	3	154	2	1287	3173
2015-16	18	2002	3	154	4	1403	3580
* NOTE:	Other Cooperatives includes Multipurpose, Consumer, Educational, Employees, Dairy, Industrial, Agricultural, Labour, etc types of Souharda						

*Source: Karnataka State Souharda Federal Cooperative Ltd. (ISO 9001:2008 Certified Statutory Organization)*

It is clearly evident from the above Table 1 that the Souharda Cooperatives have witnessed significant growth from the financial year 2008-09, thereby indicating the maturity after stabilization and consolidation phase during 2001 & 2007.

### Scope of the study

The scope of the present study extends to the study of corporate governance in SSK cooperative society, Bangalore. The scope also extends to the satisfaction of the members of the concerned co-operative society.

### Limitations of the study

1. Only one cooperative society is taken as a sample due to Time constraint
2. Out of 13000 + members only 100 were taken as a sample
3. Absence of innovative and modern banking products and services
4. Respondents were higher and lower middle class people and most of them were poor and illiterate.

## Research Questions

- Do really corporate governance is required in corporate societies?
- Is there is any positive relationship between cooperative societies financial performance and corporate governance?
- Is corporate governance having an impact on member's satisfaction level?

## Hypothesis

**H<sub>0</sub>** - There is no special impact of corporate governance on financial performance and customer satisfaction of cooperative societies

**H<sub>1</sub>**- There is special impact of corporate governance on financial performance and customer satisfaction of cooperative societies.

## Research Design and Methodology

### a. Sample size

Sl. No	Selected cooperative society	Members
1	Somavamsha Sahasrarjuna cooperative society from Bangalore city	100 respondents were selected randomly to collect data.

### b. Sources of Data

1. Primary data: primary data will be collected through the structured questionnaire
2. Secondary data: secondary data will be collected through annual reports, research articles and newspapers.

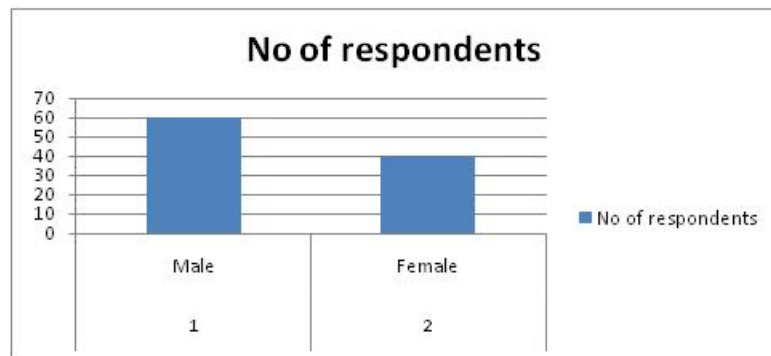
### c. Tools of Analysis

For the purpose of evaluation of financial performance and customer satisfaction, with corporate governance presence in the cooperative societies, questionnaire tool is used for measuring the data collected through survey.

## Data analysis and interpretation

1. Table showing the gender wise Number of respondents:

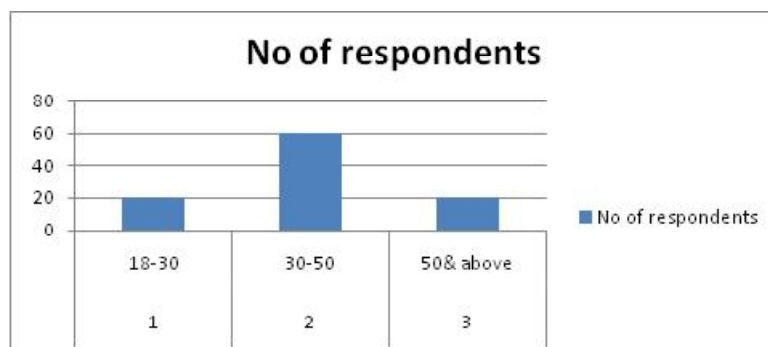
Sl. No	Gender	No of respondents
01	Male	60
02	Female	40



The above table and chart depicts that most of the respondents are male (60%) and they are very comfortable in cooperative societies transaction than the private, public and nationalized banks.

2. Table showing the Respondents Age( in years)

Sl.No	Age in years	No of respondents
01	18-30	20
02	30-50	60
03	50& above	20



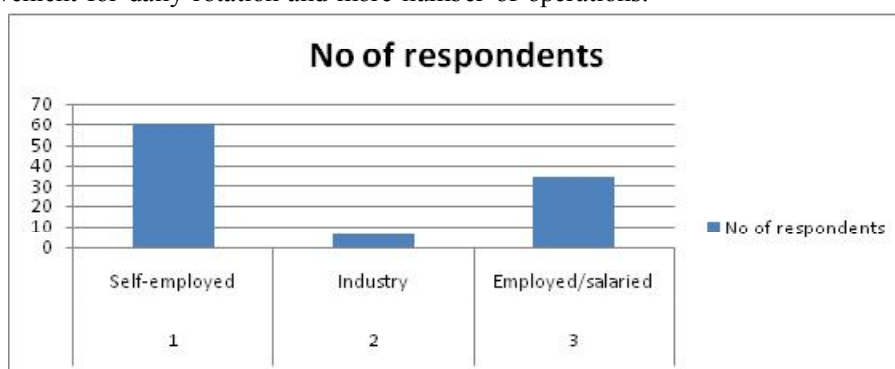
Most of the respondents lies between the ages of 30-50. It reveals that the earning group are more attracted towards the cooperatives, also transacts flexibly with the cooperatives.

Respondents between the age of 30 to 50, transacts nearly 60 % of the cooperative transaction.

**3. Table showing the Occupation of respondents:**

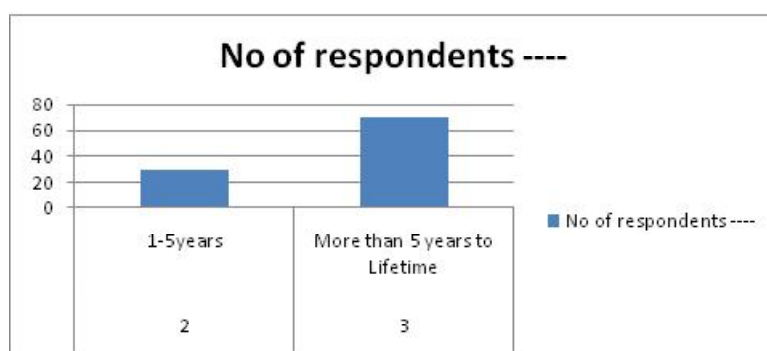
Sl. No	Type of occupation	No of respondents
01	Self-employed	60
02	Industry	06
03	Employed/salaried	34

The above table and chart depicts that most of the respondents prefer the cooperative for the business purpose. According to the business group of respondents transactions in cooperatives are more convenient for daily rotation and more number of operations.



**4. Table showing the Membership duration**

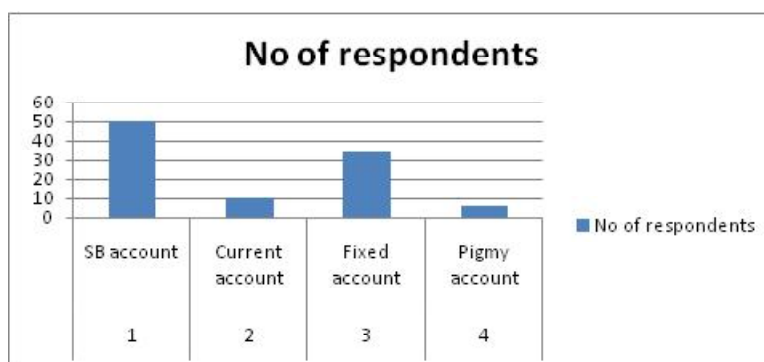
Sl. No	Duration	No of respondents
01	Less than year	----
02	1-5years	30
03	More than 5 years to Lifetime	70



Out of 100 respondents nearly 70% of respondents are loyal towards cooperatives transactions; it proves the satisfaction aspect of members from many years.

#### 5. Type of account

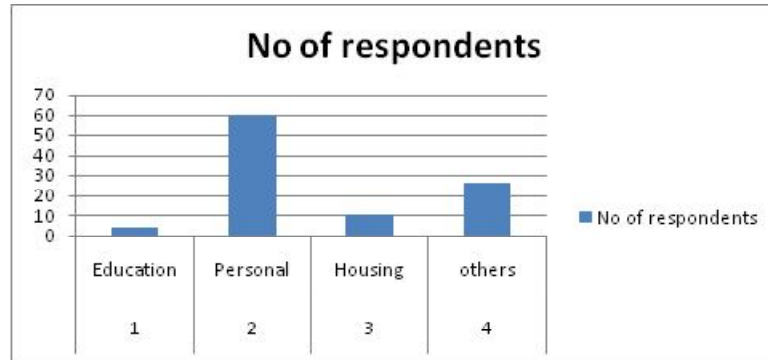
Sl. No	Type of account	No of respondents
01	SB account	50
02	Current account	10
03	Fixed account	34
04	Pigmy account	06



Out of 100 respondents 50% of respondents prefer cooperatives for the saving bank account purpose and 20% prefer fixed deposits. It shows that members are satisfied towards the interest rate of fixed deposits and they prefer savings account for their normal transaction.

#### 6. Types of loan offered by the Co-operative society

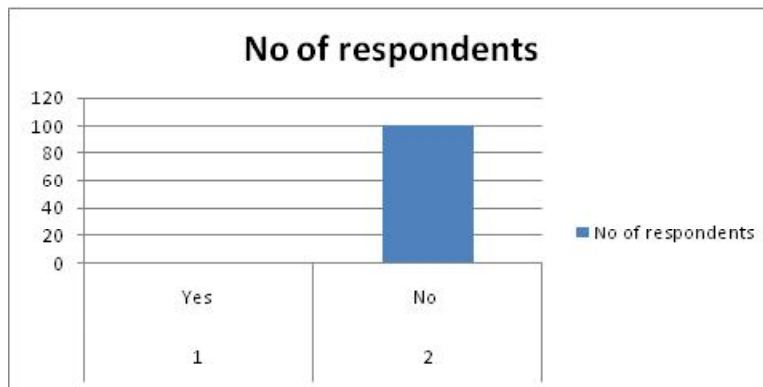
Sl. No	Type of loan	No of respondents
01	Education	04
02	Personal	60
03	Housing	10
04	others	26



Out of 100 respondents 60 respondents prefer cooperatives for the personal loan purpose. According to them procedure of loan approval and repayment of loan is comfortable in cooperatives. When it comes to repayment of loan daily payment is accepted from members.

**7. Table showing the Bad experience in society**

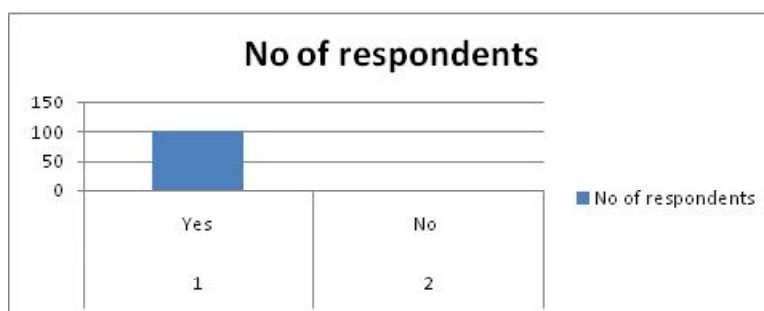
Sl. No	Bad experience	No of respondents
01	Yes	00
02	No	100



To measure the customer satisfaction, respondents are asked to reveal the bad experiences in cooperatives. 100% of the respondents revealed that they are very convenience with the transactions and no issues with the behaviour of the staff of cooperatives.

## 8. The table showing the Recommendations to others

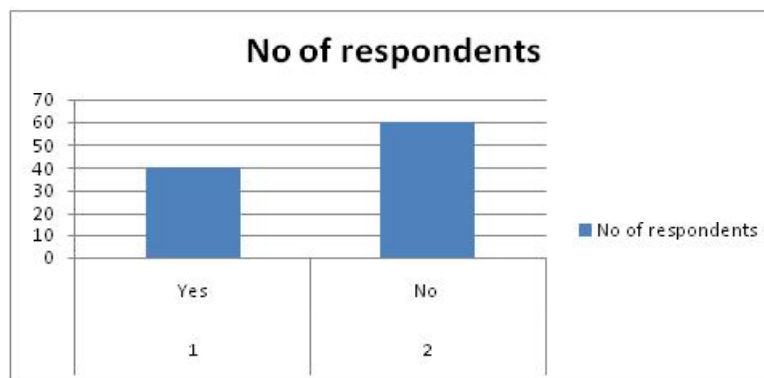
Sl. No	Recommendations	No of respondents
01	Yes	100
02	No	00



From the above table it has been inference that 100 % of the respondents revealed that they are ready to recommend the new upcoming members to operate in SSK cooperative society.

## 9. Table showing the Satisfying banking needs

Sl. No	Customer needs	No of respondents
01	Yes	40
02	No	60

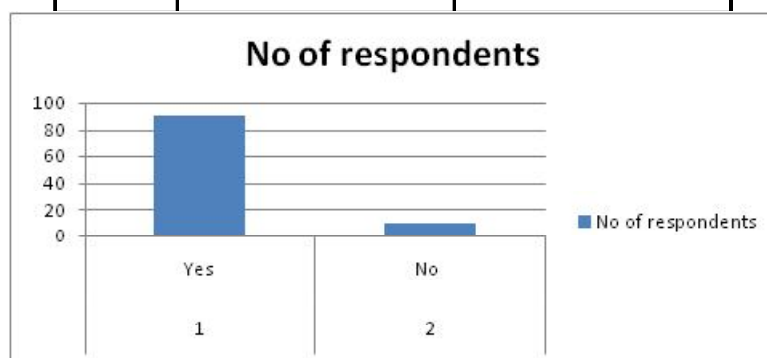


In spite of having the great satisfaction towards the SSK cooperatives, members required the innovative banking products and services. like ATM's, RTGS, Cheques transaction Etc.



**10. Rate of dividend**

Sl. No	Satisfaction	No of respondents
01	Yes	90
02	No	10



From the above table depicts that the rate of dividend payable in SSK cooperative societies is nearly 14% as of now earlier it was around 17%, but still when it is compared to other banks (nationalised, private, public) the rate which they are offering is good, so members having the great satisfaction about the rate of dividend. Nearly 90% of the respondents were happy to get the good rate of dividend.

**11. Table showing the Awareness about SSK cooperative society**

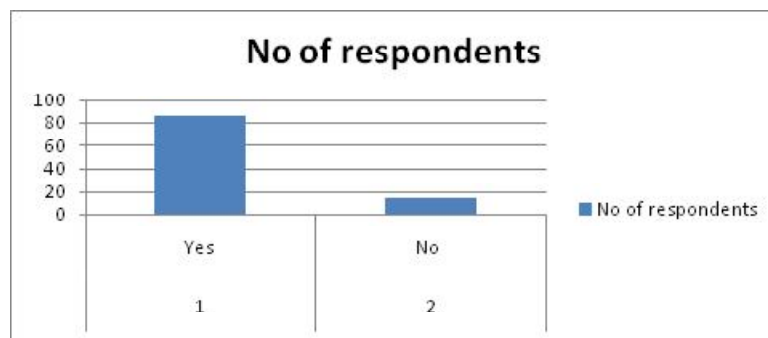
Sl. No	By	No of respondents
01	Ancestors	90
02	Relatives	06
03	Friends	04
04	Others	----

90 % of the respondents transacting in SSK cooperative societies, because it has become a custom and it has been suggested by the ancestors. Young generations following the ancestors mode of operation and they are satisfied with SSK Cooperative banking transactions.

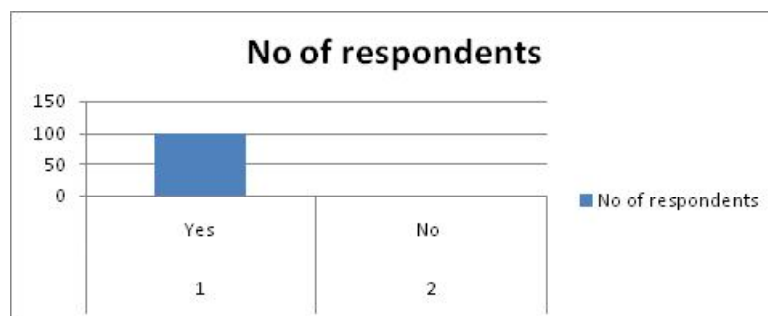
**12. Table showing the Sufficient Space banking**

Sl. No	Reply	No of respondents
01	Yes	86
02	No	14

It has been depicted from the above table 86 % of the respondents feel that the SSK cooperative society has enough banking space to satisfy the member's requirement.

**13. Satisfaction towards Staff behaviour**

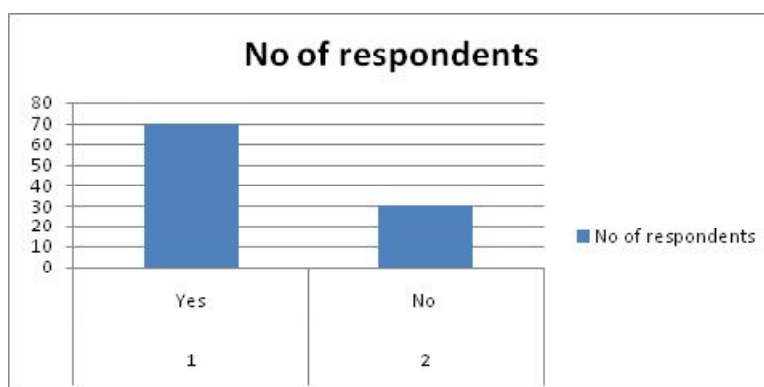
Sl. No	Satisfaction	No of respondents
01	Yes	100
02	No	00



The above table shows that 100% of the respondents are happy with the staff behaviour. No such issues are found between the staff and members. Staff are enough cooperative with members and provides the guidelines to members about their requirements.

**14. Table showing the Issue of proper notice and letters:**

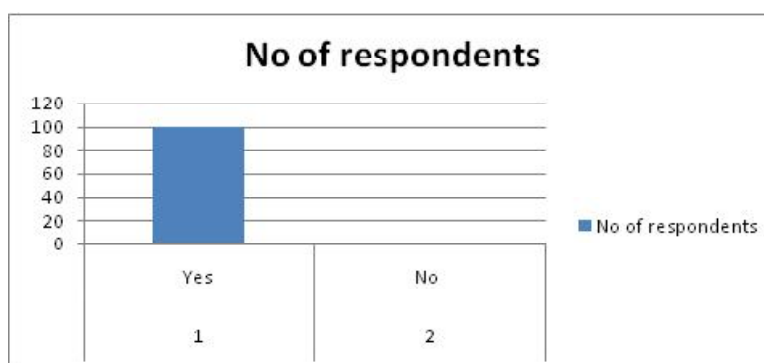
Sl. No	Issue of proper notice and letters	No of respondents
01	Yes	70
02	No	30



The above table depicts that respondents are happy with the proper notice and circular issued by the SSK cooperative bank. Communication of information to its members is satisfactory. Notice of the annual general meeting is also available on time to its members.

**15. Table showing the Opinion of members towards service**

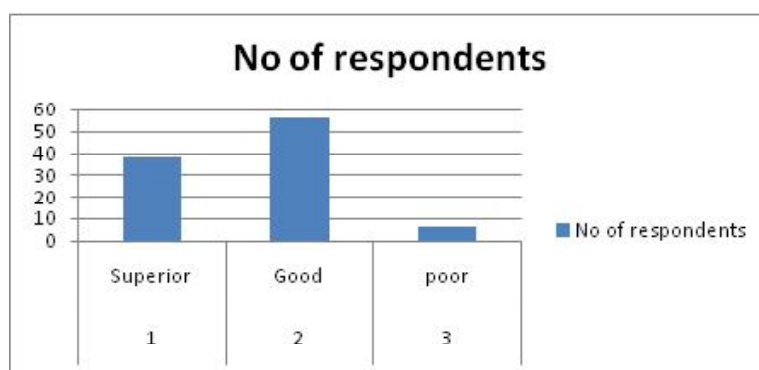
Sl. No	Members service	No of respondents
01	Yes	100
02	No	00



100% of the respondents are glad with the service available in the SSK cooperative bank. Members revealed no grievances related to service factor.

**16. Table showing the Coordination among staff**

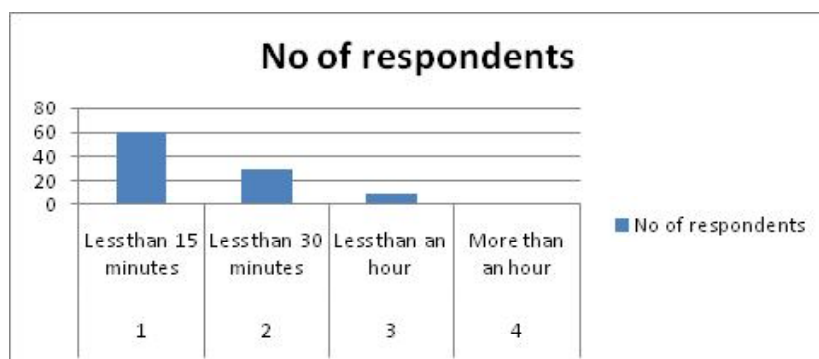
Sl. No	Coordination	No of respondents
01	Superior	38
02	Good	56
03	Poor	06



It has been found that nearly 94% of respondents were happy with the staff coordination in SSK cooperative societies.

**17. Table showing the Time consumption of transaction**

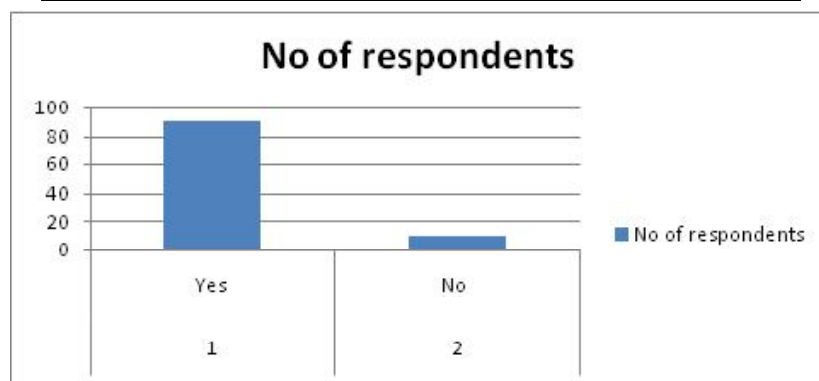
Sl. No	Duration	No of respondents
01	Less than 15 minutes	60
02	Less than 30 minutes	30
03	Less than an hour	10
04	More than an hour	00



The above table shows respondents were patron towards SSK cooperative society because the time consumption of transaction is very less when compared to other banks.

**18. Table showing the Corporate social responsibility**

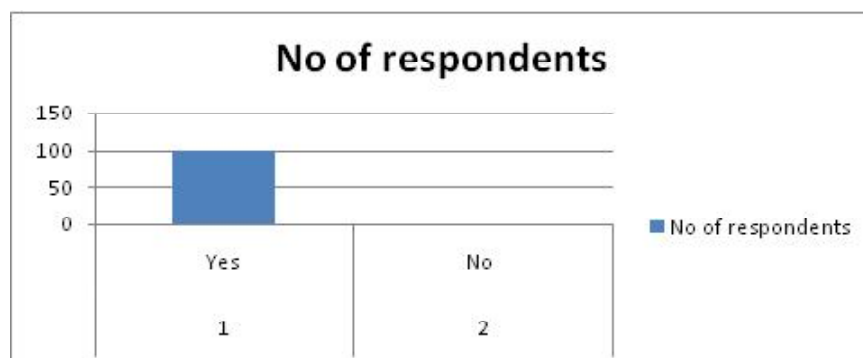
Sl. No	CSR	No of respondents
01	Yes	90
02	No	10



The above table shows that 90% of the respondents has an instances of CSR of SSK cooperative society. Like free education fund, interest free loan to students, graduate rewards death relief fund etc. SSK cooperative society is trying to uplift the poor sections of the society by providing different types of the loans and advances. SSK Concentrating on educational part of the community.

**19. Fair dividend distribution**

Sl. No	Dividend distribution	No of respondents
01	Yes	100
02	No	00



Shareholders/members main aspect of buying shares is the fair dividend distribution. No respondents having an issue with the dividend distribution part of the society. Within one month of the annual general meeting the society is going to distribute the dividend. 100 % of the respondents are happy with the fair dividend distribution.

## Findings

The Corporate governance philosophy of societies has to be based on pursuit of sound business ethics and the society. Strengthening of public confidence in societies is a vital requirement. Staying focused on fundamentals, adoption of utmost professionalism, conformity to prescribed norms of lending and investment, adherence to sound banking principles and ensuring optimum capital efficiency are vital for success and continued also could contribute to a collaborative working relationship between societies management and bank supervisors.

1. Society financial performance is good, due to best corporate governance the number of members was increased periodically.
2. SSK having good governance but failed to adopt innovative products to provide more comfort to the members.
3. Societies offering the good rate of interest on the deposits.
4. When compared to other nationalized, private, public and other cooperative banks, SSK cooperative societies offering the good rate of dividend i.e., minimum 15% per annum. This attracting the members to deposit more in Societies.
5. It has also found that societies undertaken several social responsibility activities like talent award scheme, student welfare fund, honouring meritorious students, interest free education loans, suggestions and counselling, Mahila abivruddi sangha, members death relief fund etc.
6. Also there is a greater requirement of modernization, and innovative banking practices (ATM's, E-Banking, NEFT, debit and credit card, mobile banking, industrial and business loans etc). If not so 20 years down the lane bank will remain as out dated.

## Suggestions

1. SSK Cooperative societies should develop its own code of corporate governance to ensure that is in line with international best banking practices.
2. The society should also work towards increasing the female membership.
3. Societies should initiate massive awareness campaign highlighting the meaning and the business care of good corporate governance and advantages of corporate governance.

4. Code of ethics and board charters serve a very important documents for ensuring good corporate governance and can think of developing such documents in the long run
5. Societies should initiate the performance evaluation if the board to ensure that the board achieves its purpose as best able to protect the interest of stakeholders
6. Societies should conduct seminars, workshops on corporate governance for its board members to provide more comforts and to solve problems which are hidden from society.

(Grateful acknowledgements to Dr. B.S Patil, Director, school of research and innovation, CMR University, and Dr. Eshwar Reddy guide and Professor of CMR School of research and innovation for their valuable suggestions in the preparation of this paper).

## References

### Periodicals

1. The Hindu
2. Deccan Herald

### Articles

1. Ankith Katrodia, corporate governance practices in the societiesing sectot ISSN 2277-1166, vol no. 1, issue no. 4
2. Anrew campell (2007), Societies insolvency and the ;roblem of non-performing loans", Journal of Bnaking Regulation, 25-45.
3. CMA Dr. meenu maheshwari and sapna meena, corporate governance standards and practices in SBI: an empirical study, Journal of business management & social sciences research (JBM & SSR), vol 3, no 11, nov 2014
4. Hemali chokshi , corporate governance in societiesing sector-indicating transparency or translucency, Law Mantra Journal
5. Pisun xu, reiman school of Finance, Hugh glove, lorenzopatelli, Lisa M victoriavish, corporate governance and performance in the wake of the financial crisis: evidence from US commercial societies
6. Soni Sonali, (Oct, 2011), "Corporate Governance in India", India CSR, Retrieved from <http://www.indiacsr.in/en/?p=2630>
7. West, Andrew. (2006), "Theorizing South Africa's corporate governance?", Journal of Business Ethics, 68, 433-448.

## **A Study on Impact of Marketing Strategies on Consumer Behaviour towards FMCG sector with reference to Nestle India Ltd and Britannia Industries Ltd.**

–Swaroopam Moses \*

– Charles Ambrose\*\*

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### **Abstract**

*Innovation always drives people and intrigues an individual in the choices of consumer products they use; we live in a competitive world where FMCG brands come up with different marketing strategies in order to satisfy customers, and, make them relate better with regard to their products. Marketing strategies play a vital role in the consumers' decision making process, as the strategies are designed particularly in achieving the organisational goals. Different companies follow different strategies to meet their objectives, and the strategies which companies implement have a greater impact on consumer behaviour towards the product. The organisations forecast the future while implementing the marketing strategies, and, also analyse the areas in which they need to improve, and the changes which have to be taken into consideration. The organisation cannot enjoy success unless they come up with strategies which will help them in meeting their objectives.*

*FMCG companies mainly concentrate on product innovation, and use strategies like Multi brand strategy, new product development etc. This paper studies the marketing strategies used by Nestle India Ltd & Britannia Industries Ltd, furthermore examines the impact of these strategies on consumer behaviour and suggests the measures to be taken to improve their marketing strategies.*

**Keywords:** *Marketing strategies, Consumer Behaviour, Innovation, Quality, Organisational Goals.*

### **Introduction**

A Marketing strategy is a plan of action designed particularly for achieving marketing objectives in an organization or a firm. Marketing strategies play a vital role in the organizations growth. It is very important for an organization to forecast the future while implementing the strategies.

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The success of FMCG companies purely depends on their marketing strategies, and the impact it has on consumers mind, as marketing strategies helps the organization to meet their objectives and goals. FMCG companies mainly concentrate on "Product Innovation" and they use strategies like Multi Brand strategy, Product Flanking, Brand Extensions, Building Product Lines, New Product Development, Product Life cycle strategy, etc.,

### **Objectives of the Study**

- To study the impact of marketing strategies used by Nestle India Ltd and Britannia Industries Ltd.) on consumer behaviour towards FMCG Products
- To study factors that affect consumer behaviour towards FMCG
- To study measures taken by FMCG Brands to improve their marketing strategies

### **Review of Literature**

MHB McDonald, L De Chernatony, European Journal of Marketing-2001. "Corporate marketing and service brands-Moving beyond the fast-moving consumer goods model". This study examines the issues related to creation and development of service brands in corporate marketing.

S Ramesh Kumar, JY Advani, Journal of Customer Behaviour-2005, "Factors affecting brand loyalty: A study in an emerging market on fast moving consumer goods", This study mainly focuses on the factors that affect brand loyalty with reference to FMCG.

### **Statement of the problem**

This research paper attempts to study the marketing strategies used by FMCG companies in achieving their objectives, and the effects of these strategies on consumer behavior. Marketing strategies taken by each FMCG companies differs from the others; therefore, this study aims to identify those facts which have an impact on consumer behavior.

### **Methodology**

Sampling Technique- Convenient Sampling,

Data Collection: Primary data from dealers using questionnaire and secondary data from official websites of FMCG companies

**Sample Size- 60**

### **Scope of the study**

- To gain knowledge about marketing strategies used by FMCG companies to attract consumers to achieve organisational goals.
- To study the extent to which marketing strategies have an impact on consumer behaviour.

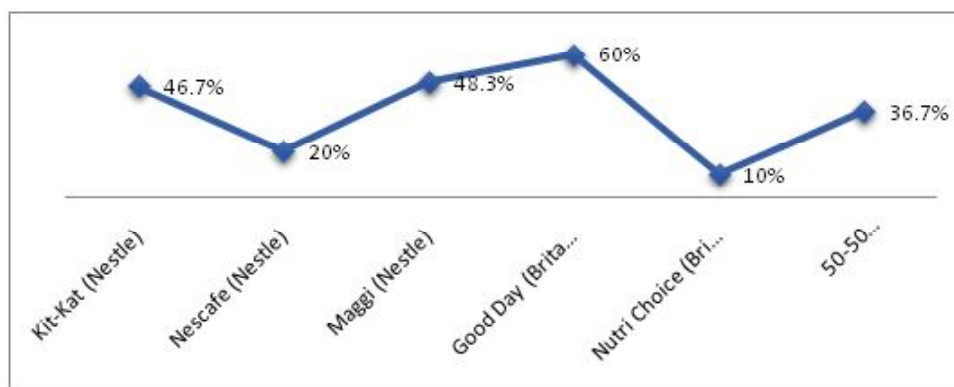
### Limitations of the Study

- It is limited only to the marketing strategies implemented by FMCG companies.
- It may not cover all the strategies taken by FMCG companies to achieve their goals, as strategies taken differ from one company to another.

### Data Analysis And Interpretation

**Table Showing Age of Respondents and Availability of FMCG Products in the Market**

Age of the respondents	Percentage	Availability of FMCG Products In the Market	Percentage
Below 20YRS	12%	Yes	57%
20-30YRS	80%	Sometimes	40%
30 YRS and above.	8%	No	2%
		I don't know	1%

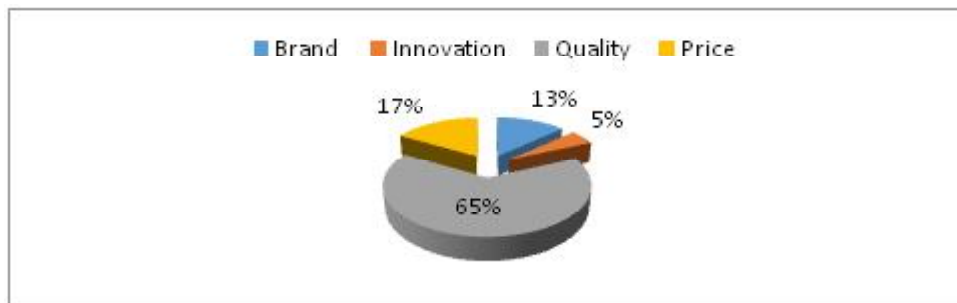


**Graph-1: Buying Behavior of FMCG Products**

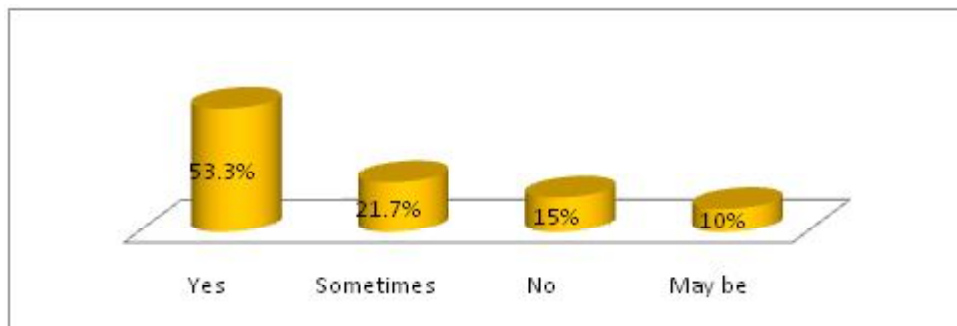
Graph 1 show that, all customers are aware about the above FMCG products. Greater number of consumers, that is 60%, purchases Good Day products of Britannia Industries, and the most selling product of Nestle India is Maggi. Nutri Choice biscuits are the least purchased product, because 80% of the respondents are aged between 20-30 Years and are more concerned about the taste, rather than the health benefits and 83% of the consumers agree that FMCG products are easily available in the market.

Table showing role of innovation in brand preferences and switching brand preferences based on innovation

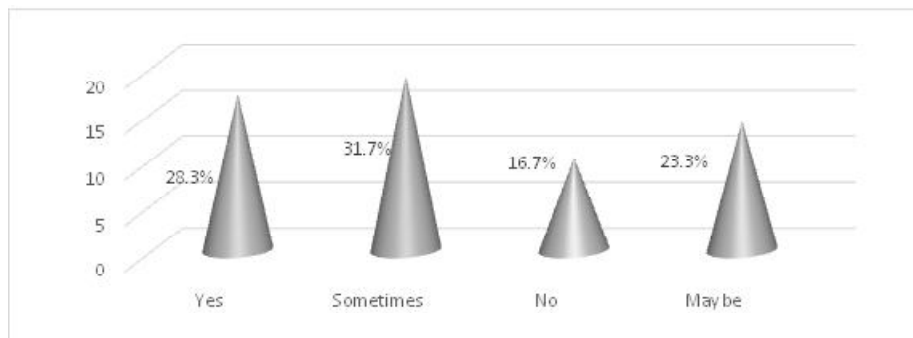
Role of innovation in brand preferences.	Percentage	Switching brand preferences based on the innovation	Percentage
Yes	57%	Yes	20%
Sometimes	40%	Sometimes	46%
No	2%	No	12%
May be	1%	Not Sure	22%

**Graph-2: The Factors Affecting the Purchase of Products**

From the above pie chart it can be analysed that Quality is a major factor which affects the purchase of a particular product, people are not only concerned about innovation, but are also concerned about quality of the product, as 46% of the customers would switch their brand preferences if they are not satisfied with the quality. It is very important for the FMCG companies to focus on the quality of the products they offer and maintain it consistently. 40% of the consumers agree that even if there is no innovation in the product they would still purchase it because of the quality, 57% of consumers agree that innovation plays a vital role in brand preferences as innovation is a basic thing which a consumer expects.

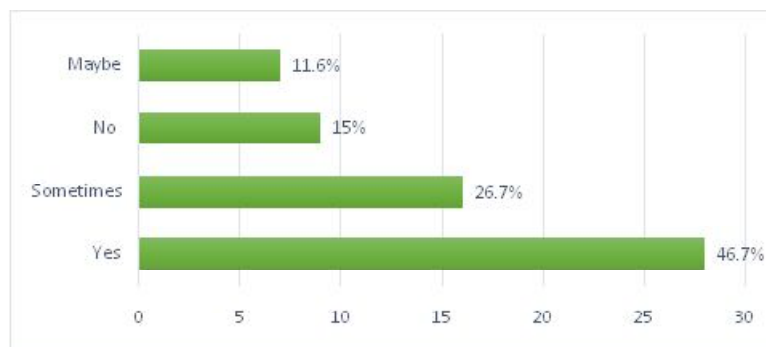
**Graph-3: Role of Promotion if there is an Increase in Price**

From graph 3 it can be analyzed that 53.3% of consumers agree that promotions play a vital role when there is an increase in the price of a particular product, it is because they want to be aware of the reason for the increase in price, it is through promotions that customers will be aware about the product, 21.7% of consumers feel that sometimes promotion plays a vital role if there is an increase in the price, 15% of the consumers feel that promotions does not play a role if there is an increase in the price.



**Graph-4: Showing Consumers Loyalty Towards The Same Product if there is increase in Price**

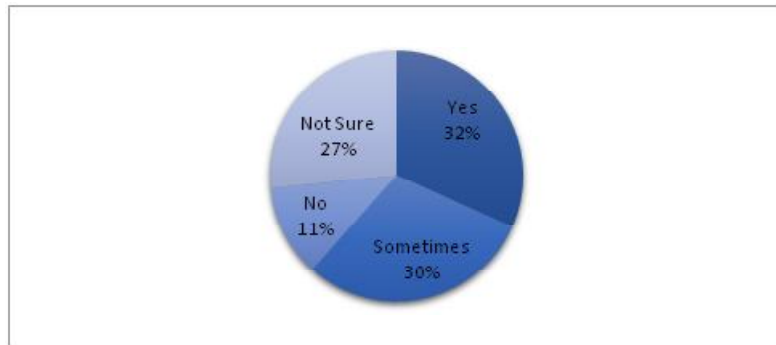
Graph 4 shows that majority of consumers remain loyal towards the same product, even if there is an increase in the price. If the competing brand is providing a similar product for a lesser price, then there are possibilities of the consumer switching brands. 28.3% of consumers responded that they will remain loyal towards same product, even if there is an increase in the price of the product, because they are satisfied with the quality of the product and are not willing to switch to another brands product. 16.7% of the consumers will not remain loyal even if the price is increased.



**Graph-5:- Showing Impact of Schemes Offered By FMCG on Buying Behavior**

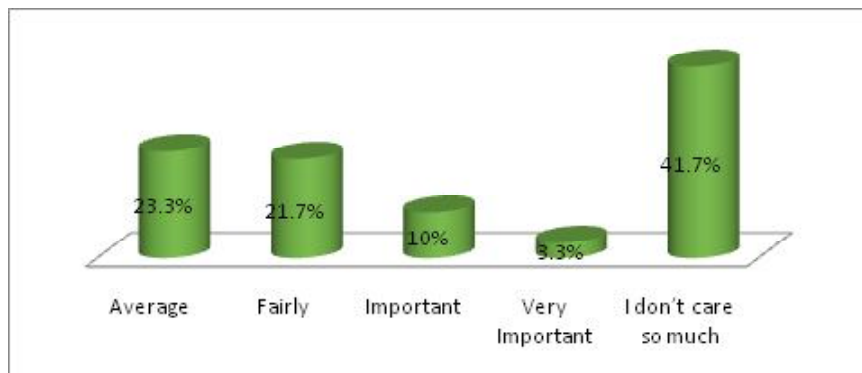
From the above bar diagram it can be analysed that 46.7% of consumers agree that various schemes like discounts, gift vouchers etc., offered by FMCG companies do have an impact on their buying behaviour. When the companies offer various schemes, then the purchasing power of the customers would increase, 26.7% of the consumers feel that the schemes offered by companies does

not impact their buying behaviour much, 15% of the consumers feel that these schemes doesn't have any impact on their buying behaviour.



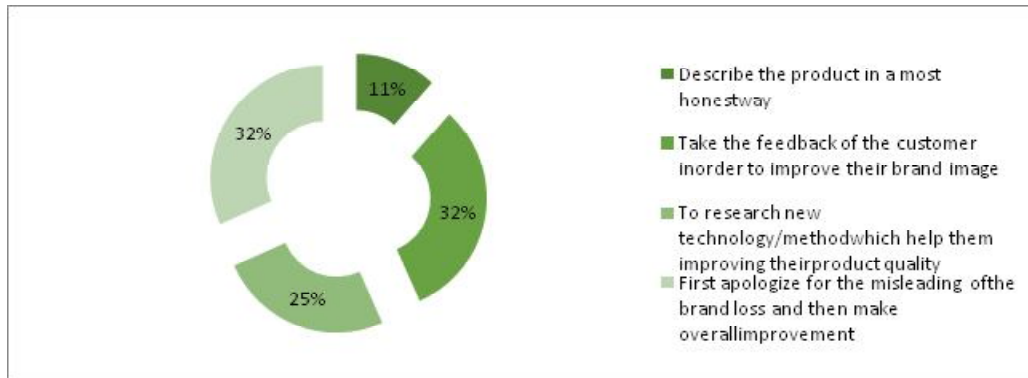
**Graph-6: Showing Fmcg Companies Are Fair In Attracting Their Customers**

Graph 6 shows that 32% of the consumers agree that FMCG companies are fair in attracting their customers, it is because they are satisfied with the products which these companies sell. 30% of the consumers feel that FMCG companies are not always fair in attracting their customers, as they show advertisements just to pursue customers, and are not as honest about their product and its causes. Few customers view that their loyalty is affected by the advertisement they see, 11% of consumers feel that FMCG companies are not fair in attracting their customers.



**Graph-7: Showing Impact of Brand Ambassador Endorsing The Product On Purchase of FMCG Product**

From the above graph it can be analyzed that 41.7% of the consumers are not so influenced by the brand ambassador endorsing the product, and it doesn't affect their purchasing power. Rest of the consumers feel that the brand ambassador endorsing product plays an important role in their purchase of FMCG products.



**Graph-8: Showing Measures Taken By the Lost Brand to Reinstat Thier Previous Image**

Graph 8 shows that 32% of the consumers believe that a brand can reinstate their previous image by taking the suggestions of their customers, and improving their brand image, furthermore seeking a public apology for the misleading content of the brand, and then making overall improvement in the product. 25% of the consumers believe in conducting research or adopting new technology/ methods, which help them improving their product quality, and 11% of the consumers believe that by describing the product in a more honest way, they can reinstate their previously loved image.

## Findings

- All the respondents are aware about the products of Nestle India Ltd and Britannia Industries, adults who are aged between 20-30 years are much more concerned about the taste and not so much on the health aspect. They prefer buying products based on taste.
- Innovation is a fundamental quality which each customer expects from a brand.
- Quality is a major factor which affects the purchase of a product, more than innovation; the customer expects quality in a product. If the customers are not satisfied with the quality provided by FMCG companies, then they might switch to other brands.
- Promotions play a vital role when there is an increase in the price of a certain product, the customers expects to know the reason for the increase in the price. It is only through brand promotions that the customers will know about the reason for the increase in price.
- The various schemes offered by FMCG companies also have a great impact on consumers buying behaviours.
- Few customers feel that FMCG companies are not fair in attracting their customers.
- A very miniature size of consumers give importance to the brand ambassador endorsing a product.

- When the brand loses its value and trust of its consumers, the respondents feel that it is important for the company to take feedback, and also apologise for their misleading contents.

### **Suggestions**

- Innovation plays a vital role in brand preferences made by consumers. The FMCG companies should innovate on their products on a timely basis, adapting to the changing business environments and according to the customers' needs and wants.
- FMCG companies must mainly focus on the overall quality of their products, as it is major factor which affects the purchase of a product.
- FMCG companies must give importance to promotional activities when there is an increase in the price of a particular product. This study proves, that a large number of respondents believe that promotion plays a vital role when there is an increase in the price of the product.
- It is suggested for FMCG companies to offer various schemes in order to attract the customers, as this study shows that the schemes offered by FMCG companies do have an impact on customers' buying behaviour.
- The FMCG companies must be careful when they promote a product through advertisement and other marketing methods etc., as few consumers feel that FMCG companies are not fair in attracting their customers. When they advertise a product, the information provided should involve facts.
- As there are very few customers who give importance to the brand ambassador endorsing a product, the companies must be extremely careful while they chose the person to endorse a product.
- It is suggested for a brand to take feedback from their consumers on a regular basis in order to avoid the pitfalls and also to maintain and constantly improve the quality of the product.

### **Conclusion**

From this study we can understand that, all the customers are aware about Nestle India Ltd and Britannia Industries, and these companies have to mainly concentrate on the quality of their products more than innovation. Innovation also plays a major role, but, the study has clearly proved that customers are more concerned about the quality of a product, and based on the quality of the product that companies offers, consumers make their choice in a brand. When the company provides products with a good quality, and though they may increase the price of the product, the customers will still remain loyal towards the brand and the product. The brand should also be honest when they are promoting a particular product. FMCG companies have to follow-up and work on their strategies according to the customers' needs and preferences.

## References

1. McDonald, M. H., Chernatony, L. D., & Harris, F. (2001). Corporate marketing and service brands ? Moving beyond the fast?moving consumer goods model. *European Journal of Marketing*, 35(3/4), 335-352. Doi:10.1108/03090560110382057
2. Kumar, S. R., & Advani, J. Y. (2005). Factors Affecting Brand Loyalty: A study in an emerging market on fast moving consumer goods. *Journal of Customer Behaviour*, 4(2), 251-275. Doi:10.1362/1475392054797223
3. Strategies Adopted By FMCG Companies for Making Their Brands Outstanding. (2014, March 12). Retrieved December 8, 2017
4. Hem, L. E., Chernatony, L. D., & Iversen, N. M. (2003). Factors Influencing Successful Brand Extensions. *Journal of Marketing Management*, 19(7), 781-806. Doi:10.1362/026725703322498109
5. Shukla, P. (2004). Effect of product usage, satisfaction and involvement on brand switching behaviour. *Asia Pacific Journal of Marketing and Logistics*, 16(4), 82-104. doi:10.1108/13555850410765285



## Nexus Between Intellectual Capital Disclosure and Corporate Governance Quality: Evidence from IT Companies in India

– Yusaf Harun K\*

– Dr. V Kavida\*\*

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### Abstract

*Present days economic situations are changing rapidly. In view of liberalization, globalization and privatization, business organization are more towards following the system which not only cater the national standard but also to cater information needed by the stakeholders to take decisions about the corporates. Prior studies are underlining that traditional information provided by the companies in the annual reports are not sufficient for the stakeholders to reach into right decision. Hence the importance of disclosing additional information on intellectual capital and social, environment and governance practices of companies arisen. Such disclosure can give a further hand for the company on the market price and previous studies are identified that the difference between one company's book value and market value is the effect made by the IC of the company. This paper is given an attempt to identify the extent of intellectual capital disclosure and the nexus between intellectual capital disclosure and corporate governance disclosure of IT companies in India. The study has revealed that the IT companies in India are decently reporting the information on IC for the selected period and the companies are giving more importance for relational capital. Current study identified that there have a significant relationship with IC disclosure and corporate governance disclosure practice among the selected companies.*

*Keywords: : intellectual capital disclosure, corporate governance disclosure, NSE IT index*

### Introduction

Presently the business sector has witnessing robust changes due to the globalization hence investment decision in different financial slots are getting more risky. In order to inculcate such situation the investors need handful information about the companies to know its ability to create wealth. The companies are well aware about the importance of disclosing quality financial information through their financial report. Because quality information provided by the firm will make a positive effect on their market value and based on those information the traders in the market (investors) are creating belief on the company and ultimately make the investment decision. So now a day's companies

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are ensuring to produce a quality annual report to with handful of information which will cater the information needs of various stakeholders including investors. Apparently company's annual reports are disclosing more value creating information which are related with corporate governance and intellectual capital to ensure the handful information.

Knowledge and information are considering as the most influential element in the value creation of the company. In this economy the firm performance not only depend on tangible assets but also on intellectual or intangible assets. A study made by Al-Ali (2003) shows that company's tangible assets can represent 20% of market value and remaining 80% is intangible capital. Hence the market value of a firm highly influenced by the information relating to intellectual capital. So presently the companies are trying disclose more intellectual capital information in their annual report.

Corporate governance is aimed to promoting corporate fairness, transparency and accountability (wolfensohn, 1999). It is merely using different tools like board of directors, auditors to induce the management to work towards the objective of shareholders wealth maximization. Its disclosure practices in India are voluntary and non-voluntary in nature. Transparency is one of the important filler of corporate governance which will ensure that the company is as such in the way in which they exhibit.

Intellectual capital disclosure is purely voluntary in nature but corporate governance disclosure are not so. The information disclosed by the companies on corporate governance may include mandatory and non-mandatory information.

Transparency is considered as the important pillar of corporate governance. If a firm want to be more transparent, it has to disclose more about it affairs. Hence firms which are disclosing more information about their IC seems to be more transparent. So the present study is doing an effort to identify that, there is a relationship with intellectual capital disclosure and corporate governance disclosure practice(quality of the governance)and the extent of IC disclosure by the IT companies in India. In other word this study based on an assumption that those firms which are disclosing more information on corporate governance will have good governance so it causes to disclose more information on intellectual capital to ensure aquality information reporting to their stakeholders. To do this following steps are followed. First, disclosure content of IC has identified from the current literature, which are used to identify the kind and extent of IC disclosure. Second, the above tool applied on the selected companies' annual report to understand IC disclosure type and amount. Finally correlated the IC disclosure value with the corporate governance score of the selected sample companies.

The paper is organized as follows: section second comprises review of literature on the similar studies conducted in India and outside India, section third describe objective and scope of the current study. Section four of presents study describes the research method employed to collect and analyze the disclosures. In section five detail the empirical evidence of the content analysis and the result of correlation among the IC disclosure and CG disclosure, while section six provides the conclusions.

## Review of Literature

Increasing variance between book value and market value of companies are stating that the importance of physical assets are reducing. The literature and proving that IC is the main value creator rather than physical or financial capital. So presently intellectual resources are important strategic asset of the company. So it is better to communicate with the various stakeholders of the company

There are studies in different countries to know about the extent of intellectual capital disclosure in the annual reports of the companies. IC concept are entered in the corporate, but as a concept it is still out of the circle, in practical sense not widely adopted. Literature reveals that the level of disclosure of IC in both developed and developing countries are very low. For example Bontis (1996) stated that IC is still very much an academic discussion. He conducted a study on 10,000 Canadian companies to infer that only a minor percentage of companies (68 out of 10,000) even used the term in the annual reports. Guthrie et al. (2006) identified that IC disclosures are in qualitative form rather than quantitative form and level of IC disclosure is low in Hong Kong and Australia and disclosure level was found to be positively related to company size.

In India few studies have been conducted to examine IC reporting of Indian firms. Pablos (2005) stated that the IC reports in India do not focus on the business model, values, mission and vision and/or knowledge management issues. The reports were found in descriptive style and level of disclosure was very low. Mandal & Gosh (2013), state that IC disclosure of Indian knowledge intensive companies are showing very low and external capital (relational capital) is the most disclosed IC category and IC disclosure find arising trend. Kamath (2008), identified that small extent of IC disclosure of Indian firms. Bhasin (2011) conducted study on 16 Indian IT corporations confirmed that IC disclosure in these IT corporations is almost insignificant and its disclosure had not received any preference from the mentors of these corporations. Some of the studies on IC disclosure are as follows.

Author/ Year	Sample Size	Country	Findings
Guthrie & Petty (2000)	20	Australia	Relational capital is most stated intangible assets category in the reports.
Brennan (2001)	11	Ireland	Relational capital is most stated intangible assets category in the reports.
Bozzolanetal (2003)	30	Italy	Relational capital is most stated intangible assets category in the reports.
Apriletal (2003)	20	South Africa	Relational capital is most stated intangible assets category in the reports.
Goh& Lim (2004)	20	Malaysia	Relational capital is most stated intangible assets category in the reports.
Abeysekera &Guthrie (2005)	30	Sri Lanka	Relational capital is most stated intangible assets category in the reports.
Oliverasetal. (2008)	14	Spain	Relational capital is most stated intangible assets category in the reports
Sujan & Abeysekera (2007)	20	Australia	Relational capital is most stated intangible assets category in the reports
Alietal (2008)	22	Bangladesh	Internal capital(structural capital)is most reported intangible assets category in the repots
Woodrock & Whiting (2009)	70	Australia	Relational capital is most stated intangible assets category in the reports

There is no study find which is checking the relationship between intellectual capital disclosure and corporate governance disclosure practices (Quality of governance) of the company which may give more insight about the corporate reporting and can know about the relationship between transparency and intellectual capital disclosure. So this paper arguing that this is the first study examine the relationship between IC and corporate governance disclosure in the annual reports of the selected IT companies in India.

## Objective of the Study

This study is aimed to understand the relationship between CG disclosure and IC disclosure. This study put forward a hypothesis that those firm who are disclosing more CG information will also disclose more information on IC in their annual reports so as to ensure quality annual report. The objective of the study are shortened as follows.

1. To examine the extent of intellectual capital disclosure of sample companies
2. To check whether there is any relation with intellectual capital disclosure and corporate governance disclosure(Quality of governance) of the companies.

## Significance of the Study

Annual report or financial statement of a company used by the stakeholder to know about the pulse of the company. Hence the companies are emphasizing to produce quality reports. This study is checking whether those companies disclosing more information on corporate governance are also disclosing more information on intellectual capital or not. This will give more insight on the corporate

reporting practice. In other sense this study checking what is the take of a firm on intellectual capital disclosure which showing more transparency by disclosing more information on the corporate governance. In the present scenario the importance of intellectual capital reporting are increasing because it will help the companies increase their value and the stakeholders can assess the wealth creation capacity of the firm and it will help the stakeholders reach into best decision. Hence, this paper examined the extent of intellectual capital information disclosed in the annual reports of companies included in the NSE IT index and relation of transparency with Intellectual capital disclosure.

## Research Methodology

This paper is checking whether those companies disclosing more information on corporate governance are also disclosing more information on intellectual capital which are voluntary in nature and the extent of intellectual capital disclosure in their annual reports. Companies included in the NSE IT index were selected for this study because recent studies are deficient apart from that studies are limited. This index consist of 10 well sounded companies and it has selected because it is knowledge based industry as well as studies are limited in number. The annual report of the selected companies has taken from their respective website for 3 years ranging 2014-2016.

In this study used two variable namely corporate governance disclosure value and intellectual capital disclosure value. Corporate governance score has taken from Bloomberg database that represent as proxy for governance quality of the firm (Hayat & Hassan, 2017) and IC Disclosure value calculated by using content analysis. Most of the preceding studies are used content analysis to identify IC disclosure value. Here used 54 intellectual capital index used by (Zhang, 2012), which adopts Sveiby's (1997) three-dimension intellectual capital classification - human, relational and structural capital, and selects items suggested in various definitions and prior research are grouped in to human, relational and structural capital. The final disclosure index consists of 54 items. There after checked the presence of those item in the annual reports of particular IT companies.

Here content analysis comprises reading of each annual report and marking information related to each item in the coding sheet which are classified as human, relational and structural capital. For each company, if the item of intellectual capital present will put 1, otherwise 0. The frequency of disclosure can be calculated by counting the number of companies disclosing the specific items. In human capital consist of 16 items, in relational capital it is 19 items and in structural capital it consist 18 items. The following table listed the various items of intellectual capital included in each category.

To understand the relationship between intellectual capital disclosure and corporate governance disclosure, before mentioned variable author has calculated from the result of content analysis by taking its mean value and the later one has directly taken from Bloomberg database. One company among the sample list has removed because of lack of data, by using rest of companies conducted a correlation to check the presence of significant relationship between those two variable.

In table :2 showing the framework which are used to conduct the content analysis on selected companies.

**Table2- intellectual capital framework**

Human capital	Relational capital	Structural capital
1. Photos and ages of directors	Customer relations	37 New services
2. Backgrounds of directors	18 Identification of customer groups	38 Lists of intellectual property (IP)
3. Comments on directors	19 Customer relation maintenance	39 Features of IP
4. Members of top management	20 Acquisition of new customers	40 Internal generated IP
5. Backgrounds of top management	21 Customer feedback	41 Information technology (IT) system
6. Comments on top management	22 Supplier relations	42 Breakdown of IT costs
7. Employee statistics	23 Leading suppliers	43 Online management and trading
8. Changes in employee structure	24 Comments on suppliers	44 Investment in IT
9. Comments on employees	25 Investors relations	45 Corporate philosophy
10. Training policy	26 Partnerships	46 Information and knowledge sharing
11. Training activities	27 Comments on partnerships	47 Flexibilities and organization learning
12. Recruitment	28 Favorite contracts	48 General discussion of R&D activities
13. Health and safety policies	29 Comments on favorite contracts	49 R&D investment
14. Employee motivations	30 Other stakeholders	50 R&D centers and research partnerships
15. Employee communication	31 Social policies	51 R&D activities
16. Other disclosure	32 Environmental policies	52 Future prospects of R&D
	33 Market reputation and presence	53 R&D output
	34 Brand and specification	54 Feedback
	35 Awards and achievements	
	36 Advertising and promotion	

*Source : (Zhang, 2012)*

## Result and Discussion

The three years period data showing a irregularity in intellectual capital disclosure of Indian IT companies. There have clear evidence for disclosure are came down specifically in the year 2015-16 period. Further analysis is needed to understand it causes.(Mondal & Ghosh, 2013) in line with this study, most disclosing categories by Indian IT company is relational capital(external capital) and there is no much difference in the amount reporting of human and structural capital.

**Table: 2; Overall intellectual capital disclosure results.**

Categories	Years			
	2014	2015	2016	Total
Human capital	102	102	92	296
Relational capital	108	113	111	332
Structural capital	99	96	95	290

*Source: Authors completion*

Employee motivation is the most reported item and employee statistics is the second most stated item in the human capital category. Least reported item in this category are comments on top management and changes in employee structure. Market reputation and presence, social policies and environmental policies are the most disclosed item in relational capital. None of the company reported the details about their leading supplier. Other than that comments on suppliers and acquisition of new customers are the least item reported in the relational capital category. General discussion of R&D activities and new services are the most disclosed items in structural capital category. Online management training and break down of IT cost are the least reported IC element of IT companies in India for the past three years. The detailed information on item wise IC disclosure are given in the Table 3.

**Table: 3: detailed- item wise IC disclosure**

Categories And Elements	2014	2015	2016	Total
<b>Human capital</b>	<b>102</b>	<b>102</b>	<b>92</b>	<b>296</b>
1 Photos and ages of directors	7	9	8	24
2 Backgrounds of directors	7	7	6	20
3 Comments on directors	6	5	2	13
4 Members of top management	9	9	7	25
5 Backgrounds of top management	6	6	5	17
6 Comments on top management	4	3	3	10
7 Employee statistics	9	9	7	25
8 Changes in employee structure	3	3	5	11
9 Comments on employees	7	5	5	17
10 Training policy	5	5	7	17
11 Training activities	7	6	6	19
12 Recruitment	7	6	5	18
13 Health and safety policies	6	8	8	22
14 Employee motivations	9	9	8	26
15 Employee communication	5	7	6	18
16 Other disclosure	5	5	4	14
<b>Relational capital</b>	<b>108</b>	<b>113</b>	<b>111</b>	<b>332</b>

Categories And Elements	2014	2015	2016	Total
<b><i>Human capital</i></b>	<b><i>102</i></b>	<b><i>102</i></b>	<b><i>92</i></b>	<b><i>296</i></b>
17 Customer relations	7	5	4	16
18 Identification of customer groups	6	7	6	19
19 Customer relation maintenance	5	7	8	20
20 Acquisition of new customers	2	4	2	8
21 Customer feedback	7	5	6	18
22 Supplier relations	3	4	3	10
23 Leading suppliers	0	0	0	0
24 Comments on suppliers	2	1	1	4
25 Investors relations	9	8	8	25
26 Partnerships	8	7	7	22
27 Comments on partnerships	5	6	7	18
28 Favorite contracts	3	5	5	13
29 Comments on favorite contracts	2	4	5	11
30 Other stakeholders	8	7	7	22
31 Social policies	7	9	10	26
32 Environmental policies	8	10	8	26
33 Market reputation and presence	10	10	10	30
34 Brand and specification	5	3	4	12
35 Awards and achievements	8	9	8	25
36 Advertising and promotion	3	2	2	7
<b><i>Structural capital</i></b>	<b><i>99</i></b>	<b><i>96</i></b>	<b><i>95</i></b>	<b><i>290</i></b>
37 New services	8	7	10	25
38 Lists of intellectual property (IP)	6	5	4	15
39 Features of IP	7	5	5	17
40 Internal generated IP	7	5	5	17
41 Information technology (IT) system	4	6	5	15
42 Breakdown of IT costs	2	3	2	7
43 Online management and trading	0	2	2	4
44 Investment in IT	2	3	6	11
45 Corporate philosophy	8	7	8	23
46 Information and knowledge sharing	4	1	3	8
47 Flexibilities and organization learning	6	6	7	19
48 General discussion of R&D activities	9	9	8	26



Categories And Elements	2014	2015	2016	Total
<b><i>Human capital</i></b>	<b>102</b>	<b>102</b>	<b>92</b>	<b>296</b>
49 R&D investment	5	8	9	22
50 R&D centers and research partnerships	3	6	5	14
51 R&D activities	8	8	6	22
52 Future prospects of R&D	6	4	3	13
53 R&D output	9	8	7	24
54 Feedback	5	3	0	8

Past studies are reveal that the extent of IC disclosure are low in india. On contrary this study is showing an evidence of moderate level of disclosure and this parallel with the findings of (Wang, Sharma, & Davey, 2016) which examined the IC disclosure of technologically intensive companies in indian and china . some of the individual companies who are disclosing good amount of information on intellectual capital for the selected period. The companies like Infosys ltd, mindTree ltd, Tata consultancy services, wipro ltd are the companies having high average value of IC disclosure. in that Infosys Ltd standing on the top with 0.78 average intellectual capital disclosure value. But as a contrary one the Tata group subsidiary company Tata Elxsi Ltd and oracle financial service Ltd are standing below of the table with low amount of average IC disclosure value as 0.33 and 0.28 are respectively. The other companies IC disclosure value for the for the three year period of time are tabled below

TABLE 4: intellectual capital disclosure value- Company wise

NAME	YEAR	ICD VALUE
HCL Technologies Ltd.	2014	0.52
	2015	0.56
	2016	0.46
Infosys Ltd.	2014	0.74
	2015	0.81
	2016	0.80
Justdial Ltd.	2014	0.43
	2015	0.48
	2016	0.41
KPIT Technologies Ltd.	2014	0.74
	2015	0.65
	2016	0.65
MindTree Ltd.	2014	0.78
	2015	0.80
	2016	0.70
Oracle Financial Services Software Ltd.	2014	0.26
	2015	0.28
	2016	0.31
Tata Consultancy Services Ltd.	2014	0.76
	2015	0.65
	2016	0.76
Tata Elxsi Ltd.	2014	0.37
	2015	0.37
	2016	0.24
Tech Mahindra Ltd.	2014	0.43
	2015	0.43
	2016	0.41
Wipro Ltd.	2014	0.70
	2015	0.74
	2016	0.78

While comparing IC disclosure value and corporate governance disclosure score (Governance quality) of the IT companies for the past three years. It showing that there have a significant positive correlation between this two disclosures, with a value of 0.66. It means that those firms disclosing more information on corporate governance or firms which is more governed will give emphasize to include more information related with IC in their annual reports.

Content analysis result justifying that Indian IT companies are making decent reporting of intellectual capital for the selected three years of period. Relational capital is the category which are mostly reported in the annual report and human capital coming the next. Least reported category is structure capital. Market reputation and presence having the highest score. Hence it is clear that Indian IT company managers are using annual report as tool for image building. "list suppliers" is the least disclosed item and other suppliers related items are also less disclosed in the annual report of sample companies. It reveals that Indian IT companies are need to give more importance to disclose information related with their supply relationships.

In the second part correlation result is explaining that there have a relationship between intellectual capital disclosure and corporate governance disclosure (governance quality), which means that those companies who are disclosing more information on corporate governance as well as having more governance is reporting more information on intellectual capital. But this study arguing it with limited.

## **Conclusion**

Traditional financial reporting is being criticizing because of irrelevant and outdated information. Now the stakeholders are arguing to disclose more relevant information in the annual reports of the company. Apart from that, in a situation where there knowledge economy are getting more importance hence reporting traditional information are getting less value relevance. Even though the academic discussions and demand of IC information are rising but still it lack a common framework to disclose it in the annual reports of the corporates. The current study is attempted to know the intensity of intellectual capital reporting in IT companies in India.

Current result of content analysis on 10 companies which are included in the NSE IT index. From the result of content analysis it is clear that Indian companies are reporting IC information in narrative style which confirm the earlier studies and giving more important to disclose information related to relational capital and also giving some sort of evidence for to prove that there have a relationship with intellectual capital disclosure and corporate governance disclosure which will give more insight to the corporate reporting practices. This study showing an evidence for firms which inherit with good governance will disclosure more of their IC in order to increase the transparency.

It is clear that there have irregularity in the intellectual capital reporting practices of IT companies in India. So the policy makers and standard setters ensure to establish a clear framework to disclose the information related with intellectual capital. It not only ensure quality information but also help the stakeholders to assessment of value of firm.

This study has limitation such as the number of sample size are selected are very less so can't generalize the result and not discussed the factors affecting disclosure practices of the company.

## References

1. Bhasin, M. L., & Bamahros, H. M. (2016). Voluntary Reporting of Corporate Governance in the Annual Reports: Empirical Study of an Asian Country. *Wulfenia Journal*, 23(5), 195-233.
2. Kamath, B. (2008). Intellectual capital disclosure in India: content analysis of "TeCK" firms. *Journal of Human Resource Costing & Accounting*, 12(3), 213-224.
3. Joshi, M., Ubha, D. S., & Sidhu, J. (2010). Intellectual Capital Disclosures in India: A Case Study of Information Technology Sector. *Global Business Review*, 12(1), 37-49.
4. Mehrotra, V., Malhotra, A. K., & Chauhan, A. (2016). TRENDS OF INTELLECTUAL CAPITAL IN.
5. Bhasin, M. L. (n.d.). Voluntary Reporting of Intellectual Capital?: Scenario of a Developing Economy. *British Journal of Research*.
6. Mondal, A., & Ghosh, S. K. (2013). Intellectual Capital Reporting Trends in India: An Empirical Study on Selected Companies. *International Journal of Financial Management*, 3(1), 9-18.
7. Singh, S., & Kansal, M. (2011). Voluntary disclosures of intellectual capital. *Journal of Intellectual Capital*, 12(2), 301-318.
8. Bhasin, M., Utara, U., Reporting, I., Disclosures, E. V. A., View, C. P., Journal, S., & Bhasin, M. (2017). Corporate Governance Disclosure Practices In India?: An Empirical Study Corporate Governance Disclosure Practices In India?: An Empirical Study, (June).
9. Kumar, M. (2014). INTELLECTUAL CAPITAL DISCLOSURE PRACTICES OF SELECTED PHARMACEUTICAL COMPANIES IN INDIA?: AN, 3(4), 34-41.
10. Birari, A. (2015). Intellectual Capital Information Disclosure of Top Indian Corporations, 3(4), 49-53.
11. Bhasin, M. L. (2011). Disclosure of Intellectual Capital in Annual Reports?: An Empirical Study of the Indian IT Corporations, 2011(September), 455-467.
12. Bontis, N. (2003). Intellectual capital disclosures in Canadian corporations, *Journal of Human Resource Costing and Accounting*, 7, 9-20.
13. Sveiby, K.E. (1997). *The New Organizational Wealth: Managing and Measuring Knowledge Based Assets*, Berrett Koehler Publisher, San Francisco, CA.
14. Zhang, M. (2012). Board structure , ownership concentration and intellectual capital.
15. Woodrock, J.; Whiting, R.H. (2009). Intellectual capital disclosures by Australian companies, presented at the AFAANZ-2009 Conference.
16. Ali, M.; Khan, H.; Fatima, Z.K. (2008), Intellectual Capital Reporting Practices: A Study on Selected Companies in Bangladesh, *Journal of Business Studies*, 29, 81-104.
17. Sujana, A and Abeysekera, I, (2007). Intellectual capital reporting practices of the top Australian firms, *Australian Accounting Review*, 17, 71-83.
18. Abeysekera, I., & Guthrie, J., (2005). An empirical investigation of annual reporting trends of intellectual capital in Sri Lanka, *Critical Perspectives on Accounting*, 16, 151-163.
19. Oliveras, E., Gowthorpe, C., Kasperskaya, Y. and Perramon, J. (2008). 'Reporting intellectual capital in Spain, *Corporate Communications*, 13, 168-181.

20. Goh, P.C. and Lim, K.P. (2004). Disclosing intellectual capital in company annual reports: evidence from Malaysia, *Journal of Intellectual Capital*, 5, 500-10.
21. April, K. A., Bosma, P., & Deglon, D. A., (2003). IC measurement and reporting: establishing a practice in SA mining, *Journal of Intellectual Capital*, 4, 165-180.
22. Bozzolan, S., Favotto, F., & Ricceri, F., (2003). Italian annual intellectual capital disclosure: An empirical analysis, *Journal of Intellectual Capital*, 4, 543-558.
23. Brennan, N., (2001). Reporting intellectual capital in annual reports: evidence from Ireland. *Accounting, Auditing & Accountability Journal*, 14, 423-436.
24. Guthrie, J., & Petty, R., (2000). Intellectual capital: Australian annual reporting practices. *Journal of Intellectual Capital*, 1, 241-251.
25. Wang, Q., Sharma, U., & Davey, H. (2016). Intellectual capital disclosure by Chinese and Indian information technology companies: A comparative analysis. *Journal of Intellectual Capital*, 17(3), 507-529.
26. Kavida, V., & Sivakoumar, N. (2008). Corporate governance in knowledge economy-the relevance of intellectual Capital.
27. Hayat, R., & Hassan, M. K. (2017). Does an Islamic label indicate good corporate governance?? *Journal of Corporate Finance*, 43, 159-174. <https://doi.org/10.1016/j.jcorpfin.2016.12.012>

## **Predicting Stress through Organizational Role Stress for Achieving Organization Excellence**

**– Dr.S.Sakthivel Rani\***

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### **Introduction**

Organizations face many challenges due to debilitate effects on changing state of its competition and improvement in modern and technical facilities. Impact on employees creates stress and organisational role stress is due to more expectations on its employees where the roles are being not allotted properly, higher role expectations, inadequate resources, role erosions and role stagnation. Organisational Role stress is a global phenomenon affecting all occupations and tension due to the role enacted by a person in a system. Individual exposed to Organisational Role Stress for longer period of time are more likely to burn out, results in overall performance decrease (Ratna et al, 2013). There are some findings which shows that high relationship exists between work task and employee satisfaction with a mediator variable namely work-life balance (Sakthivel Rani et al, 2011).

### **Review of Literature**

Stress affects both physical and psychological ill health of the employees which affects the overall performance of the individuals. Work life balance, overload, control, job aspects and pay are identified as Low individual commitment stressor (Viljoen,J.P and Rothmann, 2009).

Colleagues and management, clarity of role, and organizational change are added to the above stressors and suggested training is essential to enable the organisations and individuals to manage the stress at their work place (Nagesh and Narasimha, 2008). Further more work stress contributes to the corporate health cost also (Katherine Pollak. Eisen & George J. Allen, 2009).

By studying the relationship in the middle of the variables like apparent stress, stress awareness, satisfaction, self evaluation, perceived health and well being Gbadamosi, Gbolahan (2008) identified that a strong association stay alive between apparent stress, self-evaluation and Well being and satisfaction. The level of stress varies among the junior and senior employees. The junior staff reported low level stress due to role ambiguity, role conflict and work problems and the seniors reported a high level stress; but the effects were sometimes buffered by social support from colleagues (Rutter and Lovegrove, 2009). Christopoulos, M.and Hicks (2008) revealed there adaptive perfectionism correlate

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with occupational stress and depression; however, unexpectedly adaptive perfectionism did not correlate significantly with occupational stress and depression. The amount of stress increases in association with the working hours also. Buddeberg et al (2008) had studied that stress is being experienced in long term work and hence attention should be paid to reduce the stress and to avoid the risk of developing burnout in the long run. Results show that intervention should be intended to reduce tension by increasing the social support and by taking into the account of individual self efficiency (Stetz, 2005). Comprehensive approach to stress prevention/reduction in practice and examining the means can help to develop initiatives which can address both the sources and the symptoms of job stress (Noblet, 2006). Even though the organisations take adequate steps to reduce the stress but still then moderate stress occurs among them (Prabaharan & Panchanatham 2016). A significant feature of the results revealed that respondents react to stress-induced conditions based on personal experiences and issues within organisational environment (Junior Mabiza, 2017). Many sources of stress like new competitors, long lasting recessionary period and unanticipated crisis are inevitable to change. Organisations have little role to have control, but generally they can amend the way in which they distinguish the situation.

### **Aim and objectives of the Research**

The research objectives are to understand the Inter role Distance & Role Stagnation among employees in auto motors in Madurai. The study intends to explore and to study the Role Expectation Conflict & Role Erosion, to find out the Role Overload & Role Isolation and to identify the Personal Inadequate, Self Role Distance, Role Ambiguity & Role Inadequacy. Organisation Role Stress scale developed and standardised by Udai Pareek was administered to collect the data. The analysis was done by adhering the guidelines and instructions provided in the manuals for respective item. Scale was used to assess organisational role stress in terms of its ten different sub scales and each variable contains 5 items.

### **Concept of Organisational Role Stress**

1. Inter-Role Distance Stress express the conflict experienced between organizational and non-organizational roles.
2. Role Stagnation stress is the experience of being stuck in the same role.
3. Role Expectation stress is the conflicting demands arise from colleagues, i.e., superiors, subordinates, and peers in the organization.
4. Role Erosion Stress arises when a role has become less important than it used to be, or when somebody else gets the credit for doing what needs to be done in one's own role.
5. Role Overload stress is the feeling too much or doing things is required.

6. Role isolation stress is characterized by the feeling of an individual and having strong linkage with others role.
7. Personal inadequacy stress represents the absence of adequate skills to meet the demands of self.
8. Self Role Distance stress assess the gap experienced between one's concept of self and with others role.
9. Role Ambiguity stress depicts the lack of clarity about the demands of the role.
10. Resource inadequacy stress arises when inadequacy of material resources allocated to perform the job.

### **Data collection**

The researcher had prepared a questionnaire to collect the data from the prospective 120 respondents who are working in Auto Motors in Madurai. The variables taken into study are the demographic variables, Inter Role Distance, Role Stagnation, Role expectation conflict, Role Erosion, Role Overload, Role Isolation, Personal Inadequate, Self Role Distance, Role Ambiguity and Role Inadequacy.



Table: 1

S.No	Demographic	Criteria	Percent
1.	Age	<=20	8
		21-30	58
		31-40	31
		41-50	3
2.	Gender	Male	81
		Female	19
3.	Marital Status	Married	71
		Un Married	29
4.	Work Experience	<5	31
		5-10	23
		10-15	42
		15-20	3
		>20	2
5.	Education	+2	3
		Diploma	32
		Under Graduate	65
6.	Monthly Salary	<10000	17
		11 000-20000	51
		21 000-30000	29
		31 000-40000	3

Table: 1 infers that younger group are employed for carrying out the services in which male constitutes more population. Many are unmarried and interesting to find out that the respondents are 65 percentages are having 5-15 years of experience. Most of the respondents are having under graduate education which will enhance them to upgrade their skills easily.

### Weighted Score of the Variables

S.No	Variables	Weighted Score	Rank
1.	Inter Role Distance	2.20	9
2.	Role Stagnation	2.61	2
3.	Role expectation conflict	2.03	10
4.	Role Erosion	2.48	7
5.	Role Overload	2.64	1
6.	Role Isolation	2.60	3
7.	Personal Inadequate	2.55	5
8.	Self Role Distance	2.59	4
9.	Role Ambiguity	2.51	6
10.	Role Inadequacy	2.40	8

Among the variables for organisational role stress it is evident role overload is creating stress among the employees. Due to monotony of work, attention is needed to make the work interesting. Training will enhance them to avoid this kind of perception related to the work. Hence the organisation has to frame the strategies to make the people more interesting in their jobs.

## Regression

S.No	R	RSquare	Adjusted R Square	Coefficient		
				B	Std. Error	Beta
1	.624 <sup>a</sup>	.389	.384	1.909.331	.125.038	.624
2	.614 <sup>a</sup>	.377	.372	1.869.383	.133.045	.6114
3	.705 <sup>a</sup>	.496	.492	1.758.385	.115.036	.705
4	.680 <sup>a</sup>	.463	.458	1.699.443	.128.044	.680
5	.431 <sup>a</sup>	.185	.178	2.150.289	.161.056	.431
6	.655 <sup>a</sup>	.429	.424	1.780.415	.129.044	.655
7	.622 <sup>a</sup>	.387	.382	1.805.404	.137.047	.622
8	.678 <sup>a</sup>	.459	.455	1.843.376	.1150.38	.678
9	.557 <sup>a</sup>	.311	.305	1.986.332	.138.046	.557
10	.461 <sup>a</sup>	.212	.205	2.051.296	.166.053	.461

The strength of relationship between the dependent variable (overall stress) and individual behavioural dimensions as independent variables. The determinacy of role of stress, method was used. The ten predictors are Inter Role Distance(X1), Role Stagnation(X2), Role expectation conflict(X3), Role Erosion(X4), Role Overload(X5), Role Isolation(X6), Personal Inadequate(X7), Self Role Distance(X8), Role Ambiguity(X9), Role Inadequacy(X10), and the dependent variable of overall stress (Y). The Estimate model is as,  $Y(ROS) = 0.331 (X1) + 0.383 (X2) + 0.385 (X3) + 0.443 (X4) + 0.289 (X5) + 0.415 (X6) + 0.404 (X7) + 0.376 (X8) + 0.332 (X9) + 0.296 (X10)$ . The R-squared of .389 implies that the ten variables explain about 3.89% of the variance in the Role of Stress.

## Discussion and Findings

This study made an attempt to study the organisational role stress and it had helped in identifying the various stressors. Some stressors had a correlation with the variables selected like age, years of experience, marital status and qualification (Sneha, 2014). Increase in age may result in stress as people are continuously exposed to fast paced changes that require continuous upgrading of knowledge on the part of their work. This plays a significant part in contributing to stressful situation (Sunetra Bhattacharya and Jayanti Basu, 2007). Rise in salary will enhance the employees to have job satisfaction results in low stress. This may due to their educational qualification which will have impact over their salary (Ragles & Sakthivel Rani, 2015). Most of the time employees always do monotonous work which results in fatigue of the employees. In such cases the organisations can provide more autonomy at work which acts as a motivation (zlem Gözükarar & Nurdan Çolakoğlu, 2016). If the employees are

working in more stressful environment, the organisation can experience absenteeism and it also affects their productivity level. Further, the employees are able to embark their stress in a optimistic way to have satisfaction with the job as contrast to the way others consider stress as a obstruction (LeRouge et al.,2006). The conclusion of this study put forth that employees make out their goals to get contentment and opinions face less organizational stress in their work areas and will be more satisfied with their profession.

## Conclusion

Organisations and employees should get ready for facing the challenges from the internal and external environment. Changes are inevitable and to adopt the changes the organisations should equip their employees in order to sustain the competitive world. Working in the uncertain world will create stress which may affect the productivity of the organisations. Many times one cannot assess the changes in advance and the stress periods may be sudden. The situation may not be under the control. Hence the organisations should identify some strategies to make their employees happy to achieve the organisation goal.

## References

1. Buddeberg-Fischer, Klaghofer, Stamm M, Siegrist, Buddeberg (2008), Work stress and reduced health in young physicians: prospective evidence from Swiss residents, *Int Arch Occup Environ Health*, Vol. 82(1)pp.31-38.
2. Christopoulos, M. & Hicks, R.E. (2008). Perfectionism, occupational stress and depression among Australian university students. In S. Boag (Ed.), *Personality down under: Perspectives from Australia*, pp. 41-52.
3. Gbadamosi, Gbolahan (2008) *Stress at Work: Any Potential Redirection From an African Sample*, International Academy of African Business and Development (IAABD), United States. ISBN 0-9765288-3-5.
4. zlem Gözükarar & Nurdan Çolako?lu (2016), The Mediating Effect of Work Family Conflict on the Relationship between Job Autonomy and Job Satisfaction, *Procedia - Social and Behavioral Sciences*, pp. 253 - 266.
5. Junior Mabiza, Joyce Conduah & Charles Mbohwa, (2017), Occupational Role Stress on Employee Performance and the Resulting Impact: A South African Bank Perspective. *Proceedings of the International Multi Conference of Engineers and Computer Scientists*.
6. Katherine Pollak. Eisen. George J. Allen. Mary Bollash and Linda S. Pescatello (2008), "Stress Management in the workplace: A comparison of a computer-based and an in-person stress management intervention", Vol.24, Issue 2, pp. 486-496.
7. Lerouge, C., Nelson A., & Blanton, J. (2006), The Impact of Role Stress fit and Self- Esteem on the job attitudes of It professionals, *Information & Management*, 43, pp. 928-936.
8. M.C. Stetz, C.A. Castro, P.D. Bliese (2007), The impact of deactivation uncertainty, workload, and organizational constraints on reservists' psychological well-being and turnover intentions *Military Medicine*, 172 (6), pp. 576-580

9. Nagesh P, Murthy, Narasimha M S (2008), Stress Management at IT Call Centers: A Case Study ,The ICFAI University Press, 2008.
10. Noblet, Lamontagne (2006), The role of workplace health promotion in addressing job stress, Health Promot Int. Vol(4):346-53.
11. Prabaharan, T. & Panchanatham, N., (2016). Occupational Role Stress among Public Sector Banks Employees in Sri Lanka. Wayamba Journal of Management. 4(1), pp.22-25.
12. Ragles Devi & Sakthivel Rani (2015), The Impact of Organisational Role stress and Work Family Conflict: Diagnosis Sources of Difficulty at Work Place and Job Satisfaction among Women in IT Sector, Chennai, Tamil Nadu, Procedia - Social and Behavioral Sciences, pp.214-220.
13. Ratna, R., Chawla, S. and Mittal, R. (2013). Organizational role stress: level of stress, major stressor and its differences. International Journal of Indian Culture and Business Management. Vol. 7 (3), pp. 359-383.
14. Rutter, D.R., Lovegrove (2008), M.J. Occupational stress and its predictors in radiographers. Radiography, Vol 14, pp.138-143.
15. Sakthi Vel Rani, Kamalanabban, & Selvarani Mariappan (2011), Work/Life Balance Reflections on Employee Satisfaction, Serbian Journal of Management 6 (1), pp. 85-96
16. Sneha, Kairanna, Rajani Suresh, (2014), Study on Organisational Role Stress among Women Working in Private Colleges in Mangalore using ORS scale, OSR Journal Of Humanities And Social Science, Volume 19, Issue 10, PP25-28.
17. Sunetra Bhattacharya and Jayanti Basu (2007), Distress, Wellness and Organizational Role Stress among IT Professionals: Role of Life Events and Coping Resources, Journal of the Indian Academy of Applied Psychology, Vol. 33, No.2, 169-178.
18. Viljoen, J.P and Rothmann (2009), Occupational stress, ill health and organisational commitment of employees at a university of technology, SA Journal of Industrial Psychology, Vol 35, No 1 (2009), pp.711 - 730.

## **A Study on Policy-Holders Opinion about Investing in Bharti Axa Life Insurance**

– Dr. G. Madan Mohan\*

– G. Hariharan\*\*

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### **Abstract**

*This descriptive research has made an attempt to assess the opinion of policy-holders of Bharti Axa about investing in life insurance policies of the company, by administering a well structured questionnaire to 100 policy-holders selected using Simple Random sampling in the city of Chennai. The study has revealed that the policy-holders are pretty satisfied with their investment in the company's life insurance policies due to good returns provided by the company, minimum risk associated in dealing with the company, variety of attractive schemes and multiple benefits offered by the company. Improved promotional measures coupled with effective marketing force and better surrender options will play a better role in enhancing the reputation of the company among investing Indians.*

**Keywords:** *Bharti Axa, Policy-holders, Life Insurance policies, Premium*

### **Introduction**

Insurance is a form of risk management primarily used to hedge against risk which might be caused by a contingent and uncertain event. The firm providing insurance service is termed as an insurer, insurance company or insurance carrier while the customers served by these firms are termed as insured or policy-holders. Insurance is a contract wherein the insurer promises to indemnify the loss sustained by insured due to a specific event upon payment of regular premium by the insured. The loss might be financial in nature or reducible to financial terms. Further, the loss must involve something in which insured has insurable interest which might be due to ownership, possession or pre-existing relationship.

### **Life Insurance**

Human life is priceless and invaluable. Value of life cannot be measured in monetary terms. Hence, no monetary compensation can be considered as adequate for loss of human life. However, life insurance tries to offer financial protection to dependents of a person upon his death. In addition, life insurance provides a platform for boosting savings among public.

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## Literature Review

Manuel (2013) surveyed 50 life insurance policy-holders in Kottayam City to understand their perception about investing in insurance and found that return on investment, company reputation, premium payment, service quality and product quality influenced their decision to invest in life insurance policies.

Sahu et al.(2009) conducted a similar study on 150 life insurance policy-holders and found that six factors of consumer loyalty, service quality, ease of procedures, satisfaction level, company image and company-client relationship affected the buying behaviour of life insurance policy-holders. The study also found that these six factors exerted almost identical influence on decision to invest in life insurance for both the male and female policy-holders.

Taneja (2014) has traced the growth of insurance business in India and has pointed out that insurance business has doubled during 2012 when compared with 2002 due to the government's concrete measures to develop the industry and the role of IRDA to regulate the industry and protect the interests of policy-holders.

Sandhu and Bala (2011) surveyed 337 customers spread over the three Punjabi cities of Jalandhar, Ludhiana and Amritsar and came out with seven factors influencing the quality of services offered by LIC namely, proficiency, media and presentations, physical and ethical excellence, service delivery process and purpose, security and credibility and functionality. The study also revealed that performance of agents exerted significant influence on customer satisfaction.

Alinvi and Babri (2007) assessed the means by which insurance companies can survive in the insurance market, characterised by prevalence of massive competition and immensely fluctuating customer preference. The survey covered young customers who expressed their apprehension of being fooled and tricked by telemarketers representing insurance companies. These young customers have limited awareness about insurance products and consider price as the most important factor determining choice of insurance product. These youngsters rely on personal contacts and internet to gather information about insurance products. Time seems to play a decisive role on customer preference over insurance products as changing circumstances of life cast a bearing on changing preferences.

Yadav and Tiwari (2012) studied 150 policy-holders in Jabalpur district of Madhya Pradesh and found that gender, age and income had significant relationship with customer choice of insurance as avenue of investment. They found that company reputation, money back guarantee, risk coverage, low premium and easy access to agents were the important factors influencing policy-holders choice of insurance services and insurance company. Majority of the policy-holders preferred the public sector insurance provider, LIC while SBI Life is the most preferred private sector life insurance service provider.

## **Bharti Axa Insurance Company Limited**

Bharti Axa is an outcome of International Joint Venture between Bharti Enterprises and AXA business Group. Incorporated on August 2008, the company is engaged in the business of providing life and general insurance services to corporate and retail clients. The company has expanded to the extent of having 79 branches throughout India. Bharti Axa is the first general insurance company to operate with ISO 9001:2008 and ISO 27001:2005 certifications.

### **Objectives of the Study**

1. To assess the level of satisfaction of policy-holders towards the terms and conditions offered by Bharti Axa Life Insurance policies;
2. To identify the factors which influence policy-holders to subscribe life insurance policies of BhartiAxa.

### **Methodology**

The proposed study is descriptive in nature, based on primary data, collected by administering a well structured questionnaire to 100 policy-holders who have invested in life insurance policies of Bharti Axa, selected using simple random sampling. The sample frame selected for this study is Chennai while those who have invested in life insurance policies of Bharti Axa shall be the study population. Policy-holders of Bharti Axa were contacted through policy advisers of the company and data collected from them were analysed using the software of SPSS, employing the statistical tools of Percentage, Frequency, Mean, ANOVA, Crosstabs and Cluster Analysis.

### **Data Analysis and Interpretation**

#### **Demographic Profile of Policy-holders Selected for the Study**

Of the 100 policy-holders selected for this study, 55 are males and 45 are females; 45 are aged less than 30 years, 36 are aged 30-50 years and 19 are aged above 50 years; 27 are government employees, 20 are private employees, 22 are businessmen, 9 are students, 12 are house wives and 10 are pensioners; 8 possess educational qualifications of up to HSE, 44 are graduates, 33 are post-graduates and 15 possess diploma/professional education; 55 are married and 45 are unmarried; 20 have monthly income of less than Rs. 25,000, 37 have income of Rs. 25,000-50,000, 27 have monthly income of more than Rs. 50,000 while 16 do not have any income.

#### **Level of Importance Attached to Factors While Deciding About Investing in Life Insurance**

The level of importance attached to different factors while deciding about investing in life insurance policies by the policy-holders has been obtained in a four-point scale and the results are depicted in Table 1.

**Table 1: Importance Attached to Factors While Deciding About Investing in Life Insurance**

<b>Factor</b>	<b>Mean</b>
Risk Coverage	2.8400
Returns	3.3400
Tax Planning	3.0000
Securing Old Age	2.7600
Long-Term Savings	2.7800

Table 1 suggests that policy-holders prefer investing in life insurance policies largely for securing better returns and planning for tax deduction. Thrift of long-term savings and Providing cover for risk associated with life and old age security also drive policy-holders to invest in life insurance to a pretty good extent.

#### **Influential Factors Inducing Policy-holders to Invest in Bharti Axa Life Insurance Policy**

Different factors may drive investors to choose a particular avenue of investment. Having decided the avenue of investment, the next step is to decide about the institution wherein the investment can be entrusted with. The life insurance policy-holders might have been influenced by different factors to invest in life insurance policies offered by Bharti Axa and an attempt has been made to capture the effect of such factors in a four point scale ranging between Nil Influence to Highly Influenced and the results have been portrayed in Table 2.

**Table 2: Influential Factors Inducing Policy-holders to Invest in Bharti Axa**

<b>Factor</b>	<b>Mean</b>
Company's Brand Image	3.1200
Promotion measures of the company	2.6200
Good Schemes Offered by the Company	3.5200
Multiple Benefits Offered by the Company	3.2700
Reasonable Premium charged on Policies	2.7800
Good Returns provided by the company	3.3600
Minimum risk associated with the company	3.2700
Availability of Wide variety of insurance products	2.9400
Past Performance of the Company	2.8600
Friends Associated with Company as Customers	2.3400
Influence of Marketing people of the Company	2.0500
Availability of Good surrender options	2.7600



It can be inferred from Table 2 that good returns provided by the company, minimum risk associated with the company, brand image of the company, variety of good schemes and multiple benefits offered by the company are the most important factors which have largely influenced the policy-holders to subscribe life insurance policies of the company. However, availability of friends in customer base of the company, marketing representatives and promotional measures of the company have not played much role in influencing investors to choose Bharti Axa.

#### **Relationship Between Influential Factors Inducing Policy-holders to Invest in Bharti Axa and their Profile**

The relationship between influential factors inducing policy-holders to invest in Bharti Axa and their profile has been explored using ANOVA and the results have been depicted in Table 3.

**Table 3: Relationship Between Influential Factors Inducing Policy-holders to Invest in Bharti Axa and their Profile**

Factor	Significance Value					
	Gender	Age	Occupation	Education	Marital Status	Income
Brand image	0.735	0.364	0.782	0.0748	0.701	0.062
Past performance	0.792	0.702	0.209	0.921	0.584	0.595
Friends as customers	0.603	<u>0.018</u>	0.066	0.055	<u>0.028</u>	0.973
Marketing people	0.278	0.762	0.807	0.568	0.877	0.862
promotion measures	0.753	0.162	0.394	0.346	0.091	0.331
Good Schemes	0.068	0.065	0.096	0.090	0.251	0.562
Multiple benefits	0.343	0.510	0.135	0.441	0.077	0.134
Premium charged	0.413	0.280	0.836	0.968	0.675	0.674
Good returns	0.813	0.241	0.472	0.687	0.343	0.660
Risk Involved	<u>0.042</u>	<u>0.048</u>	0.781	0.746	0.969	<u>0.004</u>
Surrender options	0.873	<u>0.027</u>	0.421	0.519	0.213	0.967
Wide Variety	0.622	0.096	0.494	0.368	0.220	0.311

It can be inferred from Table 3 that significant relationship prevails between a few factors influencing the policy-holders to choose Bharti Axa for investing in life insurance and a few profile variables. The nature of such relationship has been depicted in Tables 4-7.

**Table 4: Relationship between gender of Policy-Holders and their Opinion About Risk Involved in Dealing with Bharti Axa**

Gender	Mean	N	Std. Deviation
Males	3.1273	55	0.84007
Females	3.4444	45	0.65905
Total	3.2700	100	.77662

Table 4 suggests that involvement of minimum risk while dealing with BhartiAxa has cast a higher influence on female policy-holders to subscribed to the policies of the company.

**Table 5: Relationship Between Age of Policy-Holders and the Influential Factors of Friends in Customer Base, Minimum risk involved and Surrender Options**

Age	Friends in Customer Base	Minimum Risk	Surrender Option
less than 30	2.0222	3.1111	2.5333
30-50	2.5556	3.2778	3.1111
more than 50	2.6842	3.6316	2.6316

Table 5 suggests that existence of friends in customer base of the company casts higher influence on the middle aged and older aged policy-holders while the older aged policy-holders are influenced higher by minimum risk involved in dealing with BhartiAxa and the middle aged policy-holders have been largely influenced by good surrender options offered by the company to choose the company for subscribing to life insurance.

**Table 6: Relationship Between Marital Status of Policy-Holders and the Influential Factor of Existing of Friends in CustomerBase of company**

Marital Status	Mean	N	Std. Deviation
Married	2.5455	55	1.10249
Unmarried	2.0889	45	.90006
Total	2.3400	100	1.03690

It can be observed from Table 6that married policy-holders are more influenced by existence of friends in customer base of the company than their unmarried counterparts while deciding about Bharti Axa to subscribe to life insurance.

**Table 7: Relationship Between Income of Policy-Holders and the Influential Factor of Risk Involved in Dealing with Bharti Axa**

<b>Income</b>	<b>Mean</b>	<b>N</b>	<b>Std. Deviation</b>
less than Rs. 25,000	3.1500	20	.67082
25,000-50,000	3.5676	37	.72803
more than 50,000	2.9259	27	.82862
Total	3.2619	84	.79333

Table 7 highlights that the middle income policy-holders have been largely influenced by risk involved in dealing with BhartiAxa to choose the company for subscribing life insurance policies when compared with the lower and higher income policy-holders.

#### **Grouping of Policy-holders Based on Factors Influencing them to Invest in Life Insurance Policies of Bharti Axa**

The policy-holders surveyed have been grouped based on the factors influencing them to subscribe to life insurance policies of Bharti Axa using Cluster Analysis and the results have been portrayed in Table 8.

**Table 8: Grouping of Policy-holders Based on Factors Influencing them to Invest in Life Insurance Policies of Bharti Axa**

<b>Factor</b>	<b>1</b>	<b>2</b>	<b>3</b>
Brand Image	3.13	3.00	3.24
Past Record	3.23	3.40	1.97
Friends as Customer	1.74	1.83	3.41
Representatives	1.65	2.34	2.12
Impressive Promotion	2.00	3.43	2.35
Good Schemes	3.42	3.57	3.56
Multiple Benefits	3.26	3.20	3.35
Premium	2.74	2.54	3.06
Good Return	3.52	3.23	3.35
Minimum Risk	3.45	2.97	3.41
Surrender Option	2.35	2.80	3.09
Wide Variety	2.29	3.54	2.91
No. of Cases	31	35	34

It can be observed from Table 8 that three distinct groups have been formed based on factors influencing policy-holders to invest in policies of Bharti Axa. These clusters have been designated as "Returns-Driven Group", "Variety-Driven Group" and "Scheme-Attracted Group", each engulfing 31, 35 and 34 policy-holders.

### Demographic Characteristics of Clusters

The demographic characteristic of clusters has been assessed using Crosstabs and the results have been portrayed in Table 8.

**Table 8: Demographic Characteristics of Clusters**

Profile		Returns-Driven Group	Variety-Driven Group	Scheme-Attracted Group	Total
Gender	Males	15	21	19	55
	Females	16	14	15	45
Age	< 30	10	25	10	45
	30-50	11	9	16	36
	> 50	10	1	8	19
Occupation	Government Service	4	13	10	27
	Private Service	8	9	3	20
	Business	8	5	9	22
	Student	1	5	3	9
	House Wife	5	2	5	12
	Pensioner	5	1	4	10
Education	UG	2	1	5	8
	Degree	18	16	10	44
	PG	6	14	13	33
	Diploma	5	4	6	15
Marital Status	Married	20	13	22	55
	Unmarried	11	22	12	45
Income	<25,000	9	6	5	20
	25,000-50,000	14	10	13	37
	> 50,000	5	13	9	27
	Nil	3	6	7	16

It can be observed from Table 9 that larger number of male policy-holders constitute the Variety-Driven group closely followed by Scheme-Attracted group and lastly, the Returns-Driven group. However, female policy-holders are almost evenly distributed among the three clusters. The table further suggests that larger number of younger policy-holders constitute the Variety-Driven group followed by the other two groups while larger number of older aged policy-holders constitute the Returns-driven group and larger number of middle aged policy-holders constitute the Scheme-Attracted Group.

Table 9 further highlights that larger number of pensioners and housewives constitute the Returns driven group while larger number of students, government and private employees constitute the Variety-Driven group and larger number of businessmen constitute the Scheme-Attracted group. The table further suggests that larger number of graduates constitute Returns-Driven group while larger number of post-graduates constitute the Variety-Driven group and larger number of under-graduates and diploma-holders constitute the Scheme-Attracted group.

Table 9 further highlights that larger number of married policy-holders constitute the Scheme-Attracted group and larger number of unmarried policy-holders constitute the Variety-Driven group. The table further suggests that larger number of policy-holders with lesser and middle income constitute the Returns-Driven group while larger number of high income policy-holders constitute the Variety-Driven group and larger number of policy-holders who do not have any income constitute the Scheme-Attracted group.

### Feel After Investing in Bharti Axa Life Insurance Policies

The feel after investing in Bharti Axa life insurance policies among the policy-holders has been obtained in four-point scale ranging from Highly Dissatisfied to Highly Satisfied and the results have been portrayed in Table 11.

**Table 11: Feel After Investing in Bharti Axa Life Insurance Policies**

Feel	Frequency	Overall Mean
Highly Dissatisfied	8	2.91
Dissatisfied	19	
Satisfied	47	
Highly Satisfied	26	
Total	100	

Table 11 suggests that investors who have invested in life insurance policies of Bharti Axa are well satisfied with their choice of investment as the mean is hovering around the three mark in four point scale. Policy-holders with some degree of dissatisfaction towards their investment in Bharti Axa is fewer in number while there are larger number of policy-holders who are satisfied with their investment in the company's policies.

### Inferences from the Study

Earning good returns and providing for old age security are the major goals of policy-holders opting to invest in life insurance policies. Bharti Axa should then consider magnifying returns for their

customers which will enlarge their customer base. Further, by launching good policies targeting old age benefits will attract more customers for the company.

Good news for Bharti Axa is that most of its policy-holders are well satisfied with their choice of investment due to good returns provided by the company, minimum risk associated in dealing with the company, variety of attractive schemes and multiple benefits offered by the company. Improved promotional measures coupled with effective marketing force and better surrender options will play a better role in enhancing the reputation of the company among investing Indians.

## Conclusion

Policy-holders well satisfied with returns offered by Bharti Axa and risk involved in dealing with the company are the two major aspects which the company should bank upon to magnify its customer base and march ahead in the most competitive life insurance market of India. Years to come is not going to be easy for the company and its reputation among customers will play a decisive role in the company's sustainability and scalability.

## References

1. Yadav B and Tiwari A.(2012). "A Study On Factors Affecting Customers Investment Towards Life Insurance Policies", International Journal of Marketing, Financial Services & Management Research, Vol.1 Issue 7, pp 106-123
2. Alinvi F. &Babri M. (2007). "Customers' Preferences of Insurance Services ", International Business Program Bachelor Thesis,pp 1-96
3. Sandhu H. and Bala N. (2011). "Customers' Perception towards Service Quality of Life Insurance Corporation of India: A Factor Analytic Approach", International Journal of Business and Social Science, Vol. 2 No. 18, pp 219-231
4. Taneja S. (2014). "Comparative Evaluation of Life Insurance Companies in India". Journal of Radix International Educational and Research Consortium, 3 (2), pp 1-9.
5. Sahu P., Jaiswal G and Pandey V. (2009). "A Study of Buying Behaviour of Consumers towards Life Insurance Policies", Asian Journal of Management Research, Volume 3, Issue ¾, pp 1-10

## **Women's Perspective Towards Health and Fitness - A Case Study on Indian Fitness Industry and Women**

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### **Abstract**

***Purpose:** The purpose of this paper is to analyse the women's perspective towards health and fitness industry.*

***Design/Methodology:** Research design is based on exploratory and descriptive research from India on the basis of convenience sampling, with the sample size of 50 women's & data is analysed using simple tools like averages and percentages.*

***Findings:** There is a huge scope and demand for health and fitness industry in the country like India due to the increasing health issues, to overcome hectic stressful and busy life, to overcome stress levels and majorly 20+ Years aged women's are getting influenced by fashion icons hence they want to look and feel good they consider building fitness is a status symbol. Health and Fitness is a booming industry in the coming future as well.*

***Research limitations/implications:** The study is restricted to Indian women.*

***Originality/value:** This paper presents the health and fitness importance and awareness levels present in the today's women also the transformation in them from 1990's to 2017 and expected changes by the year 2020. New trends information and how fitness is inbuilt in the women's daily life. It also gives us an insight on where do we stand when compared to international market from the fitness prospective.*

***Keywords:** India, Women, Fitness Industry, Health, sports.*

### **1.1 Introduction**

From creating safe havens for women to spreading a word about new ways to exercise, many women both young and old are making fitness a more positive experience for all. After being ignored for decades, the women fitness market is now the hottest and fastest growing industries, due to athleisure fad and the large no. of women who were yoga pants to do everything except workout, but

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the market is also full of women's who wants to shed pounds, add-muscle and get healthy. According to Forbes, Nike alone saw enough opportunity in this segment to grow the market by nearly 12% into 2013 and extending its growth to 20% by 2020.

When it comes to attaining a svelte, athletic and powerful physique, while simply feeling confident and healthy women have to overcome a massive barrage of mental and physical hurdles unfortunately in physical society, including the fitness industry women and young females are incessantly pressured or shamed into feeling like they should workout or diet or solely to change their appearance, that they should strive to become smaller, skinnier, more feminine and subservient version of their current self.

## **1.2 Statement of Problem**

To analyse women's perspective towards health and fitness in the growing women's fitness market.

## **1.3 Objectives of the Study**

- To understand and analyze the Indian fitness industry
- To understand and analyze women's perspective towards health and fitness

## **1.4 Literature Review**

Al -falasi et.al carried out a research in the year 2008 to access the knowledge, attitudes and use of anabolic steroids among gym users in Al-Ain district, UAE. The study gives us an insight on anabolic steroid usage is significantly higher among body builders, weight lifters and commercial club users despite of creating awareness on consequences of anabolic steroids.

Buchha highlighted insights on fitness trends in India in the year 2012 and he observed that fitness trends and technologies were changing fast hence there is a need for educating new users on new trends, he also observed a shift towards gentler more introspective exercises that contributes to improve cardiovascular health while increasing flexibility and muscular strength. He also concluded that fitness clubs must provide highly customized fitness products and experiences that meet customer's requirements.

Darper et.al. Carried a study in the year 2006 on South African fitness industry and it stressed upon that, all the facilities were located mostly within urban areas hence only 2% population was served by fitness centres. But the facilities offered a wide range of equipments and services to their customers and majority were in the age ranging 18-25years, 55% were male and 49% were female and 25% were university qualified.

Deloitte access economics commissioned by Australian fitness centre in the year 2012 provided us with the important data and trend information which contributed to industry development. The data obtained indicated high number of users within the age range of 25-34years with majority of female participants. It also showed that there is huge growth for fitness industry when compared to other



industries and also predicted further growth for the industry. It also stressed on industry innovation to meet changing consumer preferences and to develop a greater capacity to integrate advanced technology in service provision.

EHFA's 'European Health and Fitness Operations report' provided insights in the year 2013 about many different facilities like gym, wellness centre, spa sauna, swimming pool racquet sports, Aerobics etc which needs to be provided to the customer as the retention reports were increasing from the fitness centre. By introducing multiple fitness regimes you can easily cater your special customers and retain them by satisfying their needs and requirements.

Franchise help report 2014 states about fitness industry analysis 2014-cost and trends, analysed the current costs and future trends expected in the health fitness industry in America. Acc to this the fitness industry would continue to rise and health fitness centres needs to concentrate more on older age groups, it also suggest fitness centres to purchase the equipments on the regular basis and be updated with the latest trends but it could be expensive huge amount is needed, but increased percentage of obesity rates prevalence of lifestyle diseases would continue to attract people to health clubs resulting in growth.

IHRSA and leisure trend groups published in the year 2014 proved useful for many reasons: to track past trends, analyze the findings, highlight areas of opportunities and address what needs to be done to increase member participation. This latest report focuses on health club consumer behaviour of Americans of age group above 16. It also shows that young American was playing a big role in health and fitness club memberships. More than one-fourth (37%) of them are in the age group of 21-30.

The Australian Report: wellness trends growth and market opportunities published by Hannah Wilkinson on Dec 2016 states that 15 percent of Australian adults gym members and some 20,000 are employed in the fitness industry alone, the country's mature wellness market provides a fertile breeding ground for industry innovations. Some 44 percent of Australian consumers avoid sugar when making food purchasing decisions. "The Australian consumer is 3-4 years ahead of the UK consumer, and fruit juice is regarded as added sugar by many Australians is embracing the notion of simply eating real food. Going forward, success for UK and US players looking to penetrate the Australian market rests on truly disruptive ideas, marketing strategy, and product innovation. They may manifest through clever brand collaborations, retail partnerships, destination-led experiences, or infusing technology and science with wellness since demand is high, but businesses must create innovative ways to leverage it.

Amaresh Ojha CEO and founder of Gympik contributed a study on evolution of fitness in India -Riding high on growth in the year 2017 that modern fitness concepts have entered market 20 years ago so it will not be right to say that fitness industry is in the infant stage. Fitness industry has a very good opportunity in the Indian country to grow and it might increase our national income by 20-30% due to the increasing health issues and increased literacy rate people are depending on fitness clubs.

Deloitte access economics-fitness industry workforce report :2010-2020 in Australia was published in the year 2012 which has given a updated stats on fitness industry ie, According to the comprehensive report, Spain is home to 4,350 health clubs, with an average size of 3,859sq m including outdoor activity space. On average, each club has 3,037 members with an average age of 36.5 years. Spanish health club members are slightly more likely to be female (50.6 per cent) than male (49.4 per cent), with an average monthly cancellation rate of health club membership coming in at 6.7 per cent. In 2015, Spanish health clubs spent, on average, 37.7 per cent of income on personnel salaries, 9.9 per cent on supplies, 3.5 per cent on marketing and promotions, and 1.3 per cent on education and training.

Macfarlane and Thomas has contributed a research paper on 'Exercise and diet in weight management in the year 2010 he stated that solving the overweight and obesity problem via appropriate modifications to exercise /diet appeared easy but in practicality it was very difficult and only a small percentage of people were able to maintain their weight loss for long term so they thought guidance by doctor, dieticians and allied health professionals would be the right people to guide those who are at over-weight and obesity risk.

Phillips has done a study on improvement of physical activity with special reference to the isokinetic or sedentary behaviour of the modern society and its impact on health of American population in 2012, he stresses that American population were not performing intended physical activity so new strategies were supposed to be brought to bring a change in this arena. He observed that patients respected their physicians as credible sources of information and looked to them for health-related guidance, unfortunately many physicians were not talking to their patients about physical activity hence a unique opportunity to raise awareness about fitness was missing. So he started stressing on the health care community in making Americans more physically active.

Zhang carried out a study on consumer behaviours of commercial health clubs in Liverpool in the year 2014 and he suggest that targeting marketing strategies of the clubs should be suggested accordingly in order to design service channel, price reasonably, communicate with consumers and provide satisfying environment.

## **1.5 Research Methodology**

The researcher has applied exploratory and descriptive research design by constructing the questionnaire and subjected the questionnaire to 50 women consumers who are fitness freaks in a growing city, Ballari. Using convenience sampling for data collection, the collected data has been analysed using simple tools such as averages and percentages to arrive at a desired results.

Research Design	Exploratory and Descriptive research
Sample design	Convenience
Sample size	50 women fitness freaks
Data collection method	Structured questionnaire
Sources	Primary data and secondary data
Tools for Data analysis	Averages and percentages

## 1.6 Indian Fitness Industry

Fitness and wellness sector in India has reached a long way from the ways of local akhadas to wrestling boxing now being the part of international Olympics where Indian's are taking part in it irrespective of the gender and winning the medals. Earlier physical fitness was confined only to those who were practicing body building and power lifting they used to conduct it for their survival and livelihood during the festival and social occasions they use to travel miles to participate in the event which in turn requires huge level of strength and stamina. Other such physical activity is people use to work hard in agriculture and men use to get trained for getting into soldier. But today fitness industry in India is driven towards health, well being, fitness, good looks confidence and they look fitness as their status symbol hence they are moving towards aerobics, Zumba, aerial yoga, Pilates, MMA, kickboxing etc. have become the fitness trends over the years.

Currently fitness industry in India is largely an unorganised and unstructured sector, waiting to be integrated into an organised entity. It has been observed that many mom-and-pop structures are making way towards organized retailing in the gym business and the trend will only accelerate in the coming times, with the entry of global players.

We should thank today's fast pace, hectic, stressful and modern lifestyle which has made people workout actively and follow well-designed fitness regime for healthy lifestyle. Now we have our fitness and health related app in the smart phone which is increasing the awareness levels of people towards the importance of fitness and forcing them to follow those workouts and diet to keep themselves fit and healthy. Nowadays we see even on the eatable products packages like for healthy heart, fat free, sugar free, low cholesterol, baked or boiled, probiotic etc. Moreover muscular and toned bodies of celebrities, models and fashion icons coupled with healthy lifestyles are making Indian consumers embrace fitness like never before. People never mind taking out their precious timeout even in their busy schedule to do some workouts to look good, healthy and fit.

It has been proved and people are coming to terms with the fact that those who are regularly doing some exercises and workouts are happier and healthy. Workouts also reduces stress level, depression, anxiety also keeps the diseases at bay including the cancer. It also strengthens your immune system, stamina and strength.

In India, the total retail market for fitness as a category is valued at Rs. 4,579 Cr (US\$ 0.76 bn), growing at 16-18 per cent and as per the estimation it has crossed Rs. 7,000 crore (US\$ 1.18 bn) by

the year 2017. Modern retail total market as per the estimation has grown by 22-27%. Fitness centres are flourishing as disposable per capita income rises and desk-bound lifestyles lower immunity amongst today's youth.

Indian fitness industry is undergoing riot by increasing incidences of obesity and diabetes, even when we look around on a daily basis we find weight loss advertisements are rampant everywhere. This is one of the key reasons for the increased memberships in health club and gym. Spending on fitness was considered as a luxury a decade back but now it has become a daily routine not just in urban cities but also in tier 2 and tier 3 cities, towns and villages where people are opting for fitness. The proactive approach to fitness has increased the demand for not just fitness services but also for the products because this generation people would like to look good and feel good at any cost this is increasing the growth of service and products.

Moreover global corporations, IT industry KPO's BPO's have also provided momentum to industry by installing in-house fitness centres and health clubs within their work premises. It is been followed by hospitality industry, national and international hotel chain in India many others are in pipeline. Hotels in smaller cities are providing gym if not spas- in order to satisfy the new age health conscious people. Nowadays even the wedding couples are gifted with gym subscriptions and fitness equipments.

Residential societies, community centres, apartments, complexes are also compulsorily hosting gym not just in metropolitan cities but also in tier 2 and 3 cities it is spreading like wildfire. Multinational fitness chains and gyms are taking the franchisee route in order to enter into Indian sub-continent considering India's high and middle class population.

Small in-house gym setup is also coming up in the houses of business tycoons, industrialists, sport icons, celebrities, socialites and fitness freaks that are elite sound in terms of finances and space is not a concern. Even online tutorials and apps are in demand which provide gym trainers, fitness experts, and nutritionists etc at your place with cost.

Prominent and recognised fitness centres are already diversifying their products and service portfolio into market in every possible way to satisfy and reach the potential customers. Skyrocketing prices and cost of healthcare and medicals have pushed people towards the preventive viable option, rather than cure. As one of the health mantra is "Prevention is better than cure".

Interestingly the fitness oriented customers are mostly in the age group of 20-40 who are either students or employees, which gives us a evidence that from the college days to employment people are fond of looking good, maintaining fitness and toned body. Once they cross 40 they do some workouts to fight with their health issues or doctor might have suggested them to do so for better lifestyle.

Earlier it was only males who embraced physical fitness but today 45% of females are involved in fitness regimes. Digital enforcement and easy access to technology, TV has brought a drastic paradigm shift in women's perspective towards fitness and health seriously. Rising cases of osteoporosis

and lowering of bone density have catapulted women to take up health, diet and fitness in a major way. Nowadays breast cancer is increasing drastically it is taking away the millions of women lives it is also second most common type of cancer in India. At the contrary every days trendy lifestyles, Hollywood, Bollywood celebrities lifestyle influence are some of the factors to create interest in women's to look good and have better physique.

Fitness regime and modern lifestyle have entered India a good 20years ago so it would be wrong to say that the industry is at blooming/budding stage by any means. All stakeholders, trainers and educational, institutions, fitness franchises, equipment and nutrition manufacturers and distributors, including gym owners, professional associations and the government should come together and catapult the industry to a stage where it can flourish. Undoubtedly, fitness industry has great potential in a country like India where there is a huge opportunity hidden. It is a sunrise sector, poised to grow by 30-40 per cent year on year.

India's top fitness centres:

1. Talwalkars
2. Fitness first
3. Golds gym
4. Fitness one
5. Ozone fitness and spa

India's market wellness trend report-Growth and market opportunities

With India's economy on course India is world's fourth fastest grown country by 2017, and under 25s making up almost half its population, the region's burgeoning wellness industry is full of potential.

A report published in Dec 2016 by FICCI (Federation of Indian chambers of commerce and industry) in association with consulting firm EY, it has predicted double industry wide growth for the rest decade with gym and fitness centre to see a expansion of 18%."Attitudes to wellness have changed a lot in last 5-10 years due to instagram and also India's upper class people are highly mobile and return from travelling abroad with an appetite for products they've discovered in the US and UK," explains Rohini Bajekal, a former Brand Manager for both RAW Pressery -- India's first cold-pressed juice brand, and the country's first vegan and gluten-free snack startup Eighty20.

A staggering 47 percent of India's 1.3bn population is under the age of 25, and the importance of social media in driving millennial interest in wellness is impossible to overstate. Bollywood stars like Amrita Arora regularly feature on the Instagram feed of luxury Mumbai health club I Think Fitness, while actress Gul Panag is the Co-Founder of MobieFit, a fitness coaching and motivation app. And in a market where government support for new businesses is limited, stars even play a role in the funding

space. In April 2017, RAW Pressery attracted a \$559,000 investment from actress and model Jacqueline Fernandez.

Finally with increased interest in yoga and meditation showing no signs of slowing down outside India, opportunities to build on the country's spiritual reputation are only going to increase. Indian wellness industry likely to hit Rs1.5 trillion by FY2019-20: as the industry estimated close to 85000 crores in financial year 2014-15 and is expected to grow at a compounded annual growth rate of nearly 12% for next 5 years so it can easily achieve above 1.5 trillion by FY20.

### 1.7 Data Analysis

1. Awareness levels of BMI (Body Mass Index) in women's are very high it is found that 90% of them know about BMI.
2. 20-45 Age range of women's showed high awareness levels towards their own BMI levels.
3. Awareness level towards their own BMI measurements is moderately high. 70% of the women has the knowledge about the levels of their BMI and 30% doesn't have any knowledge about it.
4. Obesity levels in women's is as follows:
  - 10% of women's have very high obesity levels whose weight is above 85kg.
  - 20% of women's have moderately high obesity level whose weight is between 75-85 kg.
  - 30% of women's have average obesity level whose weight is less than 75 kg.
  - 40% of women's are having low or normal obesity and BMI levels.
5. Occupations of women's who is aware about BMI are:
  - It is found that 50% of the respondents belong to student's category and working spinster.
  - 30% are housewives and 20% are working women.
6. Stress levels of women are as follows:
  - From the sample size result is it found that 5% of the women are having very high stress levels.
  - 50% of the women are having moderately high stress levels.
  - 20% of the women are having moderately low stress level as compared with 50% women.
  - 25% of the women are having low stress levels
  - Even their stress levels are affecting their health and fitness to a greater extent.
7. Initiatives taken by women's to overcome their stress levels are:
  - 20% are fond of gym to overcome their stress and to be fit and healthy.
  - 30% of them go for a regular walk in the morning and evening as a fitness regime.

- 50% of women's are following yoga and meditation as a stress reliever and health mantra.
8. Location chosen by women's to carry out their regular fitness activities.
- 60% of them visit's fitness clubs.
  - 30% prefers to carry out physical activities in the parks and grounds.
  - 10% women's would like to stay at home and do their regular exercises with gym equipments placed at home and meditations.
9. Parameters on the basis of which women chooses her fitness clubs or locations.
- 20% of the women look for the accessibility as a priority to join a fitness centre.
  - 40% of the women look for the credibility and expertise of the coach in the fitness centre.
  - 40% of them see to it that equipments/instruments are well maintained and placed in the centre as per there requirements.
10. Number of women owning their own fitness equipments are:
- 20% of the women from the elite segment own the fitness machines in their home.
  - Other 80% of the women's are dependent on fitness centre they do not own any equipments.
11. The type of instruments owned by the women are:
- 40% own treadmill in order save their time going out for a walk.
  - 10% of them own different set of instruments.
  - 50% own cycling machine with some extra fittings as a fitness remedy.
12. How many of them strictly follows the diet chart prescribed by the trainers or doctors:
- 50% of women strictly follow the diet charge and they are highly serious about it.
  - 40% of them are moderately following the diet chart.
  - 10% are low in practicing the diet chart regularly.
13. Women who are sports lovers are:
- 5% of the women are sports lovers and they are very particular about their health and fitness.
  - 50% are moderately interested in physical activities like dance, aerobics, zumba etc.
  - 45% are traditional fitness followers like walking, exercises, yoga with normal diet.

14. Diabetic patient percentage in women - 5% of the women whose age is 40+ is affected by the diabetes.

## 1.8 Findings

1. Awareness levels of women's towards fitness and its importance in life is high.
2. Majority of the adults and youths are showering interest on fitness clubs when compared to old aged people as they want to look good and feel good and create an image for themselves.
3. Old aged or 40+ aged women are looking for fitness club for health related issues.
4. Increased obesity and diabetic risk in today's generation has given a huge scope towards fitness regime and women above the age of 40 are suffering with such issues.
5. Women's are more specific when it comes to fitness clubs they are looking for experienced trainers, customised instruments, ambiance, location etc.
6. Women's are getting influenced by fashion icons, celebrities, Hollywood, bollywood, peer groups showing interest in fitness alternatives like aerobics, zumba, pilates, yoga, gym, nutrition diets and counselling sessions etc.
7. There is less demand for fitness equipments due to increase in fitness centre which provides a package of physical activities.
8. Women prefers multiple beneficiary packages at one location like well set gym equipments, trainer, nutritionist guidance, relaxation, entertainment, health drinks/snack, fitness shopping centre at one location.
9. Women's from elite background set up a in-house fitness club at their home and do the workouts.
10. Physical activities reduce the stress level, anxiety, depressions in women to a greater extent.
11. Today's generation feels that being fit is their identity, as the medical expenses are also increasing instead of spending on medicals they are happy spending on fitness activities and have a healthy lifestyle.
12. Finally there is a huge demand and opportunity available in India for the fitness industry and it's a blooming industry and keeps growth over the years ahead.
13. It is found that in order to get rid of busy, hectic and stressful lifestyle women's are mandatorily getting involved in different fitness activities they are following a mantra of "Health is Wealth".
14. Due to the emergence of deadly diseases where 13 types of cancer including breast cancer has been proved to be 2nd highest disease found in India. So people have considered health and fitness as a priority and necessity in their day-to-day life irrespective of the high cost charged by the health and fitness centres.



15. It is found that women's are also more determined towards yoga, meditation and moving into spirituality in order to have a better health and fitness in a long run.

## 1.9 References

1. Bob Gustafson, Michael Hanley and Mark Popovich, Ball State University, Muncie, IN has done a study on women's perceptions of female body shapes and celebrity models: the dove firming cream advertising revisited, 2005, 1-14.
2. Maurica Patterson, Lisa O'Malley & Vicky has worked on Women in advertising representations, repercussions, responses, 2009; 20, 1; ABI/INFORM global in Irish marketing review, 1-14.
3. Australian fitness Industry report, 2012, Fitness Australia (health and fitness industry association), Lauretta stace, 1-28.
4. Working in fitness-An analysis of fitness industry in UK, 2015, 1-89.
5. Fitness franchise industry report 2014: Industry overview and outlook, by Renee Bailey, Nov 13, 2014.
6. IHRSA Update: A recent report from MAS on the Spanish health and fitness market, by Kristen Walsh associate publisher for IHRSA reports, published by Health club management, 2017 issue 2.
7. Deloitte Access Economics-Fitness industry workforce report: 2010-2020, Fitness Australia, Jan 2012, 1-62.
8. The Australia report: Wellness trends, growth and market opportunities, by Hannah Wilkinson, Dec 16, 2016-Insights market report.
9. Evolution of fitness industry in India-Riding high on growth by Amaresh Ojha CEO and founder of Gympik, 2-3-2017.
10. Berg, R. (1994, June). Eighty-five percent of American women don't like their bodies. Are you one of them? Self, pp. 134-138.
11. Bartky, S. (1988). Foucault, femininity, and the modernization of patriarchal power. In I. Diamond & L. Quinby (Eds.), *Feminism and Foucault: Reflections on resistance* (pp. 61-86). Boston: Northeastern University Press.
12. Bordo, S. (1993). *Weight, feminism, Western culture, and the body*. Los Angeles: University of California Press
13. Cash, T. B. , Winstead, B. A., & Janda, L. H. (1986, April). Body image survey report: The great American shape-up. *Psychology Today*, 24, 30-37
14. Davies, D. (1998). Health and the discourse of weight control. In A. Petersen & C. Waddell (Eds.), *Health matters: A sociology of illness, prevention and care* (pp. 141-155). St. Leonards, Australia: Allen & Unwin.
15. Beyond the Perfect Body-Women's Body Image Distortion in Fitness Magazine Discourse, by Pirkko Markula, *journal of sports and social issue*, May 1 2001.
16. Victoria D. Bush, Alan J. Bush, Paul Clark, Robert P. Bush, (2005) "Girl power and word?of?mouth behavior in the flourishing sports market", *Journal of Consumer Marketing*, Vol. 22 Issue: 5, pp.257-264, Emerald group publishing limited.

17. SharleneHesse Biber, PatriciaLeavy, Courtney E.Quinn, JuliaZoino, The mass marketing of disordered eating and Eating Disorders: The social psychology of women, thinness and culture, Women's Studies International Forum, Volume 29, Issue 2, March-April 2006, Pages 208-224.
18. Chiu, Weisheng; Lee, Kwang-Yong; Won, Doyeon, CONSUMER BEHAVIOR TOWARD COUNTERFEIT SPORTING GOODS, Source: Social Behavior and Personality: an international journal, Volume 42, Number 4, 2014, pp. 615-624(10), Publisher: Scientific Journal Publishers.
19. MariskaKleemans, SerenaDaalmans, IlanaCarbaat, DoeschkaAnschütz. (2018) Picture Perfect: The Direct Effect of Manipulated Instagram Photos on Body Image in Adolescent Girls. Media Psychology 21:1, 93-110, online publication date: 15-Dec-2016.
20. Richard L. Divine, Lawrence Lepisto, (2005) "Analysis of the healthy lifestyle consumer", Journal of Consumer Marketing, Vol. 22 Issue: 5, pp.275-283, Emerald group publishing limited.
21. Yanni Afthinos, Nicholas D. Theodorakis, Pantelis Nassis, (2005) "Customers' expectations of service in Greek fitness centers: Gender, age, type of sport center, and motivation differences", Managing Service Quality: An International Journal, Vol. 15 Issue: 3, pp.245-258, Emerald group publishing limited.
22. Jennifer Smith Maguire, Body Lessons Fitness Publishing and the Cultural Production of the Fitness Consumer, December 1, 2002 , International review for the sociology for sports.
23. Donelda S. McKechnie, Jim Grant, Victoria Korepina, Naila Sadykova, (2007) "Women: segmenting the home fitness equipment market", Journal of Consumer Marketing, Vol. 24 Issue: 1, pp.18-26, Emerald group publishing limited.
24. Raj Arora, Charles Stoner, Alisha Arora, (2006) "Using framing and credibility to incorporate exercise and fitness in individuals' lifestyle", Journal of Consumer Marketing, Vol. 23 Issue: 4, pp.199-207, Emerald group publishing limited.
25. Steve Dix, Ian Phau, Sonia Pougnet, (2010) ""Bend it like Beckham": the influence of sports celebrities on young adult consumers", Young Consumers, Vol. 11 Issue: 1, pp.36-46.

## **GST- Awareness, Perception and Practical Difficulties of Retail Traders- Evidences from Kerala**

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– Alphy Maria Manuel \*\*\*

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### **Abstract**

*"One Nation One Tax" - The Goods and Service Tax has become the prominent topic discussed since its implementation in India on 1st July 2017. It is a comprehensive, multi-stage, destination based tax which is levied on every value addition. The new tax policy has brought significant changes to the existing tax system and business transactions. Even though the impact of GST on retail sector is positive from both taxation and operations point of view, the implementation risks remain due to the complexities of adopting the new system. The study seeks to evaluate the awareness, perception, practical difficulties and extent of impact of awareness on practical difficulty of retail traders after implementation of new tax system. For the purpose of the study the samples were collected from the retail traders of Kerala and the collected data were analysed using statistical techniques such as ANOVA, Factor analysis and Regression*

*Keywords: Goods And Service Tax (GST), Awareness, Perception and Practical Difficulties.*

### **Introduction**

Tax is not a temporary contribution; it is a mandatory financial burden that is imposed by the government on the income and business profit of the people. Every country imposes tax on goods and services to generate revenue to meet their expenditure. Undoubtedly, the Indian government also imposes taxes to meet up its public expenditure that contribute to the welfare of the society. The power to levy the tax goes together with central and state which is derived from the constitution of India. The system of taxation can be traced in India from ancient times and year after it has undergone certain changes and new reforms to make it more standardised. Among them one of the milestone reforms that have taken place in the Indian tax system is the introduction of VAT and its transformation

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into GST. In order to reduce the existing complexity in tax, a new tax reform was made in 1st July 2017 to ensure uniformity in tax rates which is known as goods and service tax. GST is a modified form of VAT where tax is levied on value added at each stage of supply chain. It is a proposed system of tax that subsumes all the existing indirect taxes. Under GST there would be only one law as GST and would be one CGST rates and one SGST rates across states that ensures fiscal autonomy, harmonisation and transparency at each level (GST reforms and intergovernmental consideration in India 2009). The government implemented new tax system with a view to eliminate complexity, reduce tax burden, and ensure compliance of tax payment. GST has a great impact on the various sectors especially retailers, wholesalers, logistics and FMCG. Its implementation has made serious difficulties among the business activities of traders especially of retail traders. Of all the sectors GST will have far reaching impact on traders and would result in reducing the prices of the goods supplied by such traders. About 1/10th of India's economic development is contributed by the retail sectors. They play a major role in the economy as they act as an intermediary between business and customers. Introduction of GST regime has benefited the growth of retail sector. Under GST regime traders can claim input tax credit for tax paid on inter-states purchase of goods, against tax liability incurred on sale of goods which were not allowed under VAT system (goods sold in his own state). Although the retail industry is benefitted with the introduction of GST, it would depend upon the rate of tax applicable to each category of goods. Lack of clarity on tax rates, its provisions, valuation of stock and fixation of price are the major challenges retailers face.

Many studies have been conducted measuring the awareness and perception of people towards GST independently. This study is relevant as no such studies have been conducted, that measure the practical difficulties and its relationship with level of awareness. Many retailers are not aware or does not have a clear idea about GST and various provisions of GST are still ambiguous. In our study we seek to find out the awareness, perception and practical difficulties that retailers face after GST implementation. This study will be beneficial as it helps the government to understand the difficulties faced by retailers after GST implementation and take necessary decisions. Also it helps the retail traders to understand the level of awareness that they hold towards GST and measures can be taken for improving their knowledge and it also helps to reduce their level of practical difficulties.

## **Review of Literature**

GST decisions have been taken without consultation of major stakeholders like businesses and consumers. Since they are not consulted, their views on the design and structure of GST are not clear and this may lead to resistance to the new tax reform (Sachchidananda Mukherjee, 2015). The Government has implemented GST without any preparation. The people perceived GST as a very good reform in India, at the same time they agree that GST leads to increase in legal cost, will lead to deterioration of small scale industries, increase the inflation level and tax burden of the common people (DR. Manoj Kumar Agarwal, 2017). The general public received less information about GST. Most of the respondents were unclear whether the goods and services are not subject to GST and this has created a high

negative perception among tax payers (Mohamad Ali Roshidi Ahmad, 2016). The awareness among Indians about GST is relatively low due to lack of knowledge or information regarding GST (Dr.K.R. Sakthi Devi, 2017). The level of awareness among the people is fairly high, that is people are aware about the tax system which is going to be implemented. The success of the tax system is based on how convenient it is to be paid by the tax payers. Retailers in hubli -dharwal city are not prepared to adopt the new tax system as most of the people depends on the tax consultant and follows the traditional system even though they are well aware about the mode of payment (DR.Ramesh,R.Kulkarni, 2016). The general public from rural area, have no doubt with regard to the proposed GST but half of the population have not yet registered under GST and still depends upon the advices of the accountants for the transaction process. Lack of information coupled with apathy towards reforms may slow down the implementation process of GST (Dr.G.H.Barhate, 2017). The respondents are aware of GST and showed a positive attitude towards GST and this awareness is closely related to their educational qualification and their perception is not linked with their political affiliation (AlenKuriakose, 2016). Vineet Chouhan, who measured awareness about implementation of GST among small business owners in Rajasthan found that most of the respondents faced difficulty to submit report to authority and customers refusing to pay GST. Also most of the respondents were not willing to accept implementation of GST (Vineet Chouhan, 2017). The level of knowledge is a major factor influencing perceived impact of GST. The results indicated that better understanding on GST, higher educational level of employees and higher level of management support implementation of GST (Amanuddin Shamsuddin, 2016).

From the available literature, discussions with experts and retailers it is evident that exist practical difficulties in retail sector after implementation of GST. The above studies highlight the level of awareness and perception the traders holds towards GST. The present study seeks to find out the practical difficulties the retailers face after implementation of GST. The study also considers the relationship existing between the level of awareness and practical difficulties. As the study is relevant in the current scenario it is titled as "GST-awareness, perception and practical difficulties of retail traders- Evidences from Kerala".

## Methodology

The study is descriptive and analytical in nature. Survey method is used for the collection of data. The primary data is compulsory material for the doctrine of analysis. The samples were selected in two stages. In the first stage Kerala was divided into 3 zones namely south, central and north zone. From each of these zones one corporation and one municipality were selected. One town ward was selected from each of the above chosen corporation and municipality on a random basis. In the second stage, total 200 samples were collected from each zone by 88 Samples collected from Corporation and 112 Samples collected from Municipality level by using purposive sample method. Five point likert scale used for measuring level of Awareness, Perception and Practical Difficulties. The collected data were analysed by using SPSS package. ANOVA, Factor Analysis and Regression techniques were used for data analysis.

## Discussion of Results

The study attempted to assess the level of Awareness, Perception and Practical Difficulties faced by retail traders regarding GST. Through this study we analyze factors influencing level of awareness and measure dependency of these factors on level of practical difficulties faced by retail traders on GST. The first part of the analysis deals with measuring level of awareness, perception and level of practical difficulties faced by retail traders on GST. 10 statements were used for measuring level of awareness and level of perception among retail traders and 10 variables were used to measure level of practical difficulties faced by retail traders on GST. The second part of the analysis deals with the identification of factors influencing level of awareness through factor analysis and its extent on level of practical difficulties faced retail traders on GST. The level of awareness, perception and practical difficulties are measured on a five point scale, the maximum value being five and minimum value one.

### Level of Awareness

The following statements are identified for measuring level of awareness among retail traders.

**Table 1 Variables identified for measuring level of awareness**

1	I am well aware of the tax rates applicable to different products
2	I know about the goods which are exempted and come under provisions of GST
3	GST will evade the cascading effect of earlier tax system
4	GST will bring uniformity in tax rates
5	GST is a simplified taxation system when compared to the earlier tax system
6	Under GST tax is charged at every point of sale
7	GST rate is the lowest tax rate in the world
8	GST is not imposed on exported goods and services
9	I have enough knowledge about the various provisions of GST
10	I know about the voluntary registration option available under GST for traders whose turnover is less than 20 lakhs

### Level of Perception

The following variables were identified for finding out the level of perception of the retail traders.

**Table 2 : Variable identified for measuring level of perception**

1	I think GST help me to boost the sales
2	GST may increase the easiness in procurement of goods from other states
3	I believe that GST will reduce my tax liability
4	I think implementation of GST has resulted in rise in prices of goods and services
5	GST boosts economic activity and leads to economic growth
6	GST has made tax structure and administration more complex
7	GST has enhanced and strengthened the existing tax system
8	GST has increased the compliance costs
9	GST will improve revenue growth due to wide coverage of goods and services
10	GST will result in simple , easy and transparent tax

**Level of Practical difficulties**

The following variables identified for finding out the level of practical difficulties faced by retail traders, including;

**Table 3 : Variables identified for measuring level of Practical difficulties**

1	Filing of returns is more simple under GST
2	I can easily handle the new GST accounting software
3	GST implementation forced me to take technical expertise from outside
4	Tax rates applicable on promotional offers has resulted in reduction of sales
5	Strict documentation procedures for claiming input tax credit has created difficulties
6	The revision of tax rates has created problems in price fixation
7	Preparation of bills after GST implementation has become a difficult task
8	I started receiving customer complaints after GST implementation
9	Purchase from unregistered dealers does not allow me to claim input tax credit
10	I feel quantity of goods purchased by customers has declined after GST coming into effect

### Exploratory Factor Analysis-Awareness Variables

Factoranalysis is a multivariate statistical method that is used to identify the major factors influencing the level of awareness. It is used in data reduction to identify a small number of factors that explain a large number of distinct variables. One of the major condition to be satisfied in factor analysis is that the Eigen value should be greater than one and test of sphericity must be significant. For running factor analysis Kaiser-Meyer-Olkin measure of sampling adequacy was calculated and found to be .617 and the same was adequate to conduct factor analysis.

**Table: 4b : VARIMAX Rotated Component Factor Matrix**

Factors	Factors		
	GST provisions	Tax system	Tax Applicability
I am well aware about the tax rates applicable to different products	.708	.337	.206
I know well about the goods which are exempted and come under the provisions of GST	.777	.211	.113
GST will evade the cascading effect of earlier tax system	.182	.835	.121
GST will bring uniformity in tax rates	.125	.872	-.014
GST is a simplified taxation system when compared to the earlier tax system (VAT)	.028	.134	.772
GST rate is the lowest tax rate in the world	-.077	.243	.780
GST is not imposed on exported goods and services	.342	-.082	.591
I have enough knowledge about the various provisions relating to GST	.681	.367	.153
I know about the voluntary registration option available under GST for traders whose turnover is less than 20 lakhs	.782	-.161	-.004
Eigen values	3.273	1.454	1.402
Sum of cumulative % of Variance	24.13	43.120	61.289
Kaiser-Meyer-Olkin Measure of Sampling Adequacy			.617
Approx. Chi-Square			183.760
Bartlett's Test of Sphericity			45
Significance			.000



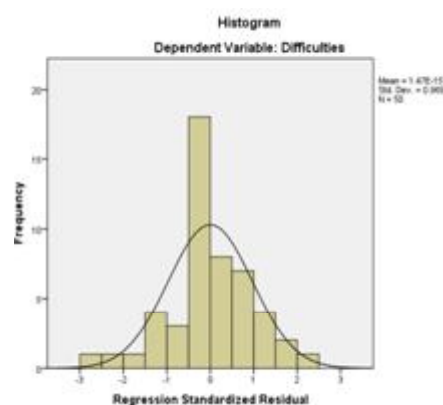
The factor analysis reduces the 10 awareness variables into 3 groups after fulfilling the basic requirements. The first group consists of I am well aware of tax rates applicable to different products, I know well about the goods which are exempted and come under the provisions of GST, I have enough knowledge about various provisions of GST and I know about the voluntary registration option available under GST. All these 4 variables are grouped under the head GST provisions. The second group named tax system consists of variables GST will evade the cascading effect of earlier tax system and GST will bring uniformity in tax rates. The third group named tax applicability includes GST is a simplified taxation system when compared to the earlier tax system, GST rate is the lowest tax rate in the world and GST is not imposed on exported goods and services.

### Impact of factors influencing awareness on practical difficulties

In our study we observed that out of 50 respondents 44% of the respondents belonged to the category having turnover less than twenty lakh. The mean value obtained (3.1932) when level of awareness was measured implies that respondents have moderate level of awareness about GST. That is, even though they are not fully aware they still possess basic knowledge of GST. When level of perception was measured a mean value of 3.18 was obtained. This implies that respondents hold moderate level of perception towards GST. From the analysis it was observed that level of practical difficulties faced by retail traders is on an average with mean 3.6980 with standard deviation .46534. There is no significant difference in level of awareness on the basis of volume of business but level of awareness significantly differs on the basis of nature of business. There is significant difference in practical difficulty on the basis of volume and nature of business.

Using factor analysis the variables influencing level of awareness is grouped under three heads namely tax system, GST provisions and tax applicability. Linear Multiple Regression analysis was used to study the extent of influence these factors have on level of practical difficulties. Here practical difficulty is dependant variable and awareness variables are independent variables.

**H<sub>0</sub>:** The practical difficulties faced by retail traders are independent in different components of awareness.



Mean of above distribution (1.478E-15) is very close to zero and the Standard deviation (0.97) is approximately one, so this satisfies the characteristics of Standard Normal Distribution. The following tables are shows the results of regression analysis.

**Table 5 : Model Summary of Multiple Regression**

model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.485	.205	.198	.4785	1.721
model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
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model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.485	.205	.198	.4785	1.721

**Table 6 : ANOVA - Model Fitness for Practical Difficulties**

Model 1	Un standardized coefficients		Standardized coefficients	T	Sig.
	B	Std. error	Beta		
(Constant)	3.747	.219		15.396	.000
Tax system	.121	.019	.124	2.528	.006
GST provisions	-.185	.104	-.037	-1.231	.075
Tax applicability	-.112	.034	-.141	-2.691	.047

**Table 7 : Coefficients - Significance of the Factors Influencing Practical Difficulties**

The model summary shows the R square value and standard error of the estimate. Since the R square is .205, 20.5% of the variation in practical difficulty can be explained by the factors of awareness. The basic criterion for regression analysis is satisfied as the obtained value (1.721) of Durbin Watson test is less than 2. The ANOVA table gives the value of F-statistics and its significance. The significance value (.000) of the regression model is significant at 5 percentage level of significance and hence the regression of practical difficulties on awareness is valid. This shows that factors of awareness have significant impact on practical difficulties. The above coefficient table indicates beta values, t values and the significance level. Since the significance level of tax applicability (.047) and tax system (.006) is less than 5 percentage level of significance. It can be said that they have considerable impact on practical difficulty. The beta value of tax system is positive; it implies that the tax system and practical difficulties moves in same direction. The beta value of tax applicability is negative, which means, the tax applicability and practical difficulties moves in opposite direction. The above regression analysis reveals that the awareness factors have significant impact on practical difficulty and so it is important to point out those factors that have considerable influence on practical difficulty.

## Conclusion

The study was conducted to evaluate the knowledge, perception and practical difficulties the retailers have towards GST implementation. From the findings it is clear that the level of awareness has not reached satisfactory level and this has led to negative perceptions among retailers about GST. Also lack of awareness was found to be a significant factor that has caused practical difficulties. In order to increase awareness and knowledge and to make retailers better understand the general principles of GST adequate and relevant information must be provided by organising talks, public education programmes and training.

## References

1. Ahmad, M. A. R., Ismail, Z., & Halim, H. A. (2016). Awareness and Perception of Taxpayers towards Goods and Services Tax (GST) Implementation. *International Journal of Academic Research in Business and Social Sciences*, 6(11). <https://doi.org/10.6007/IJARBS/v6-i11/2375>
2. Barhate, G. H. (2017). an Analytical Study of Awareness and Perception Towards Gst Amongst Traders in Rural Areas. *International Research Journal of Engineering and Technology (IRJET)*, 4(5), 1133-1142. Retrieved from <https://www.irjet.net/archives/V4/i5/IRJET-V4I5223.pdf>
3. Chankseliani, M. (2016). University of oxford, 44(0).
4. Devi, K. R. S. (2017). A STUDY ON AWARENESS OF TAXPAYERS TOWARDS GOODS AND SERVICES TAX ( GST ) IMPLEMENTATION, 2(1), 204-206.
5. Dhond, S. S. (2010). Impact of sales tax, VAT & GST on the profitability of organizations, (10), 280.
6. Garg, G. (2014). Basic Concepts and Features of Good and Service Tax In India. *International Journal of Scientific Research and Management*, 2(2), 542-549.
7. Kuriakose, A (2016). Awareness and Perception of Traders About GST?: A Study Limited to Kanjirapally Thaluk. *Splint International Journal of Professionals*, 3(12), 63-71.
8. Lourdunathan, F., & Xavier, P. (2017). A study on implementation of goods and services tax ( GST ) in India?: Prospectus and challenges. *International Journal of Applied Research*, 3(1), 626-629. Retrieved from <http://www.allresearchjournal.com/archives/2017/vol3issue1/PartI/3-1-42-650.pdf>
9. Mukherjee, S (2015). Working Paper No . 2015-154 September 2015 National Institute of Public Finance and Policy Present State of Goods and Services Tax ( GST ) Reform in India, " 2015)
10. Muthupandi, S., & Xavier, A. J. (2017). Awareness of Implementation of Goods and Services Tax (GST) Among College Students ' i n Sivakasi. *International Journal of Engineering Science and Computing*, 7(4), 11065-11070.
11. Norasibah, A. J., Norsamsinar, S., Anuar, S., Norimah Rambeli, R., & Emilda, H. (2015). Public Awareness, Knowledge and Understanding of. *International Journal of Management and Applied Science*, 1(11), 21-24. Retrieved from [http://www.ijar.in/journal/journal\\_file/journal\\_pdf/14-213-145171717821-24.pdf](http://www.ijar.in/journal/journal_file/journal_pdf/14-213-145171717821-24.pdf)
12. Pematuhan, K., Barangan, C., Perkhidmatan, D., Kalangan, D., Kecil, P., Sederhana, D., ... Mustapha, F. (2015). Compliance Costs of Goods and Services Tax (GST) among Small and Medium Enterprises. *Jurnal Pengurusan*, 45(2015), 39-48.

13. Poddar, S., & Ahmad, E. (2009). GST Reforms and Intergovernmental Considerations in India. Working Paper, (1), 1-45.
14. Sharma, G., & George, M. (2017). GST-A Game Changer in Indian Tax Structure, 3(4), 55-62. <https://doi.org/10.9790/487X-1904015562>
15. Vasanthagopal, R. (2011). GST in India?: A big leap in the indirect taxation system. International Journal of Trade, Economics and Finance, 2(2), 144-146. <https://doi.org/10.7763/IJTEF.2011.V2.93>
16. Vineet Chouhan, P. S. (2017). Measuring Awareness about Implementation of GST: A Survey of Small Business Owners of Rajasthan. Pacific Business Review International, 9(8), 116-125.
17. Zainol, F. A., & Soon, T. T. (2015). GST: The impacts, opportunities and challenges for Malaysian SMEs, and experiences faced by other knowledge-based economy. Asian Journal of Knowledge Management, 2(1), 6-19.



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