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# RVIM Journal of Management Research

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# RVIM Journal of Management Research

## Aims and Scope

RVIM Journal of Management Research (RVIM JMR) is a peer-reviewed journal published by the R. V. Institute of Management (RVIM), Bengaluru, India, since 2009. It is biennial with editions published in January and July every year. RVIM Journal of Management Research is a peer-reviewed journal that uses a double-blind review process for evaluation and selection of all submitted materials.

### The Aims of RVIMJMR are to:

- ◊ Seek and disseminate original theoretical and applied research in the field of management and allied areas.
- ◊ Provide a platform for publishing quality research work and case studies undertaken by academicians, industry practitioners and research scholars.
- ◊ Bridge the gap between academia and practice by promoting the publication of original, novel and industry-relevant research.

### Scope of the Journal

RVIM Journal of Management Research welcomes submissions in different areas of the management discipline as below:

- ◊ Banking, Financial Services and Insurance (BFSI)
- ◊ Business Ethics
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- ◊ Strategic Management
- ◊ Technology Management
- ◊ Total Quality Management (TQM)
- ◊ Tourism and Hospitality Management

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## From the Desk of the Chief Editor...

It is our pleasure to present you the first issue of Volume 12 of *RVIM Journal of Management Research*. During this COVID-19 pandemic too the journal has continued to carry forth the research work of eminent academicians and practitioners in management since then. We are proud to inform that our journal has been indexed with J-Gate, Indian Citation Index (ICI) and Cosmos foundation with an impact factor of 5.395. We are hopeful to give the rigor and quality in the papers that have been published and also currently under review, with *RVIM Journal of Management Research*.

In this issue of *RVIM JMR*, eight research papers and two book reviews have been presented for further dissemination across academia and industry as summarized here-in-under:

India being an agrarian economy enhancing farmer's income is imperative for economic growth. Farmers' collectives are playing a significant role in this direction of facilitating farmer's. In the first paper, the study is focused to understand the role of FPOs in extending benefits and members constraints based on size of land holdings and educational level. It is found that, coconut farmer collectives in the state of Karnataka need to have a workable business plans to facilitate their member farmers.

Indian economy is currently experiencing transformation due to GST, demonetization, digital banking, global competition, e-commerce, technology advancement, etc. The second paper attempts to show various developments which are followed and implemented in India in management accounting field which are beneficial for India. The authors have found that both traditional and conventional methods of management costing will help the Indian industries in value creation, cost control and in better utilisation of resources.

A recent trend noticed in the health care delivery sector in Kerala is that many small hospitals are closing down. Since small hospitals are critical for accessible and affordable healthcare, it is important to understand the reasons for their closure. The third paper deals with the findings of the study conducted among consumers of healthcare in Kerala. The findings of the study revealed that customers prefer small hospitals over big corporate hospitals for treatment of both minor and major ailments.

Total Quality Management (TQM) is one of the important tools, which can help the organizations to integrate all its resources and meet those customer requirements. The fourth paper deals with this aspect and the data for the study was collected from 255 quality management personnel working in 58 manufacturing organizations from Belagavi hub of Karnataka state. The results of the study prove that there is a significant correlation exists between TQM and organizational performance. Further, TQM strengthens organizational performance.

Although behavioral finance has gained more prominence across the globe, with the transition to the defined contribution system, the key question of whether the millennial prioritize savings behavior? And does it reflect on the process of financial planning? is yet to be answered. The fifth paper presents the results of the study conducted about the savings behavior on financial planning among the millennial.

Behavioural finance is an interdisciplinary science that provides supporting evidences to certain erratic behaviours of investors. At this juncture, to bring together the concepts, categorization, indicators and remedial measures to behavioral biases becomes very fetching. The sixth paper attempts to present a vivid description of various behavioral biases, followed by their categorization as cognitive and emotional biases.

Leadership is an art of influencing people at workplaces. The successive drive of modern organizations relies on the leader's ability at workplaces. A leader needs to enhance his concentration and focus. This is feasible through yoga practices. Seventh paper makes an attempt to study the impact of yoga practices and its influence on leadership effectiveness and behavior. For this study, the data is collected from 480 Yoga practitioners from various Yoga centers of Madurai Zone and found that there is direct effect of compassion, concentration and awareness on leadership effectiveness which subsequently influence leadership outcome

In the current situation of pandemic, where department of posts, along with department of telecommunication is serving as the fourth leg of the administrative chair of the country, after the administration, security and medicine, providing its role in official communication and articles' flow in the country. The eighth and final paper brings a virtual diary log based study from CPMG Ambala, SSPO Ambala, DAP Ambala and CPMG Chandigarh.

The two book reviews in this issue, the first one on the book 'Emotional Intelligence: AUTHENTIC LEADERSHIP' by HBR Publishing and the second one on the book 'Introduction to Machine Learning by Ethem Alpaydin.

In conclusion, we express our thanks to all members of our Editorial Board and Advisory Body, and to the reviewers for their continued support and encouragement. We hope this issue of *RVIM Journal of Management Research* will play a crucial role in creating and disseminating new knowledge in management, which is the sole purpose of this journal.

Happy Reading and Researching!

**Purushottam Bung**

Chief Editor

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## Coconut Farmer's Collectives in enhancing farmer's income

Dr. A.N.Vijayakumar\*

### Abstract

*India being an agrarian economy enhancing farmer's income is imperative for economic growth. Farmers' collectives are playing a significant role in this direction of facilitating farmer's. The study focused to understand role of FPOs in extending benefits and members constraints based on size of land holdings and educational level. It is found that, coconut farmer collectives in the state of Karnataka need to have a workable business plans to facilitate their member farmers. The educational qualification and land holding size of farmer members do not have any impact on availing the services but FPOs facing constraints in extending services due to lack of workable business ideas and professional acumen as well as financial constraint. Policy makers need to organize capacity building programs on professional management, good agricultural practices etc., including manufacturing techniques of coconut based value added products to enhance coconut farmer's income.*

**Keywords:** Coconut, Collectives, Education, Farmers, Income, Land holding size,

### Overview

Coconut tree popularly known as "Kalpavriksha" is one of the important agriculture crop, provides food, fiber, oil, beverage, and other outputs having economic importance (Naik, 2017). It is cultivated across 95 countries in an area of 12.30 million hectares, with an annual production of 60.77 million tones of nuts. Indonesia is a leading producer of coconut in the world followed by Philippines, India, Sri Lanka, Brazil, Vietnam, Papua New Guinea, Mexico, Thailand and Tanzania (FAO, 2018). The coconut sector provides employment opportunities to millions of people in Asia Pacific countries and also contributes for the economic development and financial empowerment (Kishore & Murthy, 2016). India produces 22.16 million nuts in an area of 2,088 million hectares with an annual productivity of 10,616 nuts/ hectare. In India, state of Kerala (35.51%) and Karnataka (26.36%) jointly contributes around 61.87% to country's total production (CDB, 2019). This sector consists majorly of small and marginal farmers having holding less than 5 hectare's. However, it is facilitating in removing regional imbalances by creating rural employment through plantation and associated industries. It is estimated that around 10 million people depend directly or indirectly on coconut sector for their livelihood in India (CDB 2018).

Most of the coconut farmers are exposed to more risks and uncertainties due to high degree of price fluctuations and are not able to realize remunerative prices for their marketable produce (Lijo Thomas,

et al., 2018). Indian coconut sector is facilitated by Coconut Development Board as a nodal agency of Government of India. In its efforts of enhancing coconut farmer's income promoted coconut farmer collectives to strengthen the competitiveness of unorganized coconut farmers for financial empowerment. Farmer collectives such as co-operatives and farmer producer organization (FPOs) emerged as best alternative among others, to increase market participation and reduce transaction costs through collective action (Padmaja, S. S. et al., 2019). It also acts as an essential element for enhancing farmer's income as well as rural development of the nation (Mukherjee, et al., 2018). The form of farmer producer's organization (FPO) in India has been introduced based on the recommendations of YK Alagh Committee by inserting a new part IX A in 2002 by amending Companies' Act 1956. Subsequently, FPO has been promoted in all the sectors of agriculture i.e., crops, dairy, fishery, horticulture etc. with an intention to increase sustainability of small and marginal farmers in India. These organizations are acting as an effective agent in the development of poor and rural areas by providing immense benefits to the rest of society (Mukherjee, et al, 2018). Farmer producers organizations with three tier structure of coconut producers societies, federation and companies of farmers in coconut sector are expected to reduce cost of production, improve marketability, production of diversified and value added coconut based products, food security, poverty reduction, socio economic development apart from enhancing farm income.

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## Background of the study

Karnataka, being the second largest coconut producing state in India, produces 6,273.79 million nuts, in an area of 518.39 thousand hectares with higher productivity of 12,102 million nuts as against Kerala. In spite of higher productivity in the state, coconut processing units is not been developed to produce high value coconut based products to enhance farm income. In addition, issue of small holdings of small and marginal farmers, lack of awareness on coconut based market opportunities, technical and capital requirements etc., also posing challenge to reap the benefit of coconut business. In the recent past, Government of Karnataka procured coconuts directly from farmers due to severe price crash for coconut and copra's. The farmers generally face challenges of lower price realization, low farm income, financial, technical and marketing skills in manufacturing of coconut based value added products leading to difficulties to sustain their livelihood with coconut farm. In this regard, Coconut Development Board and Government of Karnataka initiated many developmental schemes to promote coconut plantation and allied processing units by socio-economic integration of coconut farmers through farmer collectives to enhance their farm income. Accordingly, as on date around 400 coconut producer societies, 125 coconut producer federations and 13 coconut producer companies were registered in the state of Karnataka. However, coconut farmers are generally not getting benefited from these collectives due to certain factors and constraints. It is, therefore, this study has been initiated to understand the challenges and constraints of coconut farmers in deriving benefits from coconut farmer collectives.

## Literature Review

Small and marginal farmers in India consists 87% of the total farm house hold (Singh & Vatta, 2019). The sustainable growth of Indian agriculture sector depends upon the overall performance of small and marginal farmers (Dev, 2015). Small farm holders are unable to realize better price for their produce, as they are exiting early in the trade value chain (Ramappa & Yashashwini, 2018). Hence, it acts as a major constraint for financial and economic empowerment of farmers (Trebbin & Hassler, 2012). Most of the small and marginal farmers does not have access to consumer markets, as they sell their produce to intermediaries at unreasonable prices (UNDP, 2014). The integration of individual farmers, food markets and raise of modern retail chains has created both opportunities as well as challenges (Singh & Vatta, 2019). These small and marginal farm holders are facing various problems like indigent infrastructure, low access to finance, assets and services resulting in high transaction cost, less market participation (Padmaja, S. S. et

al., 2019) limited access to credit and insurance, vulnerability to drought, pests and other associated risks (Desai & Joshi, 2014 ; Fan, et al , 2013).

Integration of small farm holders in local, national and international level helps in grater specialization, higher productivity and income (Otekunrin, et al., 2019). This resulted of significant improvements in agriculture, food security, poverty reduction and economic growth of the nation (Bernard & Spielman, 2009). A variety of alternative approaches emerged in response to the challenges and constraints faced by small and marginal farmers (Bikkina, et al., 2018). The numerous efforts had been taken by various institutions to mobilize small and marginal farmers to improve their financial status and their wellbeing. These efforts consequently led to emergence of collectives in various forms such as societies, trusts and cooperatives. Even though, co-operatives played a vital role, it did not facilitate in strengthening the economic condition of small and marginal farmers (Ramappa & Yashashwini, 2018). However, the performance of co-operatives in India suffered from lack of active participation of member farmers, poor management skills, financial irregularities, lack of resource mobilization, over-dependence on state assistance, poor benefits to intended target group, social structures based on castes, political and bureaucratic interference in functioning of co-operatives (Abraham, 2015). In spite of the challenges faced in community based collective action and co-operatives, Government and other policy makers emphasized the importance and necessity of nurturing producer organization to deal with the constraints and to empower small farm holders.

Farmer producer organizations (FPOs) formed by primary producers or farmer member of agriculture and allied activities, artisan, non-farm products, etc, intends to bring the spirit of collectivism of co-operative and professionalism of private limited companies. The participation, organizational structure and membership pattern of these organizations are similar to co-operatives, but their day to day business activities looks similar to a professionally managed private companies (Mukherjee, et al., 2018). FPOs play a major role in enhancing the earnings of their member farmers by enabling them to enhance productivity by effective utilization of resources and to obtain higher returns for their produce through collective action (Krishna, Gupta, & Kademani, 2018). They extend backward and forward linkage services to its members such as seed, fertilizers, credit, insurance, technical know-how and processing, market-led agriculture production as well as collective marketing (Singh & Vatta, 2019). These FPOs require technical and managerial skills in order to carry out their activities in a sustainable and profitable manner to benefit member farmers. The FPOs also facilitates member farmers to reduce cost of

production by supplying inputs at reasonable cost by procuring in bulk and with affordable transportation cost. Similarly, collectivizing the produce of member farmers and marketing them in bulk would also fetches remunerative prices. It even, provides market information to the farm producers to hold their produce till their market price become favorable and skill sets through workshops, conferences, focus group gatherings etc. to assist farmers for enhancing their farm income (Mathur, 2018).

The above scholastic evidences highlighted role of farmer producer organizations in providing various services, technical know-how, collective marketing to realize remunerative prices for their produce. However, hardly any research studies have been found focusing on farmer's collectives of Karnataka coconut sector. It is, therefore, posing a research gap to understand the role of farmer collectives in enhancing coconut farmer's income and also to explore various challenges of coconut farmers in receiving the benefits from such collectives. Hence, this paper has been conceptualized to add new insights to the existing literature.

### Objectives of the study are as follows-

1. To study coconut farmers initiatives for enhancing their farm income
2. To review the benefits derived from coconut collectives by member farmers
3. To understand constraints and challenges of farmer collectives (FPOs) in serving member farmers.
4. To study the impact of land holdings and educational qualification of member farmers on constraints and receiving benefits from collectives.

### Research Methodology

This study focusing on intended objectives adopted descriptive and explanatory research method. The scope of study is limited to Karnataka coconut sector focusing on coconut farmers and collectives. The study used both primary and secondary sources of data. Primary data has been collected through structured questionnaires from member farmers of collectives by personal interview method. This study also used secondary sources of data from Coconut Development Board, Government of India, Department of Horticulture, Government of Karnataka and other published sources. The data has been subjected to statistical test of one way ANOVA and descriptive statistics using SPSS 21.0 software for analysis and interpretation.

### Sample

Coconut production in the state of Karnataka is being concentrated in the districts as mentioned in the table no. 1

**Table no.1: Coconut production in the state of Karnataka**

Sl No.	Districts	Production (lakh nuts)	%	Cumulative of %
1	Tumkur	11397.18	34.94	34.94
2	Chitradurga	5042.71	15.46	50.41
3	Ramnagara	1081.94	3.32	53.72
4	Mysore	1778.53	5.45	59.18
5	Mandya	1493.54	4.58	63.76
6	Hassan	3198.00	9.81	73.56
7	Devanagere	618.15	1.90	75.46
8	Dakshina Kannada	2198.77	6.74	82.20
9	Udupi	1779.39	5.46	87.65
10	Chamaraja Nagar	585.13	1.79	89.45
11	Uthara Kannada	616.30	1.89	91.34
12	Chikmagalur	2395.53	7.34	98.68
13	Shimoga	429.94	1.32	100.00
	<b>Total</b>	<b>32615.11</b>		<b>100.00</b>

(Source: Coconut Development Board, 2019)

The districts of Tumkur, Chitradurga and Mysore contribute around 55.85 % of total coconut production, hence using proportionate and convenience sampling method chosen the sample size of 120 respondents. The same has been proportionately related to the districts for data collection as mentioned in Table No.2.



**Table No. 2: Sample Size**

SI No.	Districts	Production (%)	Proportion	Sample Size
1	Tumkur	34.94	63	75
2	Chitradurga	15.46	28	33
3	Mysore	5.45	10	12
	Total	55.85	100	120

(Source: Coconut Development Board, 2019)

The member farmers of collectives having coconut farm holdings up to 2 hectares of marginal and small farmers and also from semi-medium farmers with holding from 2 to 4 hectares at Karnataka have been considered in the sample frame.

### Limitations

The study focused on farmer producer organisations in coconut sector of Karnataka. The sample size is limited to 120 respondents of member farmers of collectives due to time and cost constraints. The quantitative data on evaluation of financial performance of FPOs is not part of the study due to unavailability of data at this movement.

### Coconut Producer Organization an approach

Coconut Producers Society (CPS) is formed by associating 40-100 coconut growers in a particular area with range of 4000-6000 yielding palms. It is mainly registered under the Charitable Societies Act. Coconut Producers Federation (CPF) is formed by combining 8-10 CPS. A CPF would have around 1,00,000 palms under it, also registered under the Charitable Societies Act. Coconut Producers Company (CPC) formed with 8-10 CPFs. A CPC would consist of around 10,00,000 yielding palms. This company generally registered

under Indian Companies Act of 1956 and it is wholly/fully owned by the farmers. CDB channelizes various promotional activities of production and distribution of quality planting materials, expansion of area under coconut in non-traditional areas, adapting to integrated nutrient and pest management, replanting and rejuvenation of old and senile coconut gardens, technology mission on coconut for promotion and processing of coconut value added products, setting up of coconut points/kiosks and facilitating farmers through farmer producer organization for sustainable development of the coconut sector (Jnanadevan, 2019). At present there are 9736 CPS, 743 CPF and 67 CPC functioning in the country, Kerala stand first with maximum number of collective organizations followed by Tamil Nadu, Karnataka, Andhra Pradesh, West Bengal, Odisha, Assam, Gujarat, Maharashtra. In the state of Karnataka, various districts in their geographical frontiers have taken initiative for the formation of farmer collectives by organizing small and marginal farmers and facilitate them for their inclusive growth. The table no.3 shows number of societies, federations and companies in various districts of Karnataka, where in Tumkur stands first with more farmers collectives followed by Chitradurga, Ramnagara, Mysore, Mandya, Hassan, Devanagere, Dakshina Kannada, Udupi, Chamrajnagara and Uthara Kannada.

**Table No. 3: Coconut Farmer Collectives in the state of Karnataka**

SI No.	Districts	CPS Regd	CPF Regd	CPC Regd
1	Tumkur	334	38	6
2	Chitradurga	19	11	2
3	Ramnagara	16	27	2
4	Mysore	3	7	2
5	Mandya	3	14	1
6	Hassan	2	16	
7	Devanagere	10	1	
8	Dakshina Kannada	7	4	
9	Udupi	6	2	
10	Chamaraja Nagar		3	
11	Uthara Kannada		2	

(Source: Coconut Development Board, 2019)

## Analysis and Interpretations

Primary data collected on demographic profile of respondents has been show below:

**Table No.4: Educational Qualification**

Particulars	No. Respondents	Percent
Below Matriculation	19	15.8
Matriculation	29	24.2
10+2	36	30.0
Under Graduation	36	30.0
<b>Total</b>	<b>120</b>	<b>100.0</b>

(Source: Field survey)

The table no. 4 denoting qualification of respondents observed that among 120 respondents, 60% were undergraduates and have passed 10+2 respectively, where as 24.2% have passed matriculation and 15.8% were non matriculates.

The table no.5 depicts size of land holdings of small, marginal and semi medium coconut farmer respondents from sample districts. Tumkur being the largest coconut producing district in the state comprises 50% of small and marginal coconut farmers and 15% of the respondents are in the category of semi-medium. In total, 75% of the respondents are marginal

**Table No. 5: Size of Coconut farm Holdings** (Figures in parenthesis are in %)

Particulars	Tumkur	Chitradurga	Mysore	No. Respondents
Marginal and Small (upto 2 ha)	60 (50)	22 (18.3)	8 (6.6)	90 (75)
Semi- medium (2 to 4 ha)	15 (12.5)	11 (9.2)	4 (3.3)	30 (25)
Total	75 (62.5)	33 (27.5)	12 (10.0)	120 (100.0)

(Source: Field survey)

and small coconut farmers having landholdings up to 2 ha. Similarly 25% of respondents are semi-medium coconut farmers having a land holding from 2 to 4 ha. It is observed that majority of the coconut farm holders are small and marginal farmers.

The table no. 6 shows various initiatives taken by coconut farmers to enhance their income. It is noticed that most of the respondents (60.8%) practice multi /inter cropping system. Although, 39.2% of the respondents depend upon off-farm activities like dairy farming, sheep breeding, poultry etc., Around

**Table No. 6: Initiatives of Coconut Farmers to enhance income**

Sl.no	Particulars	Yes	%	No	%	Mean	Rank
1	Multi cropping / Inter cropping	73	60.8	47	39.2	.6083	1
2	Off Farm Income	47	39.2	73	60.8	.3917	2
3	Bee keeping	9	7.5	111	92.5	.0750	6
4	Replacing of high yielding coconut varieties	35	29.2	85	70.8	.2917	3
5	Replanting and Rejuvenation of coconut gardens	15	12.5	105	87.5	.1250	5
6	Processing the coconut for value added products	31	25.8	89	74.2	.2583	4

(Source: Field survey)

29.2% and 12.5% of the farm holder replace with high yielding coconut varieties and rejuvenate coconut gardens respectively. But, very less percent of the respondents (25.8%) are engaged in processing of coconut based value added products especially copra

making. Coconut being a perennial crop acts as hindrance for realizing regular cash flow to sustain their livelihood. It is, therefore, observed that majority of the respondents are engaged in various activities to enhance their income.

## Benefits derived from coconut farmer collectives by member farmers

The primary data collected from respondent member farmers of coconut producers companies has been presented to analyze the benefits -

**Table No. 7: Benefits derived from FPOs (collectives)**

Sl.no	Particulars	Mean	Std. Deviation	Rank
a.	Availability of inputs at concessional rates	4.8833	.32237	1
b.	Bulk transport of coconut harvest at lower transportation cost	3.5667	.82740	2
c.	Coconut FPO facilitates by attracting traders to collect produce at farm gate	2.8500	.86627	7
d.	Easy access to modern technologies	1.4417	.51524	13
e.	Facilitation of capacity building, extension and training programmes.	2.1000	1.07999	12
f.	Value addition and efficient management of value chain to overcome harvest losses	3.4917	.85990	3
g.	Facilitate quality control and increased production and farm management	3.3333	.91975	4
h.	Coconut FPO facilitates in managing Price fluctuation through contract farming forward agreements, etc.	3.0500	.96884	5
i.	Easy access of coconut price, volume and other farming related advisories	2.9167	.96653	6
j.	Facilitates to access finance	2.6500	1.07414	8
k.	Access to support services by government and other service providers	2.5750	1.05848	9
l.	Improved collective bargaining power through FPO	2.5000	1.02899	10
m.	Access to Storage Facility	2.4750	1.00388	11

(Source: Field survey)

The study explored different facilities of coconut FPOs in serving its members. The above table no.7 reveals that, inputs at concessional rates have facilitated majority of the farmers and ranks first with the mean value of 4.88. Coconut farmers are also facilitated with bulk transport of coconut harvest and FPOs activity in value addition to overcome the harvest losses that is depicted from the above table with 3.56 and 3.49 respectively. Coconut FPOs are also facilitating coconut farmers with quality control measures and farm management as well as assisting them in managing price fluctuations which ranks fourth and fifth among the benefit. CPOs are also assisting farmers by providing information on price and farming

related advisories etc., however, these facilities need to be extended to more farmers. Very less number of farmers has access to finance through FPOs; and other support services from government has been channelized from FPOs, as these facilities need to be extended to more number of small and marginal farmers to facilitate in sustaining their livelihood. Coconut FPOs should focus in providing storage facility to farmers as it is less focused with low ratings. Most of the coconut farmers lack in good agricultural practices, multi-cropping etc., these skills can be imbibed through capacity building and training programmes through coconut FPOs.

**Table no. 8: Constraints and Challenges of member farmers face tough FPOs**

Sl.no	Particulars	Mean	Std. Deviation	Rank
a.	Lack of trust with FPO office bearers	1.9417	.63901	9
b.	Lack of Market Info	2.8083	.95527	8
c.	Lack of Basic Infrastructure	4.5083	.50203	4
d.	Lack of Storage of produce	4.1750	.66941	7
e.	Political Intervention	1.3500	.47897	10
f.	Lack of access to Finance	4.5083	.50203	5
g.	Lack of access to Economic benefits	4.5000	.50210	6
h.	Leadership and Management crisis	4.5667	.49761	2
i.	Divergent interest	4.5083	.50203	3
j.	Lack of Business ideas	4.9333	.25049	

(Source: Field survey)

## Constraints and challenges of FPOs

The study explored challenges of FPOs in operations and constraints in serving member farmers of coconut farmer collectives. The data has been presented with descriptive statistics and in order of ranking at the table no.8-

In the table no. 8 depicts constraints and challenges that member farmers face from farmer collectives (FPOs). It is found that, farmer collectives in the state of Karnataka lack in workable business ideas with a mean value of 4.93 to carry out viable business activities for enhancing financial performance. Most of the coconut farmer collectives also face leadership and management crisis as well as divergent interests among the office bearers with mean value of 4.56 and 4.50 respectively, indicating challenging work atmosphere for effective functioning. It is found that with mean value of 4.50 indicating coconut farmer collectives lack in assessing basic infrastructure for carrying out their business activities as well as unaware about the financial assistance for farmer collectives (example SFAC capital grant. Farmer collective in the state should focus on extending economic benefits to facilitate farmers, processing value added products and warehousing facility to manage price crash. It is observed that farmer collectives are not able to procure outputs (copra, raw nut, tender coconut etc.) from member in

spite of having market information due to lack of trust on FPOs office bearers by member farmers it is having a mean values 2.80 and 1.94 respectively. These collective are working with minimal political intervention with less mean value of 1.35 is a good sign.

It is observed that, generally, small and marginal coconut farmers are not getting benefited from coconut farmers' producers' organizations in the state. The study, therefore, considering the member's land holding size and educational qualification explored for understanding impact on receiving benefits from FPOs.

## Impact of land holding size on constraints and benefits

It is observed from table no. 9 the impact of land holding size of coconut farmer members (marginal and small as well as semi-medium) on receiving benefits and their constraints from FPOs has been analyzed.

Accordingly member farmers often and not really (mean with 3) face constraints in accessing the services from FPOs. This situation is not encouraging member farmers to access services from FPOs in enhancing their farm income. Similarly, member farmers are not really getting (with mean of 2.9) benefited from coconut farmers producer organizations in the

**Table no. 9: On land holding size - Descriptive statistics**

Particulars		Number	Mean	Std. Deviation	Std. Error
Constraints	Marginal and small	90	3.7111	.45579	.04804
	Semi-medium	30	3.5667	.50401	.09202
	<b>Total</b>	<b>120</b>	<b>3.6750</b>	<b>.47034</b>	<b>.04294</b>
Benefits	Marginal and small	90	2.9444	.52705	.05556
	Semi-medium	30	2.9000	.66176	.12082
	<b>Total</b>	<b>120</b>	<b>2.9333</b>	<b>.56111</b>	<b>.05122</b>

sample. The statistical result justifies, limited functioning and non-pro active role of coconut farmer producer organizations have an effect on enhancing financial performance of members.

## Testing of Hypothesis - 1

The size of land holdings of member farmers in facing constraints and availing benefits from farmer producer companies has been analyzed using one way ANOVA. The study postulated following hypothesis to understand the impact - Null Hypothesis (H0)

- There is no impact of land (coconut) holding size of member farmers on facing constraints and receiving benefits from coconut FPOs.

Alternative Hypothesis (H1) - There is an impact of land (coconut) holdings size of member farmers on facing constraints and receiving benefits from coconut FPOs.

The statistical results of ANOVA (table no. 10) with p values of constraints (0.146) and benefits (0.709) are not statistically significant and it is also not less than general acceptance level of 0.05. It is, therefore the null hypothesis cannot be rejected.

Table no. 10 ANOVA

Particulars		Sum of Squares	df	Mean Square	F	Sig.
Constraints	Between Groups	.469	1	.469	2.142	.146
	W ithin Groups	25.856	118	.219		
	<b>Total</b>	<b>26.325</b>	<b>119</b>			
Benefits	Between Groups	.044	1	.044	.140	.709
	W ithin Groups	37.422	118	.317		
	<b>Total</b>	<b>37.467</b>	<b>119</b>			

The study with one way ANOVA test concludes that land holding size of marginal and small as well as semi-medium member farmers does not have an impact on facing constraints and availing benefits from coconut producer companies. It is further concludes that, Coconut FPOs in the state need to improve business ideas and grow for mutual benefit of their member farmers.

Mean Plots

Figure no.1 Mean of Constraints

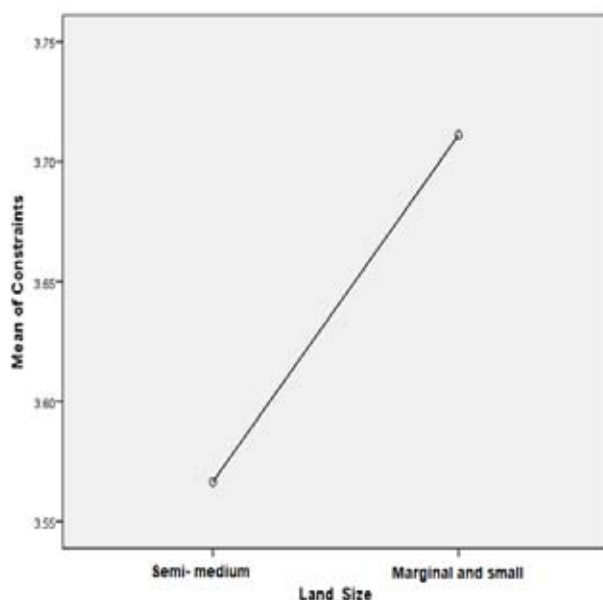
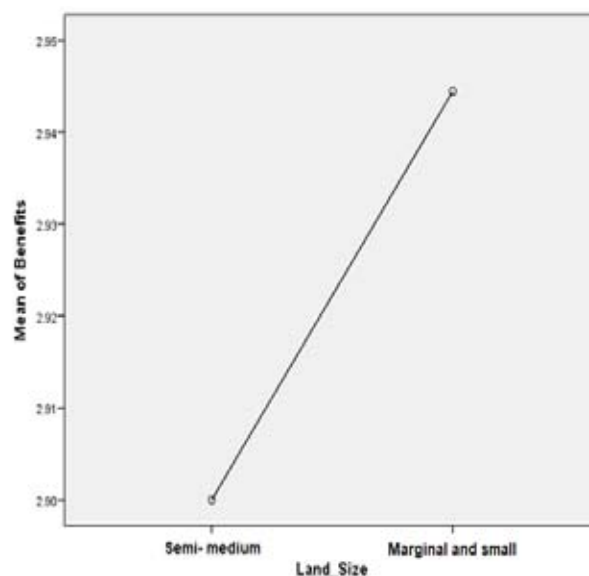


Figure no.2 Mean of Benefits



### Educational Qualification on Constraints and benefits

It is observed from the table no.11 that, the impact of educational qualifications of member farmers in receiving benefit and facing constraints from FPOs has been analyzed. The member farmers regularly face constraints in accessing the services from FPOs. This in turn does not facilitate member farmers in enhancing their farm income. Similarly, member farmers of FPOs are not actually getting benefited in the sample. The statistical results show that non-performance of coconut farmer producer organizations in enhancing financial performance is due to lack of business acumen skills and indigent infrastructural facilities.

### Testing of Hypothesis - 2

The study using one way ANOVA postulated a presumption considering educational qualification of member farmers in facing constraints and availing benefits from farmer producer companies as under –

Null Hypothesis (H0) – There is no impact of educational qualification of member farmers on facing constraints and receiving benefits from coconut FPOs.

Alternative Hypothesis (H1) - There is an impact of educational qualification of member farmers on facing constraints and receiving benefits from coconut FPOs.

**Table no. 11: Descriptive statistics of educational qualification**

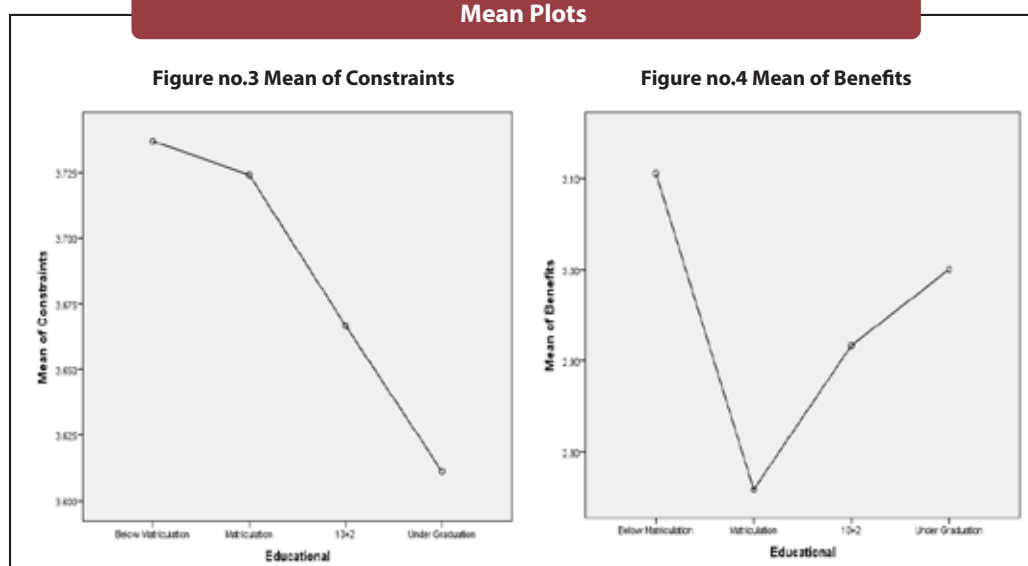
Particulars		N	Mean	Std. Deviation	Std. Error
<b>Constraints</b>	1.00 Below Matriculation	19	3.7368	.45241	.10379
	2.00 Matriculation	29	3.7241	.45486	.08447
	3.00 10+2	36	3.6667	.47809	.07968
	4.00 Under Graduation	36	3.6111	.49441	.08240
	<b>Total</b>	<b>120</b>	<b>3.6750</b>	<b>.47034</b>	<b>.04294</b>
<b>Benefits</b>	1.00 Below Matriculation	19	3.1053	.45883	.10526
	2.00 Matriculation	29	2.7586	.63556	.11802
	3.00 10+2	36	2.9167	.36839	.06140
	4.00 Under Graduation	36	3.0000	.67612	.11269
	<b>Total</b>	<b>120</b>	<b>2.9333</b>	<b>.56111</b>	<b>.05122</b>

The statistical results of ANOVA (table no.12) with p values of constraints (0.729) and benefits (0.162) are not statistically significant and it is also not less than general acceptance level of 0.05. It is, therefore, the null hypothesis cannot be rejected.

The study with one way ANOVA test concludes that educational qualification of member farmers does not have an impact on facing constraints and availing benefits from coconut producer companies. The farmer collectives need to

**Table no. 12 ANOVA**

Particulars		Sum of Squares	df	Mean Square	F	Sig.
<b>Constraints</b>	Between Groups	.292	3	.097	.434	.729
	W ithin Groups	26.033	116	.224		
	<b>Total</b>	<b>26.325</b>	<b>119</b>			
<b>Benefits</b>	Between Groups	1.617	3	.539	1.744	.162
	W ithin Groups	35.850	116	.309		
	<b>Total</b>	<b>37.467</b>	<b>119</b>			

**Mean Plots**



direct themselves in undertaking new business ideas and professionalize in serving its coconut member farmer.

## Conclusion

Coconut farmers are the integral part of agri-plantation sector; due to lack of business insights and resources they are not able enhance their income and sustain their livelihood in the state. It is, therefore, coconut farmer producer organizations need to play a vital role in enhancing economic power of their members. These collectives' services are not adequately facilitating coconut farmers nor are they favorably getting benefited. However, Coconut collectives in the state have been associated in distributing (providing) inputs and acting as a channelizing agent between member farmers and government agencies. They need to have a workable coconut business plans and adopt professional management in leading their trade to uplift the spirit of farmers' collectivism. These organizations need to work effectively with professionalism for sustainable growth and development. The Governments at center and state should also assist coconut farmers and collectives by linking with techno-management professional organizations to en-cash abundant coconut business opportunities to grow in the competitive world and also for rural development.

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## Paradigm Shift in the Management Accounting Practices in India

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### Abstract

*Management accounting is an accounting branch which provides and presents commercial, economic, accounting and operational details to the management, managers and accountants to make important decisions thereby becoming an integral part of an organization. During the past decades, in India, the competition among businesses has increased and with rapid changing working environment of businesses, there has been criticism and reviews have cautioned about the usefulness, performance, efficacy and value of traditional and usual management accounting practices for not supporting managers for decision-making.*

*India is a developing mixed-economy and is among the fast growing economies in the Asia and World. In 1991, Indian economy was liberalized and has changed the information requirements of the Indian companies. Indian economy is currently experiencing transformation due to GST, demonetization, digital banking, global competition, e-commerce, technology advancement, etc. The earlier practices adopted in management accounting was related to costing, budgeting and variance analysis which has changed to advisory, focuses on decision-making, strategic planning, long term growth and to optimize business operations.*

*The present paper tries to study the opportunities, challenges and vicissitude in the Indian economy which has compelled to shift principles and practices of management accounting from conventional model to the model of value creation. This paper attempts to show various developments which are followed and implemented in India in management accounting field which are beneficial for India.*

**Keywords** – Decision-Making, Economy, India, Management accounting, Practices

### Introduction

Management Accounting is accounting for management and managers. It is concerned with the data collected from internal and external sources and these data are processed and analyzed to interpret the required information to be communicated to the management, managers and accountants to perform their respective functions. It is helpful for the management as a support system tool for decision-making and also helps in policy formulation. Now-a-days, the role of management accounting has become bigger than earlier days. The importance of management accounting lies in providing information and contributing and helping managers in making better decisions.

According to the Institute of Management Accountants (IMA):

*"Management Accounting is a profession that involves*

*partnering in management decision making, devising planning and performance management systems, and providing expertise in financial reporting and control to assist management in the formulation and implementation of an organization's strategy" (Institute of Management Accounting, 2008).*

As per Hilton and Platt:

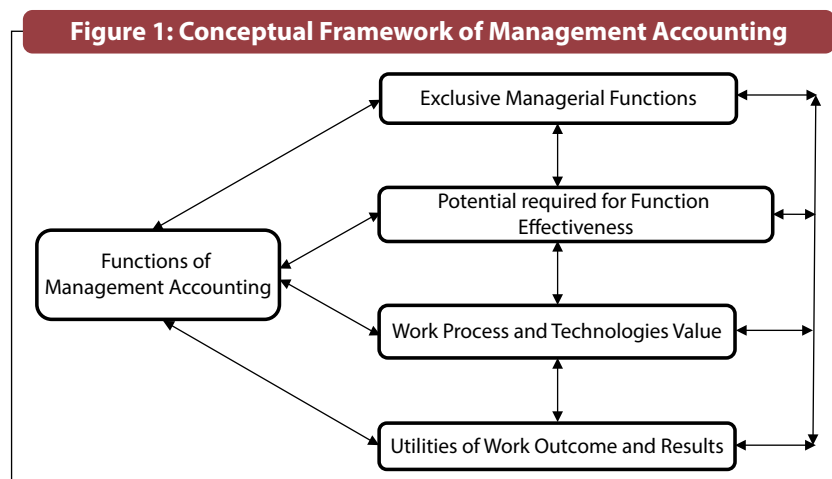
*"Management Accounting is the process of identifying, measuring, analyzing, interpreting and communicating information in pursuit of organization's goals. Management accounting is integral part of management process" (Hilton and Platt, 2014).*

The Association of International Certified Professional Accountants (AICPA) views:

*"Management accounting as a practice which has also extended to Strategic Management, Performance Management and Risk Management."*

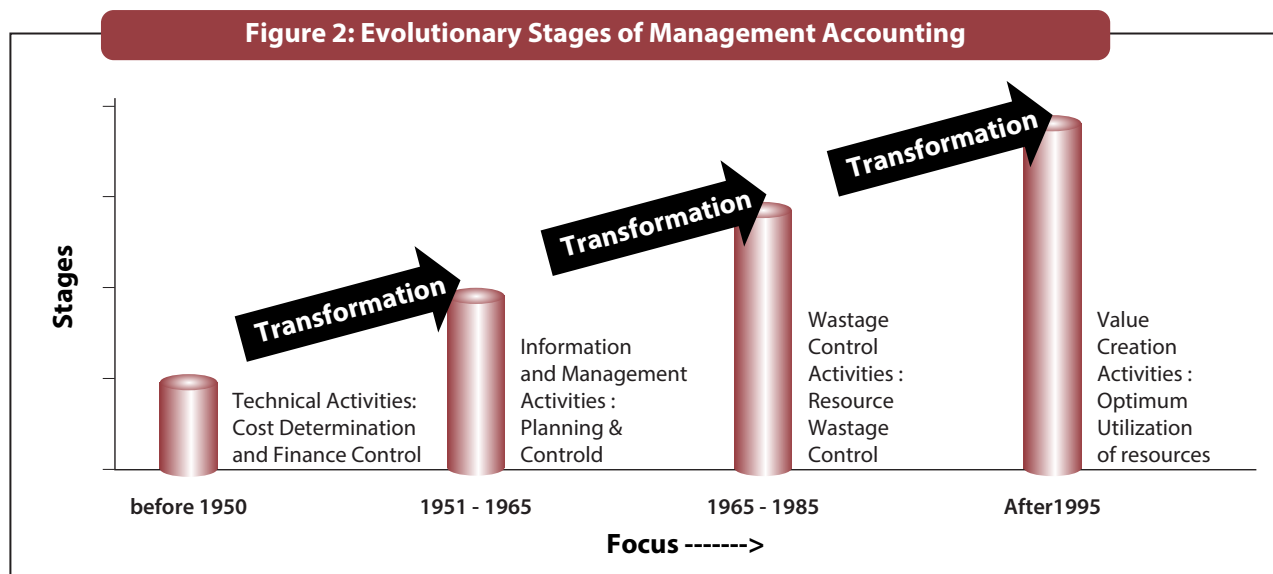
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Above is the illustration from IFAC which explains the growth in the practices of management accounting. It shows as how the resources can be utilized effectively and efficiently to ensure value creation. Each concept of framework is connected with others concept to explain the effective use of resources which generated some value. These values are of financial

and non-financial nature and are known as management accounting functions. The above conceptual framework describes its practices as focuses on the functions of management accounting having ability of effective performance, evaluations of work processes and outcomes and use of technologies for getting better results.



Evolutionary Stages of Management Accounting based on the concept of International Federations of Accountants (IFA)

The stages are briefly explained as under:

- Stage-1: Management Accounting Technique before 1950 – This stage has been described by IFAC as a stage where technical activities were undertaken in the pursuit of achieving organizational objectives. The focus of stage-1 was mainly on the determination of cost and control over finance oriented towards fixing product cost. Magde

Abdel-Kader and Robert Luther in their research note on the IFAC's Conception of the Evolution of Management Accounting stated about simple production technology, identifiable costs of materials and labour and no or very little innovation in the field of process or products (Abdel-Kader & Luther, 2004). They also stated that in this stage, the concern of management was production capacity. The practices prevalent during this period were budgeting and cost accounting technologies.

- b. Stage-2: Period of Information (from 1951 to 1965) – This stage lays emphasis on functions of management necessary for planning as well as for controlling. IFAC has described this stage as an activity of management in the role of staff. Magde Abdel-Kader and Robert Luther in their research note viewed this stage as use of technologies by the staff to support line management (Abdel-Kader & Luther, 2004). Manufacturing and internal administration was focused for management controls. In this stage, the reaction was found only when deviations were found.
- c. Stage-3: Period of Control on Wastage (from 1965 to 1985) – This stage focused on controlling wastages of resources occurring during the production process. Magde Abdel-Kader and Robert Luther in their research note explored that many aspects of manufacturing industries were affected due to world recession of 1970, oil price upset, global competition and fast technological development. The developments and evolution of computers markedly changed the essence, characteristics and quantity of data, to be retrieved and used by the managers. Ashton et al (1995) observed information systems to be considerably important for effective management. The updated and new techniques of management as well as production were introduced to meet the global competition. This stage also devised methods to control costs by reducing wastages of resources in the business process (IFAC, 1998. Para 7).
- d. Stage-4: Value Creation Stage (1995 onwards) – This stage marked the period of management accounting as value creation stage. According to Ashton et al. 1990s was the period where industries at global level had to face noticeable dilemma and unmatched progress in technologies related with production and information processing. Such problems forced the industries to shift their focuses towards the generation of value by better and optimum utilization of available resources. The effective use of technologies was a solution to achieve the above, which examines the forces for consumers' value, shareholders value and organizational innovations (IFAC, 1998. Para 7).

## Literature Reviews

Robert H. Chenhall & Kim Langfield - Smith (1998) found that "mostly the manufacturing firms of Australia have accepted and implemented traditional as well as modern management techniques. However, the traditional practices were widely used than modern techniques. Activity Based Costing, one of the modern techniques was more adopted than other modern techniques. They also revealed that the benefits of contemporary and new techniques were

less as compared to traditional techniques of management accounting."

Sulaiman M., Ahmad N.N., Alwi N. (2004) identifies "the extent of implementation of conventional and modern techniques of management accounting in four countries of Asia viz. India, China Malaysia and Singapore. The authors concluded that all four countries have wide acceptance of traditional techniques but way behind lag in the implementation of contemporary techniques of management accounting."

According to Mahfar and Omar (2004), "management accounting provides essential information to the business for planning, evaluating, controlling and decision making process. They criticized conventional management accounting as these techniques focused more on internal process rather than external issues. Latest management accounting practices are essential for any organization to survive in this rapidly changing global environment."

Christina Wiwik Sunarni (2013) observed that "main focus of management accounting has always been to improve the organization performance and profitability by providing relevant information for planning, controlling and decision making. The study revealed that traditional management techniques have wide implementation with budgeting as a significant tool for the managers of various companies except small scale industries."

Garry Marchant (2013) also points that "the 21st century has seen the emergence of the information age and the economy is driven by knowledge. The organizations equipped with knowledge have competitive gain. The forces of this shift in economic activity are leading to innovative signals in management accounting. This has aroused the demand for new proficiency, talents and potentials of accountant practicing management accounting."

Lunkes R.J., Ripoll V.M. & Rosa F.S. (2013) suggested that "Brazil and Spain have shown growing trends towards management accounting. They feel that there is a need for larger erudition for analyzing options of investment and decision making methods."

Afirah Azudin & Noorhayati Mansor (2017) suggested that "transformation in worldwide business environment have forced Small and Medium-size Enterprises (SMEs) to focus on cost efficiency for sustainability. Management Accounting Practices (MAPs) provide various tools, techniques and valuable internal information including for budgeting, profit planning and performance evaluation. MAPs are also shaped by management accounting information system. Variations in its application among businesses are common since the management accounting practices are not standardized."

## Research Methodology

Various researches have been made in the field of management accounting by various researchers in different countries but as far as India is concerned, the research studies related with this topic is limited. Various research studies of management accounting practices and concepts reports that different countries have varied tvuses of the techniques of management accounting. A number of research papers, reports and concept notes have been published in this field based on traditional and accumulated findings with the help of only secondary data. The literature reviews show that these management accounting practices are changing. An analytical research by means uses analyses and evaluates information and materials already available. There were many books and articles intended for developing the novel and advanced accounting techniques of management (Yazdifar & Tsamenyi, 2005).

The paper is organized as Introduction as Section one discussing about management accounting, its practices, conceptual framework and development phases of management accounting as explained by IFAC in 1998. Next section provides literature reviews about the traditional management accounting practices, development in its practices. Section three of this paper is about the research methodology used. The next section is about the objectives of the research paper. Finally, this paper ends with conclusion of the research paper giving scope for future studies in the field of shifting of management accounting practices and concepts.

### Objectives of the study

This research study aspires to explore the development, changes and shifts arising in the practices and concepts of management accounting in India impacting businesses for the value addition. The object of this research paper is to understand about the adoption of past and future practices of management accounting by the Indian establishments and their responses toward them.

### Effectiveness and acceptance of practices of management accounting

There have been widespread discussions on the degree of change in the field of management accounting practices. Johnson and Kaplan (1987) observed that there was not much changes observed in the beginning of the twentieth century in the practices of management accounting due to which its importance was lost for the managers especially in the process of making decision. They also stated that the cost accounting and control system of many companies were outdated to meet the global competition of 1980s. Increasing competition and shifting in the

business environment in past decades, various studies and literatures have criticized and have raised concern about the usefulness and efficiency of the traditional and conservative management practices. These old and traditional practices have been lacking and unable to provide sufficient and required information to support managers and management for decision-making.

Lawrence and Ratcliffe (1990) endorsed this argument of various dissatisfaction levels among the management accountants and managers while applying the traditional methods of management and cost accounting with the help of a survey. Bork and Morgan (1993) opined about the failure of traditional systems and practices of cost and management accounting to cop-up with the increasing demands of manufacturing environments due to technological changes.

Alnoor Bhimani (2015) observed that the literature on management accounting emanates from late 19th century with the reports and writing on cost accounting. Since, the last two decades, management accounting field has experienced important changes due to various economic, management and organisational factors at local and global level. Many transformation, innovation and development have occurred in the field of management accounting practices in various industries especially at international level.

Some changes in management accounting practices are innovation of costing on the basis of Activities (ABC), Value Analysis, JIT, Strategic Management accounting aspect, Total Quality Management (TQM), Kaizen Costing, etc. Aforesaid methods of costing have been devised to cop-up with the increasing competitions and challenges at local and global level to support management, accountants and managers. Due to changes in production techniques, advanced and improved technologies, cost restructuring of firms, global competition, etc have put pressure and compelling Indian companies to think about adopting and changing management accounting practices.

### Management accounting practices and their acceptance in india

#### A) Conventional Practices

- i. Budgeting – It is a process and quantitative expression of future projections of income and expenditures for the period prepared in advance to track of finances and funds. It may be prepared for the entire organisation or for various departments or for various functions involved in that organisation. Thus, it translates the objectives of the business into comprehensive and exhaustive plan of action to be attainable and achievable.



- ii. **Standard Costing and Variance Analysis** – It involves setting up of standards in costs and using them to measure deviations from actual results. It is used to analyse the causes and reasons of variations to maintain the efficiency in production. Thus, standard costing is a method to compare the standards and actual data and to analyse the variation, if any, between them. Variance analysis is a tool which explains the reason of variations between the performances of costs, materials, labour, overhead, etc i.e. it compares standards set with actual results. The variances may be favourable and adverse/unfavourable.
- iii. **Break-even Analysis (BEP) or Cost Volume Ratio Analysis (CVP)** – This tool helps to study the relationship of cost and volume at different levels and their impact on the profit of the business. It helps to determine an equilibrium point where sales is equal to total cost i.e. it shows that point where sales and cost, both are same and it is a situation of no profit or no loss. It is an analysis tool used by management accountants to determine the effect on profit with the changes in volume and costs.

## B) Contemporary Practices

- i. **Activity Based Costing (ABC)** – Cooper and Kaplan of Harvard Business School developed this technique in 1998 as an substitute to absorption costing method to get more understanding into the allocation of cost for the product produced in the manufacturing industries. It was found to be improvements over the traditional method of allocation of costs. There are various costs of activities which are carried out within the organization and traditional approach leads to distorted cost allocation whereas in this method of costing, these activities are taken into account to allocate them proportionate cost on the basis of their use in the product. Thus, ABC technique is a method and strategy which helps the management and managers to price the product more precisely.  
  
The adoption rate of ABC technique has been reported to 26% by a research survey conducted by Joshi in 1998 whereas in 1999, Anderson and Lanen stated in their research study that none of the companies in India found to be applying this method. Anand M. et al. (2005) found that the firms applying Activity Based Cost System in their organization were successful to show the correct information about their cost and profit (Anand, Sahay & Saha, 2005). Their result also showed that with ABC cost system, the organizations have improved understanding for benchmarking and budgeting.
- ii. **Target Costing (TC)** – Target costing is a method of costing as well management process to establish cost of product based on market conditions and standards. There are various factors which help in determining prices based on marketing situations like competition level, products of homogeneous nature, switching costs by customers, etc. It is a technique to bring down the products costs and control it at the initial stages of planning and designing of the product as the management have very little or no control on the selling price. This method starts with recognising customers' requirements and then finding sales price of the product which is acceptable by the customers.  
  
Target costing has been especially used by some Japanese companies since 1970s to control and reduce the cost. Target costing is a marketing method of costing and is very useful in the competitive markets to establish the price of the products. Individual organisation has got little chances to impact price therefore this method is used by the organisation to survive and win the increasing competition by maintaining quality, cost and productivity. P.L. Joshi in his research study found that the first non-Japanese's article on target costing appeared towards the end of the 1980s albeit with Japanese authors like Monden, Hiromoto, Sakurai and Tanaka (P.L. Joshi, 2001).
- iii. **Kaizen Costing** – This method of costing is based on continuous improvement on the small important activities. Kaizen costing methods helps in reducing and managing cost of a product. The purpose of this technique is to bring down the costs of products below standard. In this method, costs are controlled and reduced after the product design is over and is under production.
- iv. **Value Analysis (VA)** – It is a technique to reduce cost by identifying unnecessary costs in a product, process or a part. Such unwanted activities are eliminated to cut down the costs to minimum. It is a costing approach based on functions at primary and secondary levels. It helps in generating alternatives values of same function at a lower cost to result in a better accomplishment of the same function. The major tools and techniques used by value analysis are checklist, Functional Analysis System Technique, value tests, function-cost matrix, Pareto analysis, brainstorming, paired-comparison method, etc. It is a mechanism to reduce cost and far better results are achieved. In this method, values are assigned at the design stage to develop the effectiveness of the activities.
- v. **Just-in-Time (JIT)** – JIT idea was given by Taiichi Ohno, Executive Vice-President of the Toyota Motor Company in the last quarter of twentieth century. It became very popular innovation in production and



was widely accepted by the Western and Asian Countries (Schonberger, 1982b). This technique was one of the improvement concepts which have marked the drastic change in the manufacturing operations. This method is an approach of making improvement in the manufacturing process by removing all wastes. Basically, this method is an inventory management method to reduce the holding cost of materials and labour i.e. they are replenished at the time of production process. In this costs are adjusted with the minimum holding charges thereby customers demand are met with the minimum purchase of goods. Thus, just-in-time is an operational activity formulated to achieve maximum production with minimum holding costs. This technique is more popular in automobile sector.

As per Business Today, some of the Indian industries who implemented some features of JIT were Bajaj Auto Ltd., Ashok Leyland, Samtel Colour, Sundaram Brake Linings, RNAE Madras, Jindal Vijayanagar Steel, Ceat Tyres, Escort Tractors, Wipro Corporation, Hewlett Packard (HP) India, Blue Star, PriceWater House Cooper (PwC), etc.

- vi. Product Life Cycle Costing (PLC) – This method of Costing is associated with products costs for its entire life. The life cycle costs of a product includes developmental, producing and logistical costs like planning, designing, testing, converting, advertising, distribution, etc. This technique helps in identifying and managing various costs incurred during the life of the product. It provides good understanding of costs at various stages and helps in controlling.
- vii. Activity Based Management (ABM) – It emphasizes in managing activities with an object of creating value for the customer and profit realised by the organisation by giving such value to the customer. Activity based costing is the main source of data for ABM. The ABM includes analysis of cost driver & activities and measurement of performance. It facilitates management and managers in differentiating activities as value-added and non-value-added so as to find the ways to reduce or remove activities which are non-value-added.
- viii. Total Quality Management (TQM) – It is an activity of recognising and reducing faults in the manufacturing process and restructuring of operations to improve the experience of customer. The objective in this is to hold all parties involved responsible for the quality of the end product or service rendered to the customer. This technique was developed by William Deming, a management consultant inspired by Manufacturing System of Japan. It focuses to reduce or eliminate errors with the help of

internal guidelines and standard processes. It is not about a quick management fix but changing the way things are done within the organisation.

- ix. Business Process Re-engineering (BPR) – Under this, workflows are revised to improve processes and remove those activities which are non-value-added in nature. The object of this technique is to bring down costs and eliminate redundancies in the processes. It helps in the innovation, redesigning and remodelling of unproductive processes and layers to wipe out redundancies. It involves essential and major redesign of main processes of business with an aim of achieving perfections in the output, cycle periods and quality.
- x. Pareto Analysis – This technique was developed by an Italian economist, Vilfredo Pareto. It is a technique based on the rule of 80:20 focusing on selecting specific tasks affecting the total production significantly. This technique is helpful where there are various courses of action by selecting the best possible action which will deliver a reasonable overall effect. This analysis is useful in separating causes having less but vital variables with other variables which will improve the situation and problem solving of cost and regularity of occurrence (Sodhi, 2011). Thus, this analysis helps in concentrating issues having higher impact on the cost and finance though their contribution may be 20% but will be impacting 80% of the results.
- xi. Customer Profitability Analysis – This is a method of allocating proceeds and costs to main consumers and group of consumers rather than to organisational departments, divisions or products. In this a customer group is considered as a segment due to difference in the profitability of different groups of customers. It is relatively a new technique to create group of activities. This technique is helpful when it is combined with activity based costing as it determines the preference of activities to be performed for each group and accordingly costs will be assigned.

## Findings

The research studies observed that management accounting practices have changed in alignment with changes in the environment and companies. Various studies and researches mentioned above highlight the main purpose and functions of the management accounting. However, evidence reviewed suggests that providing information still remains the important object of management accounting with traditional concepts still remain strong. Many countries are found to lack in applying contemporary accounting concepts (Sulaiman, Ahmad & Alwi, 2004). Kamal Shah in his research study states that in past five decades, there have been not much novel progress and

improvement in the area of management accounting (Shah, 2015). Some of functions remain unchanged over the period of five decades whereas some have changed from functional responsibilities to professional activity. It has been observed by many authors that professionalism of functions is the main evolution of management accounting and significant changes have been found in its styles in the latter part of twentieth century.

P.L. Joshi in his paper finds that Indian societies think about long duration course having diligence towards gradual and steady results. They are eager to lower their own interests against the organizational goal to achieve it. They respect their traditions and have long

past history of legacy as against the new ideas and innovations hence they take long time to accept and adjust their traditional values, customs and practices. So, it can be assumed that the Indian industries are slow in taking-up and implementing new methods and application of such new practices in their manufacturing activities. The study also reveals that Indian industry finds traditional practices more beneficial than new techniques. Other reasons for slow adoption of management accounting practices are autocratic leadership, conservative management, narrow mind, etc (Joshi, 2001).

P.L. Joshi (2001) examined 60 companies comprising of large and medium sized manufacturing companies in India.

**Table 1 : Respondent type and Size of the sample Companies**

Respondent who completed the questionnaire	Frequency	% of total	Size	Frequency	% of total
Accounting and Finance Managers	44	73.30	Large	39	65.00
Non-accounting Managers	16	26.70	Medium	21	35.00
Total	60	100.00	Total	60	100.00

Note: Reprinted from "The international diffusion of new management accounting practices: the case of India" by P.L. Joshi, 2001, Journal of International Accounting Auditing & Taxation, 10 (1), 89-109. Copyright @ 2001 – Elsevier Science Inc.

**Table 2 : Production Methods**

Production Method	Frequency	% of total respondents
Batch	25	41.70
Continuous Flow	16	26.70
Paced Assembly	11	18.30
Job Shop	8	13.30
Total	60	100.00

Note: Reprinted from "The international diffusion of new management accounting practices: the case of India" by P.L. Joshi, 2001, Journal of International Accounting Auditing & Taxation, 10 (1), 89-109. Copyright @ 2001 – Elsevier Science Inc.

Anderson and Lanen studied about management accounting practices of Indian firms understanding and experience against global competitive market during pre-liberation period. They also studied the difference in competitive strategy of Indian firms existing at the same period of time. According to their research study, improvement was found in the procedure of management function especially related with planning, budget, employees' participation, collection and analysis of data. They have restricted data and facts about the performance evaluation of Indian management. Their study was silent on the acceptance of new techniques and practices of management accounting. Their study found some changes

**Table 3 : Industry Composition of Sample**

Industry	Size	Proportion
Consumer Durable, personal care and food products	7	13.21
Engineering and Capital Goods	6	11.32
Chemicals and Pharmaceuticals	4	7.55
Power Generation and Transmission	4	7.55
Tractors	4	7.55
Automobiles and auto ancillaries	4	7.55
Construction, Cement and building materials	3	5.66
Information Technology – Software	3	5.66
Oil, Gas and Petrochemicals	3	5.66
Telecom and Electronics Equipments	2	3.77
Tyres	2	3.77
Diversified	1	1.89
Iron Ore and non-ferrous metals	1	1.89
Textiles	1	1.89
Others (logistics, banking, telecom services, consultancy, airlines services, etc)	8	15.09

Note: Reprinted from "Cost Management Practices in India: An Empirical Study" by Anand Manoj, Sahay B.S. and Saha S., 2005, ASCI Journal of Management, 33 (1&2), 1-15. Copyright @2005 Administrative Staff College of India.

which were aligned with the change in business environment (Anderson & Lanen, 1999).

A survey of 53 companies was undertaken in the research paper by Anand Manoj, B.S. Sahay and Subhashish Saha (2005) in their paper titled "Cost Management Practices in India: An Empirical Study". Out of these 53 companies, 77 percent companies belong to manufacturing sectors and 23 percent belong to service industries. The composition of industries was –

Y.V. Rao and A.B.A. Beg (2015) conducted survey of 50 manufacturing companies of Andhra Pradesh containing both small and medium-sized and large companies. The composition of industries was –

**Table 4 : Profile of the Respondent**

Industry	Frequency	Percentage
Textile	22	44
Paper Products and Publications	8	16
Chemicals and Plastics	10	20
Food	6	12
Miscellaneous	4	8
<b>Total</b>	<b>50</b>	<b>100</b>

Note: Reprinted from "Cost Management Practices in India: A survey of Manufacturing Companies in India" by Y.V. Rao and A.B.A. Beg, 2015, International Journal of Research and Development – A Management Review (IJRDMR), 4 (4), 8-12. Copyright @ 2015 - International Journal of Research and Development.

Y.V. Rao and A.B.A. Beg found the job costing was the most widely used method of costing. Indian companies used costing information mainly for pricing decisions ratio (Rao & Beg, 2015). Y.V. Rao and A.B.A. Beg further added that there were three main important practices of management accounting undertaken by the Indian industries viz. budget, planning & controlling, and CPV ratio (Rao & Beg, 2015). The importance of cost accounting was evident and increasing due to reducing profit, increasing costs, competition and economic crises throughout the world (Rao & Beg, 2015). Anderson and Lanen (1999) stated that Indian respondents were particular about the productivity as a main area of focus along with customer satisfaction and timely delivery of goods and services (Anderson & Lanen, 1999). Bruns & Waterhouse (1975), Gordon (1984) and Marchant (1984) in their papers suggested that size of companies as a significant reason in deciding management accounting systems and processes followed inside the institutions. As per many studies, the adoption level of conventional and new techniques of management accounting are high in big size and multinational companies.

In all the above three research papers, it was concluded that some of the industries have fully integrated process with reporting systems by the help of ERP system. The job costing method is widely used method. Y.V. Rao and A.B.A. Beg (2015) found that prime costs, units produced and direct labour are the the most widely used overhead allocation bases. Costing information is used mainly for pricing decision. The companies observe traditional management accounting tools to be still important than new practices. Y.V. Rao and A.B.A. Beg (2015) observed that new techniques of analyzing and presenting information are gradually introduced to supplement the existing practices and methods and abandonment of the traditional techniques is slow on the introduction of the new techniques. Consequently, traditional techniques of management accounting still heavily dominate the Indian companies. Firms were implementing management accounting practices probably due to high competition, increasing costs and pressure on their profits.

Many Indian companies believe that it is quite expensive to adopt the new management accounting techniques particularly. The large scale companies have tendency to use new practices rather than small and medium sized companies. Some of Indian industries have successfully implemented JIT initiatives and getting benefits but they need to change their procedures, processes and operations and have to work more aggressively in suitable and successful implementation of this technique. Most of them widely use tools include Cost Volume Profit Analysis, Budgeting, Activity based costing but life cycle budgeting, Kaizen costing and Target costing was not widely used.

The application and functioning of activity based costing in Indian industries has started taking a significant role in the effective control of resources, supports continuous improvement in processes and have impacted various decision-making process but the rate at which it is applied is slower pace.

Various studies suggest that various new techniques, practices and tools of management accounting have very low acceptance and implementation rate. The implementation of target costing in India seems to be difficult due to unorganised sector and lack of collection of data as target costing needs correct market information and its proper analysis. Kaizen costing has been accepted by some of the large organisation as a part of total cost management especially automobiles sectors are ahead in applying this method in their manufacturing process. Indian manufacturers have to take initiation in this technique to compete at global level as it will help them to improve value creation and customer satisfaction to get better return on investments and increase in the market share.

## Conclusion

The practices and techniques of management accounting in India has not gain much attention as some of the big and medium-sized manufacturing units are using management accounting practices but their focus is mostly towards the traditional practices whereas contemporary practices are taking momentum at slower rate. The main and vital techniques of management accounting were related with the improvement in profit. Various researches shows that Indian enterprises does not provide important position to the management accounting in the organization but identifies opportunities for improvement in management accounting practices. Various studies, researches and articles contribute the role of accounting important for business decisions.

The Indian manufacturing industries depends greatly depends upon conventional practices of management accounting. Their rate of adoption of newly developed methods is slow and also low and they give more importance to the tools related with cost control like budgeting, standard costing, variance analysis, cost profit-volume ratio, etc. for production. Strategic planning, profitability analysis, etc. Modern techniques are given less weight than traditional ones.

Indian industries have started using modern and newly developed techniques in their production process but the adoption rate is not very much encouraging. With the changing business environment and increasing competition globally, it is very much suggested that Indian manufacturing organisation must start using these methods and practices of management accounting as much as possible to reap their benefits though they should also apply traditional and conventional techniques at the same time with better approach. Both, traditional and conventional methods of management costing will help the Indian industries in value creation, cost control, better utilisation of resources, more market share with higher profitability, enhanced planning and improved decision-making.

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## Does Size Matter in Choice of Hospitals? An Empirical Study in Kerala

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### Abstract

*A recent trend noticed in the health care delivery sector in Kerala is that many small hospitals are closing down. Since small hospitals are critical for accessible and affordable healthcare, it is important to understand the reasons for their closure. This research paper aims to find out if this closure is due to lack of customer preference for small hospitals or some other reason. The paper is based on a quantitative study that was conducted among consumers of healthcare in Kerala during April – May 2019. Chi square test was used in analysis of data. The findings of the study revealed that customers prefer small hospitals over big / corporate hospitals for treatment of both minor and major ailments. Chi square test also indicated that there is no difference in preference for health care providers across different income categories of households. The study concludes that it is not lack of customer preference that is driving closure of small hospitals. Since the small hospitals are a critical part of healthcare eco system in the country, the reasons for their closure need to be identified and addressed.*

**Key Words:** Healthcare, Hospital preference, Hospital size, Private hospitals, Small hospitals, Large / corporate hospitals.

### Introduction

In India, private sector plays a dominating role in healthcare delivery. Large majority of hospitals in the private sector are small hospitals. A trend noticed in recent times in the Indian healthcare sector is an increase in the number of large hospitals. While the large hospitals are fast expanding, small hospitals are closing down. Small hospitals are critical in ensuring accessibility and affordability of healthcare delivery and hence reasons for closure of small hospitals need to be understood. This paper attempts to understand if it is lack of customer preference that is leading to closure of small hospitals.

### Review of Literature

India's healthcare spend is 1.35% of its GDP is the lowest in the world. Public health care delivery alone cannot cater to the health care demands of a growing population. This is where private participation in healthcare becomes relevant. Indians rely heavily on private providers for primary, secondary and tertiary care. Private health care accounts for 74 percent of the country's total health care expenditure (India Brand Equity Foundation Healthcare Report, 2015). According to NSS 75th round data, private sector accounts for 65.8% of treated ailments and 55.3% of hospitalizations. Report of Steering Committee of

Health, Planning Commission, and Tenth Plan corroborates this by stating that private hospitals account for 82 percent of outpatient treatment and 52 percent of hospitalisations in India. Thus private sector plays a dominant role in healthcare delivery in India both in terms of expenditure and utilization. Taking specifically the case of Kerala, Kerala Health Accounts of the year 2013-14 states that private sector accounts for 4/5th of the total current healthcare expenditure of Rs. 24699 crores in the state. When it comes to utilisation, 55 percent utilised by private sector for inpatient treatment (Kerala Health Accounts, 2013-14) and 77 percent utilised private providers for outpatient care (Levesque et al, 2006).

Majority of the hospitals in the private sector are small hospitals. More than 80 percent of them have less than 25 beds. Average number of beds in private hospitals is 10 (Report of Steering Committee of Health, Planning Commission, Tenth Plan). A large majority of hospitals in private health care sector in India are run by one doctor (Hooda, 2015). Hospitals providing primary and secondary care are mostly owned and managed by doctors (R V Baru, 2006 & Muraleedharan, 1999). Middle class Indians rely heavily on small hospitals to meet their healthcare needs. IMAGE (IMA Goes Eco friendly - Indian Medical Association's waste management scheme in which 90 to 95 percent of private hospitals in Kerala are

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registered) estimates that close to 80 percent of the hospitals in Kerala are small hospitals (0 to 50 beds).

Many factors have contributed to the recent trend of increase in the number of large hospitals. In 2000, Indian Government allowed 100 percent FDI in hospital sector and this led to an increase in foreign investment in hospitals from Rs. 31 crores in 2001-02 to Rs.3995 crores in 2013-14 (Hooda, 2015). In 2000, hospital sector attracted 12.8 percent of the total foreign equity inflow health sector. This percentage increased to 25.5 percent in 2013 (Hooda, 2015). FDI worth US\$ 5.25 billion was pumped into the hospital and diagnostic centers between April 2000 and June 2018, according to data from Department of Industrial Policy and Promotion (DIPP). All this led to growth of big hospitals and corporate chains in health care delivery system. The impact that all this had on the structure of health care delivery system in India is that large hospitals increased at a rate much higher than that of medium and small hospitals (Hooda, 2015). The Indian private hospital sector is shifting towards corporatization with the share of 'own account enterprises' (usually run by one doctor) declining during 2001-02 and 2010-11 period (Hooda, 2015). As a case in point, if we take Kerala the number of allopathic hospitals with in patient facility in 1986 was 1864. This increased to 1958 in 1995 and then fell to 1405 by 2004. Average number of beds in these years was 26, 34 and 41. From this, it can be concluded that smaller hospitals were replaced by large hospitals (T R Dilip 2008).

Research proves that concentration (only a few providers, without much competition) is happening across industries including healthcare sector. Concentration can eliminate competition - Kerala Association of Small Hospitals and Clinics (KASC) estimates that a thousand small hospitals closed down in the state since 2005. This reduced hospital beds availability by 5000. The association attributes competition from corporate hospitals for the closures. Lack of competition can lead to higher costs and inefficiencies in delivery (Sandhya S N, Pilassery 2017). Concentration in the healthcare sector can pull up healthcare costs - concentration in hospital markets is associated with higher prices. Findings from a 2010 analysis reveals that private-insurer payment for hospital stays in a highly concentrated healthcare market as San Francisco was around 75 percent higher than in the more fragmented Los Angeles market (Wessel, 2018).

A World Bank study revealed that in India 75 percent of health care expenditure comes from private households (OOP, out of pocket expenditure), 15.2 percent from the State Government, 5.2 percent from the Central Government, 3.3 percent from private employers and 1.3 percent from foreign donors.

Given that a lion's share of health expenditure is OOP it is important that cost of health care delivery remains under control. In the absence of government regulations for cost control, competition in the sector is the only way to restrict health care delivery cost in India. If corporate hospitals dominate health care delivery it can lead to inequitable access to health care due to increased cost. Therefore it is important that small health care providers co-exist with big / corporate hospitals. In this context reasons for closure of small hospitals need to be studied. Patients are increasingly involved in making healthcare decisions as their healthcare costs keep on increasing (Corbin et. al. 2001). Patients are seen to switch hospitals even for non-clinical reasons (Munsuru, 2011). Therefore it has to be examined if closure of small hospitals is due to lack of consumer preference.

## Research Gap

Despite the very important role played by small hospitals in healthcare delivery in India, private sector is not a widely studied sector (R V Baru, 2006). Studies on private healthcare sector in India are very limited (T R Dilip, 2008). These limited studies focuses more on statistical aspects as utilization of private sector for inpatient and outpatient care, distribution of doctors and beds in the private sector and profiling of hospitals in terms of type and size. There are very few studies on private healthcare providers in general and small hospitals in particular. Small healthcare providers that include small hospitals, nursing homes, clinics and dispensaries play a critical role in health care delivery. Of late their numbers are decreasing and there is no research till date that looks into the reasons for the same. This paper attempts to address that research gap.

## Statement of Problem

Small hospitals are impacted by the emergence of large / corporate hospitals in the healthcare delivery sector in Kerala. Many of these small hospitals are closing down. The state of Kerala fares well in all health related social indices on account of a strong network of government and private hospitals in the state. As already mentioned, most of these private hospitals are small hospitals that are critical in delivering quality healthcare affordably. Therefore the reasons for their closure need to be understood. This paper tries to explore if it is lack of customer preference that is leading to closure of small hospitals.

## Research Objectives

The objectives of the study can be stated as:

- To assess patient preference for small and large healthcare providers – based on type of ailment (minor ailments / major ailments) and across

income categories (annual household earnings of Rs. 2 lakhs to Rs.10 lakhs and annual household earnings of more than Rs.10 lakhs).

- To identify the major motivators and deterrents for patients in choosing small hospitals.

### Operational Definitions

**Small healthcare providers:** National Board of Accreditation of Hospitals and Healthcare Providers defines a small healthcare organization as those with 50 beds or less. This is the operational definition for small health care providers is broadly based on this definition given by followed in this study. This will include nursing homes, clinics and dispensaries. These are usually owned and run by doctors or their families.

**Big / corporate hospitals:** Health care providers with 50 beds or more / run like a corporate. Usually owned by businessmen and run by managers.

Households with earnings between INR 200,000 and INR 10,00,000 were classified as 'middle class'. Hence the two categories considered here are 'middle class' and 'upper class'. Assumption here is that people with annual household income of less than Rs.2 lakhs visit government hospitals for their healthcare needs.

### Hypotheses

$H_0$ : In the case of minor ailments there is no difference in preference for health care providers (small health care providers and big / corporate hospitals) across different income categories of households.

$H_A$ : In the case of minor ailments there is difference in preference for health care providers (small health care providers and big / corporate hospitals) across different income categories of households.

$H_0$ : In the case of major ailments there is no difference in preference for health care providers (small health care providers and big / corporate hospitals) across different income categories of households.

$H_A$ : In the case of major ailments there is difference in preference for health care providers (small health care providers and big / corporate hospitals) across different income categories of households.

### Scope of the Study

The study was geographically limited to the state of Kerala. Districts covered include Thiruvananthapuram and Kozhikode. Type of hospital was limited to allopathic private hospitals i.e. customer preference for small and large / corporate hospitals in the allopathic private sector was examined.

### Limitations of the Study

- The study was confined to allopathic hospitals.

- The study was limited to Kerala.
- Sampling limitations – sampling method adopted was convenience sampling.

## Research Methodology

Source of data is primary data. This was a quantitative study using survey method. Face to face interviews were conducted using a structured questionnaire (with a few open ended questions as well). Practicality of the questionnaire was tested using a few pilot interviews among respondents with profiles similar to the target respondents. Though 120 respondents were interviewed, after data cleaning sample size was reduced to 111. Sampling method was convenience sampling. Though convenience sampling is not the best method to get a representative sample it is good enough to get a feel of the market. Sampling unit was the person in the household who was responsible for taking decisions on health care related needs of self / the family. The study was conducted in Kerala during April – May 2019.

## Findings and Discussions

### Respondent Profile

Of the 111 respondents 62.5 percent were men and 37.5 percent were women. 28 percent of the respondents was 25 to 30 years old, 21 percent was 31 to 35 years old, 22 percent was 36 to 40 years old, 17 percent was 41 to 45 years old and the remaining were 46 years and above. Around 56 percent of the respondents were graduates, 24 percent were post graduates and 11 percent were just high school pass outs. A few had PhD. 42 percent of the respondents worked in private organizations, 31 percent ran their own business, 12 percent were professionals and 7 percent had Government jobs.

**Table 1: Healthcare Provider Preferred in Case of Minor Ailments**

Healthcare Provider	No. of Respondents	Percentage
Small health care providers	107	96.4%
Big / corporate hospitals	4	3.6%
Total	111	100%

Source: Primary Data

In the case of minor ailments almost all (96.4 percent) prefer to go to small hospitals, doctors' consultation clinics or doctors' homes. Very few (3.6 percent) prefer to go to big / corporate hospitals.

Cross tabulation of preference for small and large hospitals across the two income categories (annual HH income of Rs.2 L to Rs.10 L and more than Rs.10L) revealed that both categories prefer small hospitals in case of minor ailments.

**Table 2: Preference for Healthcare Provider for Minor Ailments - Across Income Categories**

			Minor ailment_Preference		Total
			Small health care providers	Big / corporate hospitals	
Annual HH Income	Rs.2L to Rs.10L	Count	79	3	82
		Expected Count	79.0	3.0	82.0
		% within Income	96.3%	3.7%	100.0%
		% within Minor ailment_Preference	73.8%	75.0%	73.9%
		% of Total	71.2%	2.7%	73.9%
	More than Rs.10L	Count	28	1	29
		Expected Count	28.0	1.0	29.0
		% within Income	96.6%	3.4%	100.0%
		% within Minor ailment_Preference	26.2%	25.0%	26.1%
		% of Total	25.2%	.9%	26.1%
Total		Count	107	4	111
		Expected Count	107.0	4.0	111.0
		% within Income	96.4%	3.6%	100.0%
		% within Minor ailment_Preference	100.0%	100.0%	100.0%
		% of Total	96.4%	3.6%	100.0%

Source: Primary Data

**Table 3 : Chi-Square Tests**

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.003 <sup>a</sup>	1	.958	1.000	.721
Continuity Correctionb	.000	1	1.000		
Likelihood Ratio	.003	1	.958		
Fisher's Exact Test					
Linear-by-Linear Association	.003	1	.959		
N of Valid Cases <sup>b</sup>	111				

Chi Square test was conducted to assess the significance of difference in preference across income categories.

- 2 cells (50.0%) have expected count less than 5. The minimum expected count is 1.05.
- Computed only for a 2x2 table

Pearson Chi Square Significance value is .958 ( $p > .05$ ). Therefore null hypothesis is accepted - In the case of minor ailments there is no difference in preference for health care providers (small health care providers and big / corporate hospitals) across different income categories of households.

**Table 4: Symmetric Measures**

		Value	Approx. Sig.
Nominal by	Phi	-.005	.958
Nominal	Cramer's V	.005	.958
	Contingency Coefficient	.005	.958
N of Valid Cases		111	

For this data, Cramer's statistic is 0.005 out of a possible maximum value of 1. This represents almost no association with income levels and preference.

**Table 5: Healthcare Provider Preferred in Case of Major Ailments**

Healthcare Provider	No. of Respondents	Percentage
Small health care providers	57	51.6%
Big / corporate hospitals	54	48.4%
Total	111	100%

Source: Primary Data

For major ailments 51.6 percent of the respondents were seen to prefer small health care providers whereas 48.4 percent preferred big / corporate hospitals. The preference for big / corporate hospitals for treating major ailments is way higher vis-à-vis for minor ailments (47.5% prefer big / corporate hospitals for treatment of major ailments as against 3.4% preferring it for treatment of minor ailments).

**Table 6: Preference for Healthcare Provider for Major Ailments – Across Income Categories**

			Major ailment_Preference		Total
			Small health care providers	Big / corporate hospitals	
Annual HH Income	Rs. 2 L to Rs.10L	Count	43	39	82
		Expected Count	42.1	39.9	82.0
		% within Income	52.4%	47.6%	100.0%
		% within Major ailment preference	75.4%	72.2%	73.9%
		% of Total	38.7%	35.1%	73.9%
	More than Rs.10L	Count	14	15	29
		Expected Count	14.9	14.1	29.0
		% within Income	48.3%	51.7%	100.0%
		% within Major ailment preference	24.6%	27.8%	26.1%
		% of Total	12.6%	13.5%	26.1%
Total		Count	57	54	111
		Expected Count	57.0	54.0	111.0
		% within Income	51.4%	48.6%	100.0%
		% within Major ailment preference	100.0%	100.0%	100.0%
		% of Total	51.4%	48.6%	100.0%

Source: Primary Data

Cross tabulation of preference for small and large hospitals across the two income categories (annual HH income of Rs.2 L to Rs.10 L and more than Rs.10L)

revealed that both categories prefer small hospitals in case of major ailments too (though the preference for large hospitals is significantly higher vis-à-vis minor ailments).

**Table 7 : Chi-Square Tests**

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.149 <sup>a</sup>	1	.700		
Continuity Correction <sup>b</sup>	.029	1	.865		
Likelihood Ratio	.149	1	.700		
Fisher's Exact Test				.829	.432
Linear-by-Linear Association	.147	1	.701		
N of Valid Cases <sup>b</sup>	111				

a. 0 cells have expected count less than 5. The minimum expected count is 14.11.

b. Computed only for a 2x2 table

Pearson Chi Square Significance value is .700 ( $p > .05$ ). Therefore null hypothesis is accepted - In the case of major ailments there is no difference in preference for health care providers (small health care providers and big / corporate hospitals) across different income categories of households.

**Table 8: Symmetric Measures**

	Value	Approx. Sig.
Nominal by Nominal Phi	.037	.700
Cramer's V	.037	.700
Contingency Coefficient	.037	.700
N of Valid Cases	111	

For this data, Cramer's statistic is 0.037 out of a possible maximum value of 1. This represents almost no association with income levels and preference.

### Major Motivators in Choosing Small Hospitals:

**Table 9: Choosing a Small Healthcare Provider – Major Motivators** (Multiple responses)

Total no. of respondents: 60		
Motivators	Frequency	Percentage
1 Low cost	33	55 %
2 Distance	25	42 %
3 Friendly & caring doctors (& staff) / Good doctors	23	38 %
4 Familiarity with the doctor	11	18 %
6 Quick response	11	18 %
7 Less waiting time	7	12 %

Major motivator in choice of small hospitals is low cost of healthcare delivery. Distance to the healthcare facility (accessibility) and 'friendly and caring doctors' are the other chief motivators. This finding is supportive of the assumption that small hospitals are important in delivering affordable and accessible healthcare.

### Managerial Implications:

There seems to be distinct preference for small health care providers over large corporate hospitals for treatment of both minor and major ailments. Small health care providers need to convert this preference to 'purchase' and consequently to loyalty. Suitable marketing strategies need to be devised for this. Healthcare is an out of pocket expenditure in Kerala (as for the rest of the country). Small hospitals working out a

consolidated model to maintain cost advantage over big / corporate hospitals can help in retaining patients. Also, maintaining good relationship with patients can work as an advantage over large hospitals where patient interactions are mostly faceless.

### Scope for Further Research

This study analyse the consumers' preference for small hospitals across two income categories –annual household earnings of Rs. 2 lakhs to Rs.10 lakhs and annual household earnings of more than Rs.10 lakhs. Research can be carried out to understand preference across more levels of income categories. This can help in proper segmentation of the market and look at various positioning variables (for e.g. affordability of healthcare). Factors in choice of a healthcare provider can be studied in more detail considering more variables and then doing factor analysis to identify the motivating factors for small hospitals so as to devise effective marketing strategies for attraction and retention of patients.

### Conclusion

The study concludes that it is not lack of consumer preference that drives closure of small hospitals. Since small hospitals form an important part of healthcare ecosystem in the state (and the country), the real reasons for closure of small hospitals need to be identified and measures have to be taken to protect small hospitals to safe guard the interests of both providers and patients.

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## The Effect of TQM on Organizational Performance in Manufacturing Organizations

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### Abstract

Modern business environment is witnessing huge competition as the expectations of customers are changing in many ways. There has been consistent rise in the expectations of customer. The customers in the contemporary world are clearly conscious regarding the availability of latest technology and they expect organizations to leverage that technology to provide them with the quality products and services. Total Quality Management (TQM) is one of the important tools, which can help the organizations to integrate all its resources and meet those customer requirements. Therefore, TQM is gaining momentum and has become an integral philosophy of every business organizations. TQM is a management approach that aims at providing enduring success and achieving highest customer satisfaction through the constant delivery of quality products and services. The purpose of this research article is to test the conceptual model that addresses the association between TQM and organizational performance and to examine the strength of association between the two. The data for the present study was collected from 255 quality management personnel working in 58 manufacturing organizations from Belagavi hub of Karnataka state. Statistical techniques such as correlation analysis and multiple regression analysis were used to answer the proposed research questions. The results of the study found that there is a significant correlation exists between TQM and organizational performance. Further, TQM strengthens organizational performance.

**Keywords:** Innovation, Quality, Operations, Organizational Performance, TQM

### Introduction:

The term quality conveys an important implication to both organizations as well as customers. Both manufacturing and service organizations have realized that their survival depends exceedingly on producing superior goods and services. From the customer's perspective, quality is the one, which satisfy or exceed customer expectations at the minimum possible cost. As a result, manufacturing and service organizations are persistently struggling hard to enhance the quality at every stage and accomplish the expectations of the customers. Therefore, these days TQM has become an integral philosophy of every business organization. TQM is a quality management philosophy and all-inclusive quality enhancement technique that every business organization is practicing for the purpose of improving overall performance in terms of cost and quality. Predominantly in the recent past TQM started receiving a great attention worldwide (Jung & Wang, 2006). According to Martinez-Costa et al, (2008), TQM strategy is a leading tool used for continuous improvement and for the enhancement of company's competitive advantage. The primary objective of this study is to examine the association between TQM and organizational performance. The

study also aims to investigate the impact of TQM on organizational performance.

### Literature Review:

TQM is the continual process of detecting and reducing or eliminating errors in manufacturing, rationalizing supply chain management and ensuring the enhancement of customer satisfaction.

Generally management of quality either in manufacturing sector or service section is considered to be the responsibility of quality personnel and not of an entire organization. Nonetheless the concept of TQM articulates that, management of quality involves the participation of an organization as a whole which emphasizes on continuous improvement right from the procurement of raw material till to the satisfaction of customers.

Essentially TQM practices function as an interdependent structure that is combined with other organizational assets to achieve competitive advantage (Hackman & Wageman, 1995). Huqand Stolen, (1998) was of the opinion that, TQM tools and procedures are equally useful for both manufacturing and service sectors. Belagavi is situated in Karnataka state and is

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known for manufacturing organizations. There are several TQM practices, which influences the performance of organizations. To name a few, top management commitment, customer satisfaction, total employee commitment, process approach, integrated system, strategic and system approach, supplier relationship, design of quality, employee empowerment, benchmarking, statistical process control, employee involvement and training (Dale & Cooper, 1994). TQM elements can be classified into two categories, namely soft and hard TQM elements (Rahman & Bullock, 2005). The soft elements include leadership, employee relation, employee involvement, customer focus, strategic quality planning, process management, continual improvement, data and information analysis and knowledge and education. On the other hand, the hard elements comprise elements like quality management tools and techniques, customer and supplier relationships (Fotopoulos & Psomas, 2009). To have an efficient effective TQM in place, an organization has to focus on both hard as well as soft elements of TQM. TQM stresses on continuous improvement and satisfying the customer needs and expectations. Goh and Ridgway (1994) significantly argued that organizations must struggle hard to satisfy their customer needs and wants with the lowest cost to remain competitive in the market. Rampersad (2001) in his research work mentioned that every employee in an organization should consider continuous improvement as the key to ensure customer satisfaction. According to Taylor & Wright, (2003) top management must understand the principles of TQM thoroughly and should envisage on the significance of internal management processes, employee involvement, training and development in the implementation of TQM practices

Sharma and Gadeene (2001) in their research work indicated that TQM is all-inclusive management philosophy and has a huge potential to impact organizational performance. According to Hendricks and Singhal (2001), while assessing the relationship between TQM and organizational performance, one should consider the causal linkages. Baldwin & Johnson, 1996 in their research proved that, TQM implementation enhances continual improvement and customer focus. Salaheldin (2009) revealed that the implementation of TQM has a significant positive impact on the performance of organizations. According to Singh et al, (2018), TQM elements are positively related to the performance factors of the Indian organizations. Further, the literature survey revealed that the effects of TQM on various indicators of organizational performance is not consistent, quality performance generally indicated strong and positive

relations (Prajogo & Sohal, 2003). In addition, a research study conducted by Arumugam, Ooi, & Fong, (2008) found that TQM has a positive and significant relationship with quality performance. Innovation allows companies to adapt changes quickly and helps for finding new products, markets (Costa & Lorente, 2008). Sadikoglu and Zehir (2010) found that the elements of TQM are significantly and positively associated with innovation performance. Prajogo and Sohal (2003) identified the relationship between TQM and innovation performance and showed that TQM enhanced innovation performance. Hung et al. (2011) conducted a research on high-tech industry of Taiwanese companies and noted that TQM has a positive and significant impact on innovation performance.

Danny Samson and MileTerziovski (1999) in their research could try to examine the relationship between TQM practices and operational performance and found that, the categories of management, management of people and customer focus are the significant predictors of operational performance. Pinho, (2008) confirmed that there is an association exists between innovation and operating performance. Another study conducted by Jabbarzare H and Shafiqhi N (2019) indicated that TQM practices such as continuous improvement, customer focus and employee involvement are significantly associated with the performance of organizations. Amongst all the practices continuous improvement was considered as the most important TQM practice in terms of impact on organizational performance. Shafiq et al (2019) studied the effect of TQM on organizational performance in textile sector and found that TQM has high positive impact on organizational performance. The study further found that all the elements of TQM have positive relationship with financial and non-financial results. Though, the element of people does not have significant association with financial and non-financial results.

## Conceptual Framework:

The literature survey revealed that, the role of TQM in innovation and producing quality products with the least cost is significant in manufacturing organizations. Further, the review of literature confirmed that the relationship between TQM and organizational performance has been found positive and significant in manufacturing organizations. The literature survey also helped the researcher to identify four important elements of TQM and three indicators of organizational performance. Research variables are presented in Table 1 and Figure 1 presents the conceptual framework for the study.

**Table No. 1: Research variables of the conceptual model along with their indicators**

Research Variables	Indicators
Total Quality Management (TQM)	Top Management Commitment (TMS)
	Customer Focus (CF)
	Quality Process Management (QPM)
	Continuous Improvement (CI)
Organisational Performance (ORG PER)	Quality Performance (QP)
	Innovation Performance (IP)
	Operating Performance (OP)

## Objectives Of The Study

- To examine the relationship between TQM and organizational performance
- To examine the impact of TQM on organizational performance

## Research Questions

### Research Question 1:

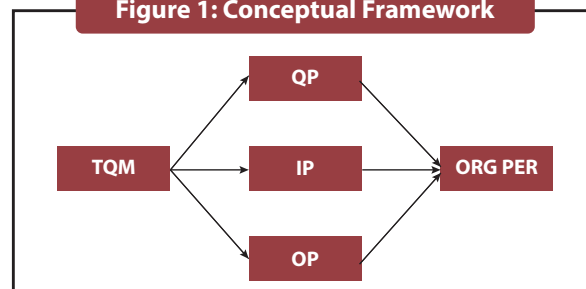
Does TQM relate to organizational performance?

### Research Question 2:

What might be the strength of association between elements of TQM and indicators of organizational performance?

## Methodology:

The study was carried out in Belagavi city of Karnataka state. Belagavi is a foundry hub of Karnataka state with more than 300 foundries producing automotive and industrial castings. These foundries support ancillaries like engineering, CNC and conventional machine shops which finish the castings that are produced in Belagavi. It is believed that Indian manufacturing and service organizations are too diverging in their focus on TQM practices. Therefore only manufacturing organizations such as foundry, engineering, food processing and machine shops are considered for the study. The list of manufacturing organizations located in Belagavi city was collected from Belgaum Foundry Cluster (BFC) and Belgaum Chamber of Commerce and Industry (BCCI). Convenience sampling method was adopted for the selection of manufacturing organizations. Further, manufacturing organizations were selected based on researcher's familiarity with the top management and willingness of these organizations to permit for conducting a survey. Finally, the sample consisted of 255 respondents from 58 manufacturing organizations was considered for the present study.

**Figure 1: Conceptual Framework**

**Note:** TQM - Total Quality Management  
 QP - Quality Performance IP - Innovation Performance  
 OP - Operating Performance  
 ORG PER - Organisational Performance

In the present study, a structured questionnaire was used to measure TQM and its elements. The scale comprised of 38 items and the items belonging to different elements of TQM were jumbled in order to minimize the respondent's bias. The participants were requested to rate the extent of presence of elements of TQM on five-point Likert scale (1 = No presence to 5 = complete presence). The organizational performance was measured using scale, which included three important indicators namely quality performance, innovation performance and operating performance. This is a 21 items questionnaire which was measured on a five-point Likert scale (1 = strongly disagree to 5 = strongly agree). Data were analyzed using SPSS version 22.0. The Karl Pearson's correlation coefficients were calculated to examine the relation between TQM and organizational performance. Multiple regression analysis was run to analyze the extent of the effect of TQM on organizational performance.

## Results

### Scale Reliability

Reliability analysis was performed by calculating Cronbach's alpha. It is calculated to check the internal consistency of the scales used for the study. It was performed on both the elements of TQM and indicators of organizational performance. For the instrument to be reliable, the reliability coefficient has to be above 0.7. Four elements of TQM scale demonstrated 0.94 and three indicators of organizational performance scale showed 0.89 reliability coefficient. This indicates internal reliability and was adequate for further analysis.

**Research Question 1:** Does TQM relate to organizational performance?

The results of Karl Pearson's correlation coefficients between TQM, elements of TQM, organizational performance and its indicators are presented in Table-I. It results showed that there was a positive and significant correlation between Total Quality Management and organizational performance ( $r=0.73$ ,  $p<0.01$ ).

**Table No. 2: Correlation between TQM and its Elements, Organizational Performance and its Indicators**

	TMC	CF	QPM	CI	TQM	QP	IP	OR	ORG PER
TMC	1								
CF	0.73**	1							
QPM	0.51**	0.74**	1						
CI	0.49**	0.60**	0.66**	1					
TQM	0.80**	0.91**	0.82**	0.61**	1				
QP	0.51**	0.20**	0.37**	0.36**	0.44**	1			
IP	0.44**	0.53**	0.65**	0.55**	0.50**	0.28**	1		
OR	0.57**	0.55**	0.55**	0.56**	0.57**	0.38**	0.64**	1	
ORG PER	0.61**	0.65**	0.82**	0.67**	0.73**	0.63**	0.79**	0.76**	1

\*\* Correlation is significant at the 0.01 level (2-tailed)

\* Correlation is significant at the 0.05 level (2-tailed)

The TQM scores showed significant and positive association with all the indicators of organizational performance namely, quality performance ( $r=0.44$ ,  $p<0.01$ ), innovation performance ( $r=0.50$ ,  $p<0.01$ ), and operating performance ( $r=0.57$ ,  $p<0.01$ ). There was a positive and significant correlation between TQM and elements of TQM named as top management commitment ( $r=0.80$ ,  $p<0.01$ ), customer focus ( $r=0.91$ ,  $p<0.01$ ), quality management process ( $r=0.82$ ,  $p<0.01$ ) and continuous improvement ( $r=0.61$ ,  $p<0.01$ ).

Top management commitment showed a positive and significant correlation with indicators of organizational performance. There was a significant and positive correlation between top management commitment and quality performance ( $r=0.51$ ,  $p<0.01$ ), operating performance ( $r=0.57$ ,  $p<0.01$ ). Whereas top management commitment showed a positive correlation with other performance indicator namely, innovation performance ( $r=0.44$ ,  $p<0.01$ ). Overall top management commitment reported a significant positive correlation with organizational performance

( $r=0.61$ ,  $p<0.01$ ). Another element of TQM namely customer focus reported a positive and significant correlation with organizational performance ( $r=0.65$ ,  $p<0.01$ ). In addition, customer focus showed a positive and significant association with indicators of organizational performance namely, innovation performance ( $r=0.53$ ,  $p<0.01$ ) and operating performance ( $r=0.55$ ,  $p<0.01$ ). While there was a low positive correlation between customer focus and quality performance ( $r=0.20$ ,  $p<0.01$ ). The correlation computation showed a high positive significant correlation between Quality process management and organizational performance ( $r=0.82$ ,  $p<0.01$ ). The results further showed that there was a significant positive correlation between quality management process and two indicators of organizational performance namely, innovation performance ( $r=0.65$ ,  $p<0.01$ ) and operating performance ( $r=0.55$ ,  $p<0.01$ ), whereas there was a positive correlation exists between quality process management and quality performance ( $r=0.37$ ,  $p<0.01$ ). Continuous improvement demonstrated a positive correlation exists between continuous improvement and quality performance ( $r=0.36$ ,

**Table No. 3: Regression Analysis**

	QP			IP			OR			ORG PER		
	$\beta$	R <sup>2</sup>	F	$\beta$	R <sup>2</sup>	F	$\beta$	R <sup>2</sup>	F	$\beta$	R <sup>2</sup>	F
TMC	0.51**	0.26	163.8**	0.44**	0.19	111.1**	0.51**	0.32	221.5**	0.61**	0.37	257**
CF	0.20**	0.04	20.5**	0.53**	0.28	180.5**	0.55**	0.3	200.8**	0.61**	0.37	257**
QPM	0.37**	0.14	76.1**	0.65**	0.42	334.8**	0.55**	0.31	203**	0.61**	0.37	257**
CI	0.36**	0.13	68.1**	0.55**	0.31	203.7**	0.56**	0.31	206.4**	0.61**	0.37	257**
TQM	0.44**	0.19	110.6**	0.5	0.25	156.3**	0.57**	0.32	218.6**	0.61**	0.37	257**

$p < 0.01$ ). There was a significant positive correlation between continuous improvement and organizational performance ( $r = 0.67$ ,  $p < 0.01$ ), innovation performance ( $r = 0.55$ ,  $p < 0.01$ ) and operating performance ( $r = 0.56$ ,  $p < 0.01$ ).

### **Research Questions 2: What might be the strength of association between elements of TQM and indicators of organizational performance?**

The multiple regression results as presented in Table-III indicates that TQM significantly predicted the organizational performance ( $F = 545.2$ ,  $p < 0.01$ ). The regression results explain that TQM has 54% variance in organizational performance ( $R^2 = 0.54$ ). The results further demonstrate that for one unit increase in the TQM, the organizational performance will increase by 0.73 units ( $\beta = 0.73$ ,  $p < 0.01$ ).

TMC, which is an element of TQM significantly predicted the organizational performance ( $F = 275$ ,  $p < 0.01$ ). TMC explains 37% variance in organizational performance ( $R^2 = 0.37$ ) and for one unit increase in TMC, organizational performance will increase by 0.61 units ( $\beta = 0.61$ ,  $p < 0.01$ ). CF is an element of TQM, which is significantly predicted the organizational performance ( $F = 343.7$ ,  $p < 0.01$ ). Further, CF explains 43% variance in organizational performance ( $R^2 = 0.43$ ) and for one unit increase in CF, organizational performance will increase by 0.65 units ( $\beta = 0.65$ ,  $p < 0.01$ ). QPM is another element of TQM shows a significant predictive ability towards the organizational performance ( $F = 576.7$ ,  $p < 0.01$ ). QPM explains 68% variance in organizational performance ( $R^2 = 0.68$ ) and organizational performance will increase by 0.82 units with the increase of one unit QPM ( $\beta = 0.82$ ,  $p < 0.01$ ). CI is yet another element of TQM, which shows significant predictive ability towards the organizational performance ( $F = 373.1$ ,  $p < 0.01$ ). CI explains 45% variance in organizational performance ( $R^2 = 0.45$ ) and for one unit increase in CI, organizational performance will increase by 0.67 units ( $\beta = 0.67$ ,  $p < 0.01$ ).

TQM significantly predicted quality performance ( $F = 110.6$ ,  $p < 0.01$ ). TQM explains 19% variance in organizational performance ( $R^2 = 0.19$ ) and for one unit increase in TQM, organizational performance will increase by 0.44 units ( $\beta = 0.44$ ,  $p < 0.01$ ). Further, TQM has significant predictive ability towards innovation performance ( $F = 156.3$ ,  $p < 0.01$ ). TQM explains 25% variance in organizational performance ( $R^2 = 0.25$ ) and for one unit increase in TQM, organizational performance will increase by 0.50 units ( $\beta = 0.50$ ,  $p < 0.01$ ). In addition, TQM significantly predicted operating performance ( $F = 218.6$ ,  $p < 0.01$ ). TQM explains 32% variance in organizational performance ( $R^2 = 0.32$ ) and for one unit increase in TQM, organizational performance will increase by 0.57 units ( $\beta = 0.57$ ,  $p < 0.01$ ).

## **Findings And Discussion**

The correlation coefficients reported a positive and significant association among elements of TQM and indicators of organizational performance. Further, the elements of TQM have significant predictive ability towards all the indicators of organizational performance. TMC predicted organizational performance and indicators of organizational performance namely, quality performance, innovation performance and operating performance. CF and QPM predicted organizational performance, quality performance, innovation performance and operating performance. CI predicted organizational performance and other indicators of organizational performance namely, quality performance, innovation performance and operating performance. Majority of the previous literature focused on TMC, CF and CI, whereas very less emphasis was given on QPM. Quality processes and quality management are the basic tools for the enhancement of quality and reduction in costs. The present study tried to study four elements of TQM and their impact on organizational performance, which include QPM. The study revealed that quality processes and quality management are also equally important in enhancing the performance of the organizations. Hence manufacturing organizations will have persistently struggle hard in improving their quality processes and quality management system, so that they can meet or exceed customer expectations thereby improve organizational performance.

This study tried to explore the role of TQM in improving organizational performance. The study found that the scales used to measure TQM and organizational performance has adequate reliability and inter-correlations amongst their subscales. It indicates that the scales were well matched with manufacturing organizations in Indian context. The current study showed that TQM is related to organizational performance. It interprets that effective implementation of TQM practices result into improved organizational performance. The study also examined that TQM is associated with all the indicators of organizational performance namely, quality performance, innovative performance and operating performance. It indicates that, the manufacturing organizations having TQM practices are superior in terms of quality, innovation and operations. This will help the organizations to produce the products as per the requirements of the customers with the superior quality and least cost.

TQM helps the manufacturing organizations in understanding quality, innovation and operations related problems. It indicates that TQM enhances the process of operations product and product quality, which eventually enhances customer relationships.



The previous studies found that, only one element of TQM that is Top Management Commitment was related to organizational performance (Shih & Gurnani, 1997). In addition, it was also found that the individual element of TQM found to contribute most to business performance was Customer Focus (MiléTerziovski et al, 2003). The present study investigated a high positive association between elements of TQM and indicators of organizational performance. All the elements of TQM namely, TMC, CF, QPM and CI reported a high positive correlation with the organizational performance. It indicates that leadership, customer focus, quality management and continuous improvement being the foremost in the process of contributing towards organizational performance.

Regression analysis revealed that TQM significantly predicted organizational performance and three indicators of organizational performance namely, quality performance, innovation performance and operating performance. TMC and CF both the elements of TQM significantly predicted organizational performance and its indicators. QPM and CI also significantly predicted organizational performance and its subscales namely, quality performance, innovation performance and operating performance. The results demonstrate that the manufacturing organization's perception about TMC, CF, QPM and CI contributes towards improvement in quality performance, innovation performance, operating performance and overall improvement in organizational performance. TQM is the better predictor of customer satisfaction. Manufacturing organizations with high understanding of TQM can focus better on innovation and designing the product, produce quality products with least cost and ensure customer satisfaction.

## Conclusion

This study provides an evidence for a positive relationship between TQM and organizational performance. The excellence in organizational performance can be achieved through enhancing quality competency and operating efficiency, which directly contribute towards the better results. TMC is an important element of TQM, without which achieving quality excellence is a dream true. The end objective of any manufacturing organization these days is customer delightedness, which can be attained only when business organizations are customer centric. It is the responsibility of the organizations to produce the products as per the requirements of the customers. An organization can produce quality product consistently only when QPM is in place. CI facilitates the organizations to incorporate changes in the existing product as per the expectations of customers. TQM as a tool, which is very much essential for every organization as it is the basic requirement in

the international market. Therefore, manufacturing organizations need to emphasize on elements such as leadership commitment, customer expectations, process approach, system's approach and continuous improvement with an objective to meet international standards. Therefore manufacturing organizations will have to consider expenditure on quality related aspects as an investment for the future and focus on implementing TQM practices.

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## A Study of Savings Behavior on Financial Planning Among the Millennials

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### Abstract

Reforms athrow the globe on implementation of defined contribution system and stress the role of individuals to assess their lifestyle and to equip themselves to ensure that they save adequately for their sunset years. Across developed countries, the issue of longevity and inadequate savings is becoming evident. Underfunded pensions and policy actions have failed to address the needs of the aging population. Though the goal clearly is retirement planning, the basic facet delves upon how an individual behaves in his earning years. The life cycle theory provides the various phases of one's transition through these phases. It is indeed the key to realize this in the context of the Millennials today in India, to capitalize on the demographic dividend. Upon this background, the aim of the study is to explore the influence of savings behavior on financial planning. The study was based on primary data through questionnaire. Factor analysis and hierarchical regression were used for the analysis. The study observes Income level as a significant demographic variable and justified a valid relationship between the variables among the Millennials.

Keywords: Behavioral factors, Financial Planning, Millennials, Personal Finance, Retirement Planning

JEL Classification: D14, G02

### Introduction

Behavioral finance interprets the logic of investors affected from psychological traits and decisive behavior. Individual investors and movements of the market are two important aspects of behavioral finance. The traditional finance tenets originate with the Modern Portfolio Theory and the Efficient Market Hypothesis. Traditional finance presumes that the "Markets are efficient" and on the contrary behavioral finance assumes "Markets are not efficient and are difficult to beat". The decisions made by human beings are broadly the cognitive illusions and they can be characterized into two broad groups "illusions identified within the prospect theory" and "illusions identified within the heuristic decision process". Kahneman and Tversky developed this theory in 1979.

Although behavioral finance has gained more prominence across the globe, with the transition to the defined contribution system, the key question of whether the millennials prioritize savings behavior? And does it reflect on the process of financial planning? remains unanswered.

### Review Of Literature

The review of Literature examined the different areas of behavioral finance towards financial planning (Ricciardi & Simon, 2015) discuss the concept and the principles of behavioral finance. The principles examined were Overconfidence, Cognitive Dissonance, Regret theory and Prospect Theory. They emphasized that anyone who studies behavior finance must first understand the concepts of Psychology, Sociology and Finance to be completely acquainted with it. The difference between Traditional Finance and Behavior Finance were also explained. A 'rule of Thumb' should be used by all investors so that they are much better prepared for risks while making investment decisions. The authors emphasized that an investor must create an investment checklist so as to understand how prepared they are to invest and will the investment decision be beneficial for them.

Bikas et. al., (2013) examined non-professional investor's financial behavior in a theoretical perspective. They shed light on the research done by various scholars and researchers on behavior finance. The

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authors observed the emotional factors of investors and their psychological effects of investing.

(Statman, 2014), observed the interconnectedness between the theory, evidence, and practice of standard finance. They found that people are rational in standard finance compared to behavioral finance among normal people. They observed that behavioral portfolio theory was substituted against the mean-variance portfolio theory and CAPM was substituted for the behavioral asset pricing model. They compared the hard-to-beat markets vis-à-vis the efficient markets, a distinction was made in justifying why investors believed that it is easy to beat the market.

(Ritter, 2003), examined the cognitive biases and the possibility and the limits of an arbitrage opportunity. The applications of behavior finance on the limits of arbitrage opportunity was observed. Cognitive bias was classified into various patterns as Overconfidence, Heuristics Mental accounting, Representativeness, Framing, Conservatism, and the effect on Disposition.

(Bakar & Yi, 2016), have tried to understand the psychological factors that impact the decision making of the investors. The research was conducted in Malaysia and details of investor were picked from the Malaysian Stock Market. The authors observed the differences between Malaysia and other countries by examining the psychological factors impact on investor's decision making. They took investor's decision making as dependent variable and the independent variables were: overconfidence, conservatism, herding and bias availability.

(Hershey, Jacobs-Lawson, McArdle, & Hamagami, 2007), investigated to comprehend why Americans are not prepared for retirement. They attempted to find out the psychological characteristics of Americans who plan and save.

(Aren & Dinç, 2015), investigated the financial literacy, the risk perception, and its impact on the investment inclinations. Questionnaire was used for collecting data and the attributes obtained from the respondents were the personality, risk, financial literacy, investment choices, demography and dependent variables (portfolio, deposits and equity alternatives)

(Shanmugham & Ramya, 2012) have made an attempt to see if social factors have any impact on the investor's trading behavior. They have tried to see if social factors shape the behavioral factors in investors. Social factors are the external forces that influence the investor's decision making. Media, social interactions with friend and relatives and internet formed the major external influences. The family members, neighbors, and friends were the internal for the investment decisions.

(Grohmann, 2018) analyzed financial literacy of middleclass people living and their financial behavior. The survey was conducted in Bangkok, Thailand and the questions were to test the financial literacy. The target respondents were middle class population who were earning more than \$10 a day.

(Venkataraman & Venkatesan, 2018), highlighted the key factors that influence financial literacy. Savings behavior, financial attitude and financial knowledge were significant in predicting financial literacy.

Various studies have been conducted to see if other factors like social factors, demography, literacy levels and gender have any impact on the decision-making skills of the investors.

## Statement Of The Problem

Prior studies have shown and proved that behavior factors have played a major role in an individual's decision-making process. There was no in-depth examination of the savings behavior of the millennials and its effect on the financial planning. This study is conducted to find that influence and understand impact of savings behavior on their financial planning process.

## Objectives Of The Study

1. Define the behavioral finance in the context of savings behavior.
2. Measure savings behavior and financial planning.
3. To observe the effect of demographic variables, savings behavior on financial planning.

## Research Hypothesis

- a)  $H_1$ : There is an effect of demographic variables on financial planning activities.
- b)  $H_2$ : There is significant relationship of savings behavior and financial planning.

## Research Methodology

### Collection of data:

Data was collected through questionnaires. The existing scales for measurement of financial literacy and financial planning were obtained from the literature.

### Tools used for analysis:

- **Descriptive Statistics** was used to group the respondent's profile.
- **Sample adequacy test** enabled the criteria for adequate responses.
- **Factor Analysis** was used to group the factors into categories to facilitate further analysis. SPSS Version 22 was used for the analysis after initial coding using MS-Excel.

- **Hierarchical Regression** facilitated to observe the influence of the variables.
- **Structural equation modeling** was used to observe the relationship with the error terms as the items for the constructs were obtained using various questions forming the items.

## Data Analysis And Interpretation

The data was obtained through questionnaire designed using the scales established by the previous studies on savings behavior and financial planning respectively. Google forms were used to collect the responses and coding was done using MS-Excel.

The summary of descriptive statistics is presented below:

**Table 1: Summary of Descriptive statistics.**

Gender		Gender	
Male	Female	Under Grad.	Post Grad.
57	49	66	40
Marital Status		Age group	
Single	Married	22-35	Years
46	60	Total respondents: 106	

The majority of the respondents was male, undergraduates, and married. The Age group of the respondents was restricted to 35 years, to reflect the millennials. The total number of respondents were 106.

**Table 2**

Table 4.2: KMO and Bartlett's Test		
KMO Sampling Adequacy		0.868
Bartlett's Test	Chi-Sq	1197.234
	Sig	0.000

The test for sample adequacy was performed using KMO test and a value of 0.868 supports that the sample is adequate. The same is observed from the significance level of the Bartlett's test. The variables were grouped by use of factor analysis. The summary of

**Table 3: Factor Analysis**

Total Variance Explained		
Eigen Value of factors	% of Variance	Cumm.%
Factor 1- 7.573	23.006	23.006
Factor 2- 2.156	13.988	36.994
Factor 3- 1.292	10.362	47.356
Factor 4- 1.113	7.326	54.682

the analysis is presented in table 4.3 and four factors were highlighted in the study.

The factors were restricted to an Eigen value of more than one. Four factors were observed from the analysis representing a total of 54% variance.

**Table 4: Rotated factor matrix**

	Factor			
	1	2	3	4
FP1	.340	.406	.395	
FP2	.151	.436	.163	-.329
FP3	.195	.284	.601	
FP4		.428	.541	.171
FP5	.210	.439	.297	
FP6	.100	.344	.123	.101
IN1	.121	.641	.260	
IN2	.197	.661		
IN3		.713		.209
RP1	.581	.128	.507	.21 1
RP2	.736	.139	.399	.153
RP3	.659		.548	.1 17
RP4	.453	.297	.293	.592
RP5	.646	.220		.287
RP6	.765	.204		
RP7	.794	.177	.220	.125
RP8	.782	.193		.127
RP9	.305			.739
RP10	.471	.278	.292	.318

The above table provides the rotated matrix with Principal axis factoring as extraction method and Varimax as rotation method. It was observed that there were more cross loadings, the financial planning, retirement planning, Insurance adequacy and savings behavior were distinct with larger values and the two constructs were initial run for a regression analysis to observe relationship.

**Table 5 Hierarchical Regression**

	Unstandardized Coefficients		Sig.			Sig.
	B	Std. Error		B	Std. Error	
(Constant)	2.309	0.364	0.005	1.099	0.382	0.005
Age	0.009	0.011	0.910	-0.001	0.010	0.910
Gender	0.163	0.167	0.165	0.206	0.148	0.165
Income	0.124	0.077	0.042	0.140	0.068	0.042
Behavior				0.514	0.088	0.000
R Square			0.232	R Square	0.382	0.523
Sig (F-Value)			0.098	Sig (F-Value)		0.000

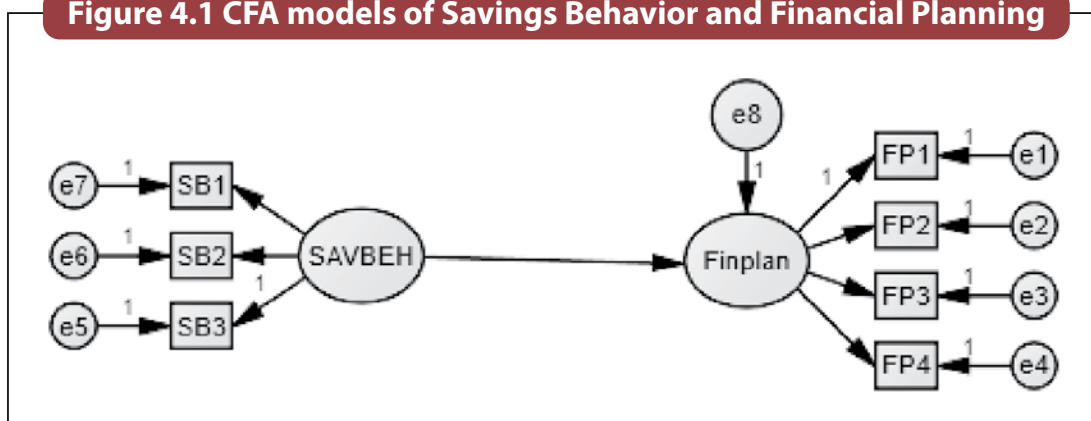
a. Dependent Variable: FP

Hierarchical regression was performed, using the demographical variables in the first step to predict financial planning. Among the variables, Income level predicted 23% of financial planning and was observed to be significant at 5% level of significance.

The second step, Savings behavior was observed significant at 1% level and a beta of 0.514 being positive

and an overall significant model proves Income levels and savings behavior predicts and facilitates financial planning.

**Figure 4.1 CFA models of Savings Behavior and Financial Planning**



The case for a confirmatory model, was intended to capture the prediction with various items reflecting the respective constructs with the errors. Table 6 provides the estimates of the CFA.

**Table 6: CFA - Regression Weights**

			Estimate	S.E.	C.R.	P
Finplan	<---	Savbeh	0.493	0.133	3.711	***
FP1	<---	Finplan	1			
FP2	<---	Finplan	1.471	0.319	4.611	***
FP3	<---	Finplan	1.07	0.246	4.346	***
FP4	<---	Finplan	0.847	0.209	4.045	***
SB1	<---	Savbeh	1			
SB2	<---	Savbeh	0.779	0.136	5.74	***
SB3	<---	Savbeh	0.629	0.118	5.35	***

The regression weights observed all items loaded adequately to the constructs. Financial planning included 4 items and saving behavior was observed with 3 items. The savings behavior predicted the financial planning with a beta of 0.493.

**Table 7: CFA - Fit Indices**

Model	Chi-square	CMIN/DF	GFI	AGFI	CFI	RMSEA
Study model	22.659	1.743	0.949	0.891	0.952	0.08
Recommended value		Acceptable fit [1-4]	Greater than 0.05	Greater than 0.9	Greater than 0.9	Less than 0.10

The fit indices for the model were observed with Chi-Square value and CMIN/DF and they were observed of acceptable fit. The goodness of fit indices namely the GFI and CFI were also observed adequately above the 0.9 level. The AGFI was observed 0.891 was observed close to the criteria.

## Discussion And Conclusion

The variables observed and drawn front the literature was observed overlapping in the context of financial knowledge, attitude towards savings, financial behavior and the same were observed in the factor analysis with cross loadings. Among the highest loaded items, the constructs framing the savings behavior and the actual financial planning were considered. The level of income was a key determinant among the demographic variables and the results matched with the prior literature. The incremental contribution of savings behavior was observed significant in predicting the financial planning activities. SEM provided the adequateness in terms of item loading of the constructs and the relationship between the variables in the study.

## Limitations And Scope For Further Research

The study though provides the adequate role of savings behavior, needs to be checked with more variables to offer justification in terms of family size, dependents, elderly family members as they can hinder the savings behavior. As millennials the role towards acquiring materialistic assets dominate and they are seldom done using a loan, savings is hardly ever a behavior. A study on materialistic goals can provide more insights. The study though valid needs to be



validated through more responses to derive a conclusive decision among the millennials. The study of cohort behavior can give higher insights about the industry or sector specific measure that can aid the policy makers to enhance the savings behavior.

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## Behavioural Biases in Investing – Concepts, Categorization, Indicators and Remedial Measures

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### Abstract

Investment decisions are not only complex but also reflexive most of the times. There have been several studies to explain these complex decisions of investors. The theory of rationality was not amply successful in explaining the investment behaviour and it intrigued researchers to explore other influencing factors like behavioural aspects. Behavioural finance is an interdisciplinary science that provides supporting evidences to certain erratic behaviours of investors. At this juncture, to bring together the concepts, categorization, indicators and remedial measures to behavioural biases becomes very fetching. The paper attempts to present a vivid description of various behavioural biases, followed by their categorization as cognitive and emotional biases.

In the present study, the behavioural biases of investors are categorized based on market conditions (bull and bear) and volatility as well, to provide an insight and stay conscious about them. An investor should be preferably more ready about biases, a few indicators of the biases and remedial measures to handle the biases forms the essence of the paper. Few tests like Myers Briggs Test etc., identified at the end of the paper can prove to be very handy while handling the behavioural biases in investing in stock markets.

**Key Words:** *Bear and Bull Markets, Behavioural Biases, Investments, Remedies, Securities Markets, Volatility*

### Introduction:

Decision making is a complex activity, and so are investment decisions. The key objective of investment activity is to deploy money to earn in return more sum of money. For decades, investment decisions had been taken on the basis of stock market performance, share price movements and trend forecasting. Eventually, studies revealed that the conventional way of analysing investment decisions has left an unidentified gap between estimated and real gains/losses. This proved to be an evidence for fundamental mistakes in the decision making.

Although, in the past researchers have explored the behavioural anomalies serving as psychological drivers for these errors, according to Glaser et al (2004) Behavioural Finance emerged as significant extension of behavioural economics, incorporating key insights from disciplines like psychology and sociology.

### Literature Review:

Lue Thi Bich Ngoc, Ho Chi Minh(2013), This study explored the influence of the behavioral variables on the individual investors' decisions. Dr.Mandeep Kaur & Tina Vohra(2014), Individual investor behavior was

driven by various psychological factors such as precautions, under confidence, conservatism, under optimism and information inferiority complex. Sunitha Kumaran(2013), study has been undertaken to investigate whether locus of control predicts hot-come effect and its converse gambler's fallacy, when making personal investment decisions. The current state of research from the efficient market and behavioral perspectives therefore suggest that an inclusive and diverse approach in the choice of theoretical explanations of the behavior of financial markets will be the pragmatic response to the inconclusive results on either side of the debate. A.Sarath Babu & R.Ramesh Kumar(2015), applied fuzzy logic to understand the underpinning relationship between national sentiments, investor sentiments and their impact on stock market activities. Facebook Gross National Happiness Index (FGNHI) and Volatility Index of India (VIX) which is a fear gauge of investors are used. The study applied Adaptive Neuro Fuzzy Inference System, a non-linear method, to understand the relationship between the sentiment score and NSE index return & compares the performance of ANFIS and VAR, a linear model. "Greed dominates in bullish markets" "Panic

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prevails in the bearish markets" "Negative sentiments get dissipated quickly in volatile periods". Tobias Baer(2018), attempted to understand debiasing and role of data analytics in counter activity to reduce risks. Some leading institutions are putting behavioral targeting into practice by applying psychometrics. Introduction of creative workarounds into the existing infrastructure, especially in IT implementation, financial institutions have a pragmatic approach of powerful behavioral segmentation linked to target treatments.

**Raluca Bighiu Qawi (2010)**, intended to show through a variety of pre-existing academic research and personal experience in the investment management field that investors' individual beliefs, opinions and values could influence those of a group, be influenced by social factors and in effect change outcomes in the markets. People have a tendency to compare their thinking to that of the group, where the individual investor makes a decision carrying less risk than the group, typically the individual revises his own decisions to an increased level of risk to follow the group thinking, this is called risky shift. Dr. Adrian Mitroi(2014), infer that there is linear dependence between daily returns and the index series of BEFTI does not follow a random walk pattern. Non-normal distribution series is a widely followed proof of inefficiency in prices.

## Objectives Of The Study

The study aims to provide a bird's eye view of the theory of behavioral finance and serve as a ready reckoner for investors. Following are the objectives of the study –

- To classify the behavioural biases for better understanding.
- To map the biases against the volatility of markets.
- To provide enough justification for the classification.
- To identify the handling mechanisms and indicators for the biases.
- To summarize all the remedial measures for biases.

## Methodology & Limitations:

The present study is conceptual in nature and undertaken purely based on secondary data. This study is presented in three sections viz., first section deals with the classification and justification of behavioural biases, then followed by next section with handling of these biases and final section describes the remedial measures that can be handy in de-biasing.

As this study is based on secondary data alone, it doesn't provide any experimental evidence for the classification and mapping of biases. But, the conceptual framework provided can definitely ease the researchers' attempt to empirical evidence in future studies.

## Findings And Discussions

### I Classification -Behavioural Biases:

#### A. Cognitive Biases:

1. **Representativeness:** It is an anomaly where, the investors believe that every performing enterprise is a representative of a breeding investment. There might also exist a strong motive to relate historical performance with probable returns in future.
2. **Trend Chasing /Momentum Chasing:** It is a common practice among investing fraternity to choose funds based on past performance and further recent investment experience often becomes the representative of likely future returns.
3. **Over-Confidence:** It is quite human that confidence is often celebrated, yet we hardly understand that it is not the only contributing factor for success. Often, investors are prone to overestimate their predictability mettle and may end up presuming themselves to be super knowledgeable than they actually are. All this leads to unnecessary trading urge.
4. **Anchoring:** Also known as confirmation bias; An individual who considers to looks out for data that confirms with his/her own ideas and views while selecting the decision alternatives than checking out information that contradicts.
5. **Herding:** Investors may not like standing out of crowd, particularly when there is an uncertainty about a firm's performance. When the uncertainty surrounding a firm being followed is low, investors tend to be confident but when the uncertainty is high, investors are convergent in behaviour and tend to follow the crowd.
6. **Gamblers Fallacy:** It is observed usually that the investors misappropriate trend reversal. They may end up in predicting too good or poor results.
7. **Hind Sight:** This bias might lead investors to a tendency that post-event one starts to believe that the event had good probability of prediction and was quite obvious. In reality, the chances of the event prediction accurately would have been grim.
8. **Availability Bias:** Investors place undue weight for making decisions on the most available information.
9. **Familiarity & Home Bias:** Whenever, individuals get habituated to prioritizing familiar investments, despite the fact that gains are more probable from divergent portfolios. Investors may experience immense anxiety in the process investing and as they encounter dilemma in choosing between well known-moderately performing securities and less known- well performing securities; the anxiety peaks. Mostly, they tend to believe well- known securities are less risky and fall within the confidence

zone. This leads to under-performing portfolios. Individuals sometimes overweigh the home country/company stocks; this is referred as home bias.
















## B. Emotional Biases

1. **Loss Aversion & Status Quo Bias:** Investors unduly seek risks when they encounter losses, however they turnout risk avert when they enjoy gains. This tendency is termed as loss aversion. It is significant to note that undue preference to current status is termed as status quo bias and this feeling emerges basically from comfort-seeking and uncertainty avoidance nature of people.
2. **Regret Aversion:** This bias refers to the intense emotion to avoid regret feeling. People do not like to be tagged for choosing wrong alternative. Investors as soon as they anticipate regret, start taking less risks, as they sense less susceptibility to poor outcomes. This phenomenon can offer enough explanation for investor reluctance in selling loss making securities.
3. **Mental Accounting:** This bias is collectively refers to the activities investors adopt while organising, evaluating and tracking their money and investments. It is imperative that individuals assign labels and

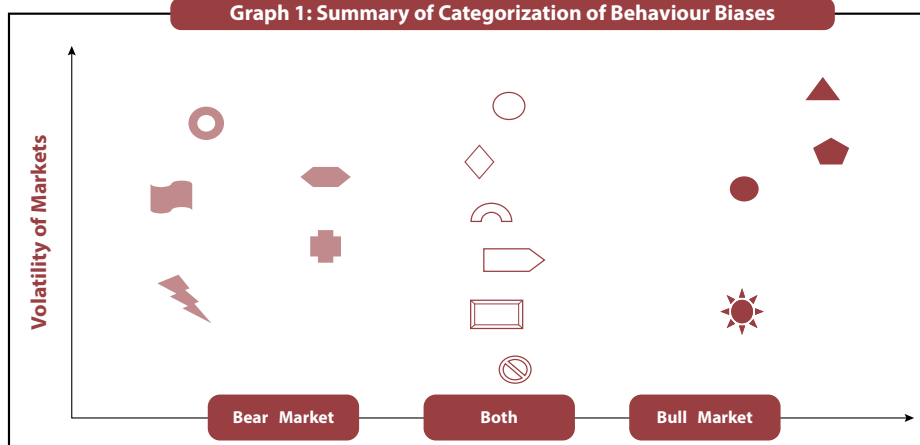
priorities to specific accounts. Sources and utility of money are ear-marked, ignoring the fungibility of money.

4. **Self Attribution:** Investors who exhibit self-attribution bias tend to attribute every successful outcome to their own actions and poor outcomes to external uncontrollable factors. People often show this bias as a mechanism of self-protection. Investors affected by self-attribution bias may also tend to be overconfident.
5. **Disposition Effect:** At times, individuals tend to label investments as winners and losers. Disposition effect might lead an investor to stick to a security that has no upside, further they may hurry in selling a well performing stock in anxiety to make up for the previous loss. This can prove to be damaging resulting in increase in capital gain taxes simultaneously mitigating pre-tax returns.
6. **Optimism:** This comes in people when they under-rate the negative happenings and will always hope of favourable outcomes. The optimistic people believe that situation will turn in their favour and will bring positive outcomes, so with this motive they take risky decisions.

**Table 1: Summary of Categorization of Behaviour Biases**

S.No	Bull Market		Bear Market		Both
1.	Momentum Chasing		Over-Confidence		Representativeness 
2.	Herding		Hind Sight		Anchoring 
3.	Gamblers Fallacy		Availability		
4.			Familiarity & Home Bias		Framing
5.	Loss Aversion & Status Quo Bias		Regret Aversion		Mental Accounting 
6.					Self Attribution 
7.					Disposition Effect 
8.					Optimism 

**Graph 1: Summary of Categorization of Behaviour Biases**



## II. Justification for Categorization of Behavioural Biases:

### A. Cognitive Biases

#### ◆ **Representativeness: It is observed in both bull and bear market conditions.**

**Justification:** Investment decisions are generally affected by this bias in both bull as well as bear market conditions. Investors trading in bull market assume good companies to be good investment alternatives based on fundamental analysis. There is also intensifying of representativeness bias as it gets coupled with optimism and availability biases. While in bear markets, investors if remain risk averse, then would go with the belief that companies / stocks with positive past preference would prove to be good investment options. Hence, representativeness can be observed in decision making in both bull and bear markets.

**Volatility:** Representativeness has a positive correlation with the volatility of markets. As the markets get more volatile, investors tend to be more affected by representativeness bias.

#### ◆ **Momentum/Trend Chasing: Observed in Bull Market.**

**Justification:** Investors are more likely to experience this bias during the continuing uptrend in the market. They unduly start believing that the upward trend in the market would continue for substantial amount of time till they realize the expected returns. They totally ignore the chances of markets swinging either way at any point in time as propounded by EMH theory. Hence trend chasing bias is more prevalent with investors in bull markets.

**Volatility:** When the markets are found to be highly volatile, these investors usually do not have enough time to follow/ chase trends.

#### ◆ **Over-confidence: Observed in Bear Markets**

**Justification:** Investors tend to be over confident in bear markets. This over-confidence might be stemming from either of the following –optimism, anchoring, availability biases or combination of them. It may also result out of regret aversion at times. When a down trend is found in the market, investors tend to over-rate their predictability and also over-estimate the validity of information/knowledge and rely more upon their decisions to earn high portfolio returns.

**Volatility:** In highly volatile markets, investors tend to show relatively more streaks of over – confidence.

#### ◆ **Anchoring: Observed in both bull and bear market conditions**

**Justification:** Though investors are subject to anchoring in both bull as well as bear market conditions, they tend to anchor more in bear markets. When the stock market falls continuously and investors start seeing losses more and more, they would anchor their beliefs on what they believe/assume to be true.

At times, when the market shows upward trend also, investors may under rate some of the investment alternatives owing to their pre-conceived anchor.

**Volatility:** In highly volatile stock markets, anchoring is experienced strongly, as the volatility increases uncertainty of returns from the investments increases leading to investors anchoring to their strong beliefs.

#### ◆ **Herding : Observed in Bull Market**

**Justification:** Investor herding behaviour is observed in bull markets. When the markets moves upwards traders start chasing the momentum. But at the same time, several others would just follow the going trend and keep investing in securities in anticipation of higher returns. Herding attitude of investors is equally observed whenever there is a downward trend in the market. Investors tend to over-react in the bear market and sell-off their securities.

**Volatility:** In excessively volatile markets, herding is convergent compared to mild volatility of markets.

#### ◆ **Gamblers Fallacy: Observed in Bull Market**

**Justification:** Investors tend to miss-judge the reversals most of the times. Too optimistic investors predict positive ends more often and they rarely expect trend reversal. While experiencing negative results, they expect quick trend reversal.

**Volatility:** There is a high positive correlation between gambler's fallacy and volatility of markets.

#### ◆ **Hind Sight: Observed in Bear Markets**

**Justification:** It is actually a post-ante effect. Usually this bias is experienced during market corrections after the end of a bear trend. If the investor gets a strong feeling that he/she knew it all along, there is more probability that he/she knew may turn out to be more over confident.

**Volatility:** There is no much evidence to conclude that any relationship exists between volatility and hind sight bias.

#### ◆ **Availability Bias: Observed in Bear Markets**

**Justification:** Investors tend to be relatively exposed to availability bias during a continuous downward trend in the market. As the market falls, pessimistic and risk averse investors are more susceptible to bias than optimistic and risk seekers.



**Volatility:** In extreme volatility of markets, investors tend to have availability bias than in less uncertain market conditions.

◆ Familiarity & Home Bias: Observed in Bear Markets

**Justification:** Investors tend to show more Familiarity Bias during a continuous downward trend in the market. As the market falls, pessimistic and risk averse investors are more exposed to this bias than optimistic ones.

**Volatility:** In extreme volatility of markets, investors tend to experience familiarity bias.

◆ Framing: It is observed in both bull and bear market conditions.

**Justification:** The context of decision making is significant both in bull as well as bear markets. According to the expected utility theory of traditional economics, a decision should not be influenced by the frame of the problem/solution. But in the context of investment decisions, the frame matters in both bull markets and bear markets.

In bull markets, investors see the frame positively and tend to become too optimistic or over-confident, whereas in bear markets the same investors tend to perceive the negative frame and emerge as risk averts.

**Volatility:** In fluctuating markets, majority of investors tend to have a negative framing owing to the uncertainty. But, there are also studies that suggest highly volatile markets provide very less framing time and thus make framing insignificant.

## B. Emotional Biases

◆ Loss Aversion & Status Quo Bias: Observed in Bull Market

**Justification:** In a market that is moving upwards, investors experience positive returns and hence tend to become risk averse, while the trend is down, investors start experiencing losses leading to risk seeking tendency. Loss aversion is a personality characteristic rather than a reaction to a situation. So, if the investor is losses avert he/she would remain avert to losses irrespective of market trends.

**Volatility:** However, status quo bias is more prominent in bull market conditions- seen in volatile markets.

◆ Regret Aversion: Observed in Bear Markets

**Justification:** Regret Aversion – As anticipation of losses is generally more in bear market conditions, this leads to anticipated regret as well in investors. Those investors in bear markets tend to be more

regret averse than in bull markets. Regret aversion explains investor behaviour of hanging onto the losing stocks.

**Volatility:** Regret aversion is also a characteristic that can be seen in investors irrespective of the volatility of markets.

◆ Mental Accounting: It is observed in both bull and bear market conditions

**Justification:** It is incorporated in the way investors organise and allocate their money. They practise mental accounting all the time, but it is more evident when the market is bearish than bullish. Mental accounting is influenced by other biases like framing, anchoring etc.

**Volatility:** Like, regret aversion mental accounting also is done by investors irrespective of volatility of markets.

◆ Self Attribution: observed in both bull and bear market conditions

**Justification:** Investors who possess this anomaly tend to attribute positive returns to the effective decisions taken, whereas rather they tend to attribute losses made to the external factors or ill-luck. The former behaviour is seen in bull market trend and later behaviour in bear markets.

**Volatility:** A key point to ponder is, investors establish a causal relationship between volatility of markets and negative returns earned.

◆ Disposition Effect: observed in both bull and bear market conditions

**Justification:** This emotional bias is closely intertwined with anchoring, loss aversion and regret aversion biases. However, disposition effect is observed more when the market is falling steadily. Investors with disposition effect find it difficult to sell off squared securities.

**Volatility:** Investors with pessimistic behaviour are more subject to disposition effect. Volatility of markets has direct relationship with disposition effect in the investors.

◆ Optimism: Observed in Bull Market

**Justification:** Optimistic behaviour of investors is in favour of bull markets. Simultaneously, they tend under rate the negative events and hence under react in bear markets, resulting negative portfolio returns. Hence, optimism is an anomaly found in both markets but its affect is prominent in bull markets.

**Volatility:** The uncertainty in the market decides the level of optimism in investors. More volatile markets produce, less optimistic investors.

### III. Handling the Biases:

Behavioural biases are pre-dispositions of a psychological, sociological and even physiological nature that can influence investor decision making, but usually regarded as flaws. These biases are inevitable as they are side effects of the mechanics the brain needs to achieve its astonishing speed and efficiency. Simultaneously it is unfortunate that, the unruly perception of biases can lead us to a myth that we are immune to them. Can these biases be handled or overcome?

Following are insights about debiasing -

- Investor Consciousness about the influence of behavioural anomalies and exercise of self-control while taking decisions.
- Behavioural designing of fin-tech trading platforms.
- Behavioural targeting can be practiced by applying psychometrics.
- Existing IT infrastructure being adopted for grouping based on primary biases investors' are susceptible to and also to determine the personality type while deciding the choice of counter-measure.
- Analytical experts and behavioural scientists can work on a learning experience of exploring the patterns of biases and applying machine learning algorithms to historical data to discover sub-optimal investment decisions, followed by a corrective measure to handle the bias.

#### Indicators of Behavioural Biases:

- Volatility of Markets – Over-Confidence and Optimism.
- Gender of Customers
  - o Women are more susceptible to mental accounting, hot hand fallacy and anchoring bias.
  - o Men are more susceptible to momentum chasing bias, optimism and gambler's fallacy
- Volume of Trade
  - o High Volumes of trade – Investors tend to exhibit over-confidence, optimism, herding and momentum chasing bias.
  - o Low Volumes of trade – Investors are more susceptible to disposition effect, Self-attribution bias, regret aversion
- Experience of Investors
  - o Lesser the experience, more the susceptibility to representativeness.
  - o More the experience, lesser the susceptibility to Gamblers' Fallacy.

### IV. Remedial Measures for Behavioural Biases:

- **Seeking Contrary Opinions:** Investors are vulnerable to confirmation bias, as majority of them seek validation from sources that usually fall in line with their available information, rather than looking for contradicting information. But, investors in true spirit should welcome contrary opinions.
- **Avoid Attachments:** Investors develop unnecessary attachment to a particular stock for various reasons. Stocks that an investor buys should be supposedly temporary possessions; hence attachment is to be shunned to control Disposition Effect.
- **Alertness to Crowding Trades:** Investors are susceptible to herding towards successful stocks. The quant boom ended badly with the "Quant Quake" in 2007. As far as herding, the last entrants into the herd are most affected during market reversals. Hence, it should be understood that mere trade volumes shouldn't be motivation for investments.
- **Focus on investing rather than trading:** Retail investors' activity is inversely proportional to the gains they make. So, it is better that one trades less and invests more. One should remain focussed and consistently resist the myth that one's intuition and decisions are superior to others in the market.
- **Reducing Regrets:** It is quite natural for human beings to avoid being regretful of their actions. This tendency is very common while investing in stocks, as an investor sells a winner stock at the earliest than a loser. Traders are almost twice likely to sell a winning stock too early and losing position too late. Formulating and adhering to rigid trading rules rather than emotions can be very enticing while handling regret aversion.
- **Limited Attention Span:** Investors as such have a plethora of stock choices in the market, yet they identify and relate to only few that are in limelight or gain attention. This behaviour results from confirmation bias. Limit the media noise and an effort should be made to utilise media as one of the data sources out of many.
- **Avoid Momentum Chasing:** We as humans are blessed to identify patterns and tend towards following the trend quite often. However, markets are mostly random than repeating past patterns. If investor identifies a trend, in most cases it is already exploited completely by others. If one wants to leverage the inefficiencies in the market, then one needs to indulge in buying when others are fearful and selling when they sound confident.
- **Build-in Accountability Mechanism:** It is general phenomenon that, external accountability is far

more effective than self-accountability. Hence, it always better to have a mechanism which makes the investor accountable to someone with regard to his/her decisions. This also enables the investor to remain more rational than emotional in decision making.

- **Test and Re-Test:** There are several critical aspects of investment decision among which timing and choice of stocks prove to vital. The investor needs to make it a practice to test and re-test what works and what doesn't in the context of investment decisions. This will lead customized heuristics.
- **Most importantly-Keep track of failures/mistakes:** A explicit effort to keep track mistakes and failures would make the investors more learned and experienced contributing to avoid getting into gambler's Fallacy.
- **Take Tests:** There are a wide range of psychometric tests available to test your ability to assess based on attitude and emotions. However, tests are to be selected based on the criteria viz., standardization, reliability, validity. Interest tests and Personality Type Tests are very commonly used tests.

Following tests can be used for analysing ones behavioral profile and this awareness would enable to counter the behavioral biases in investing.

- o **Wonderlic Test** – This test comes as the Wonderlic Personnel Test-Quicktest (WPT-Q) with 30 questions that are required to be answered in eight minutes and the other one is Wonderlic Personnel Test-Revised (WPT-R) with 50 questions that are to be answered in 12 minutes.
- o **PICA and PIBA Tests** - The **PICA test** aims to conduct an unbiased assessment of an individual's cognitive ability. In these tests, a person's abstract intelligence is evaluated. On the other hand, **PIBA** is necessarily a behavioural test that assigns scores in a dissimilar way to the cognitive test. Right or wrong answers are not part of this tests, the answers given, build a picture based on four traits: dominance, extroversion, patience and formality.
- o **Myer-Briggs Personality Type Test:** This test was developed by Katharine Cook Briggs and her daughter Isabel Briggs Myers. The personality test is essentially based on the personality indicator. The type test is based on a well drafted series of questions that intend to capture information on how a person tends to respond or relate to diverse situations.

The responses to the questions are evaluated to asses the person's individual personality type.

Understanding ones personality type can provide productive insights, such as optimal professional choice, better personal relationships, and paths to aspiring growth.

- o **The Caliper Profile:** This is a comprehensive assessment, which has been used for nearly five decades, measuring personality traits viz., assertiveness across thoroughness. These traits relate to key professional abilities required by corporates.
- o **Gallup Strengths Finder Test:** This test was designed in recent decades by Gallup. This agency post-research, suggested that personality assessments lay emphasis on personality flaws rather than strengths. Gallup devised a test, wherein based on responses to 177 statements about thirty four positive traits that the test-taker is likely to possess viz., discipline, communication, the test identifies the top five strengths that most strongly represent the person.
- o **Sixteen Personality Factor Questionnaire:** This test, is also commonly referred as the 16PF, was introduced in 1949 by psychologist **Raymond Cattell**. Here, sixteen traits that humans posses in varying degrees are identified. The test falls at another level compared to other personality assessments as it incorporates 170 questions.

Most of these tests can be taken at free of cost, at the same time there are several organizations that give more detailed assessment of personality, behavioural and attitudinal aspects of an individual but they charge fee. As an investor it is worth to invest in knowing personality profile as it can fetch a conscious insight about behavioural biases in investing.

## Conclusion

Based on the study the nine biases are categorised as cognitive biases and remaining six biases falls under emotional biases category. Four biases (Momentum Chasing, Herding, Gamblers' Fallacy, Loss Aversion) are often observed among investors in bull market conditions, whereas biases viz., Overconfidence, Hindsight, Availability Bias, Familiarity Bias, Regret Aversion are prevalent when the market is bearish. Representativeness, Framing, Self-Attribution Bias, Disposition Effect, Optimism are omniscient in markets. Volatility, gender, volume of trade, experience in investing stand out as major indicators of biases. Focus on investing rather than trading excessively and avoidance of momentum chasing can serve as best remedial measures while overcoming the biases along with taking relevant tests as preparatory measures. Behavioural Biases are inevitable and they creep in without notice, hence better understanding and conscious effort to handle them can be quite fetching enabling investors avoid losses.

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## Effective Leadership Through Yogic Practices

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### Abstract

Leadership is an art of influencing people at workplaces. The successive drive of modern organizations relies on the leader's ability at workplaces. The leaders in the present day scenario need multi-facet skills like communication, motivation, strategic and political management to acquire and update skills and abilities. A leader needs to enhance his concentration and focus. This is feasible through yoga practices. Yoga derives from the Sanskrit word "Yuj" which means to unite or integrate. It is a Physical, Mental and Spiritual discipline which has originated from ancient India. This study aims to explore the aspects related to yoga practices and its influence on leadership effectiveness and behaviour. For this study, the data is collected from 480 Yoga practitioners from various Yoga centers of Madurai Zone. Convenience sampling technique is used to select sample. From the study it is found that there is direct effect of compassion, concentration, awareness on leadership effectiveness which subsequently influence leadership outcome

**Keywords** – Leadership effectiveness, leadership performance, Yoga practices

### Introduction

*The Greatest gift of India to the world is Yoga. Yoga is derived from the Sanskrit word "Yuj" which means "to unite or integrate" It is a physical, mental and spiritual discipline originated in ancient India. Yoga in essence is the integration of the body-mind-intellect with the self, individual with the family, the family with the society, the society with the nation and the nation with the whole creation. Yoga is a way of life based on the vision of oneness. Yoga focuses on the Individual's*

1. **Physical level:** Makes the body work more efficiently by directing the energies in the most controlled fashion.
2. **Mental level:** Enhances the power of imagination, creativity and the will power of the mind.
3. **Intellectual level:** Enhances the power of sharpness and comprehensive development of the intellect with powerful concentration.
4. **Emotional level:** Enables to systematically sharpen and sensitize their emotions.
5. **Spiritual level:** Helps to move towards the casual state of mind by introspection wherein the subtle layers of mind unfold themselves and the inner dimensions of personality opens out.

### Yogic practices

All yogic practices are psychological and physiological. The commonly used three stages of yogic practices are:

#### 1. Asanas (Posture)

A steady and pleasant posture produces mental equilibrium and stable mind. Asanas are postures. The yogi conquers the body by the practice of Asanas and makes it a fit vehicle for the spirit.

#### 2. Pranayama (Science of Breathing)

Pranayama is control of Breath. One can control the rhythms of pranic energy with pranayama and achieve healthy body and mind.

#### 3. Meditation (Dhyana)

According to Patanjali Yoga sutra (Ashtanga Yoga) "Meditation (Dhyana) means Full concentration of the mind focused on one of those experiences" Meditation is the deep concentration, calmness and tranquillity of the mind. It is the study of attaining complete control over one's mind.

### Leadership

Leadership is a "Process of social influence in which a person can enlist the aid and support of others in the

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accomplishment of a common task". Leadership has been defined in terms of group processes, personality, compliance, particular behaviours, persuasion, power, goal achievement, interaction, role differentiation, initiation of structure and combinations of two (or) more of these. Effectiveness is defined as the perceived quantity and quality of the performance with satisfaction and commitment. Leadership effectiveness comes from the human – oriented activities – communication and human resource management.

Leader's style is the key to the formulation and implementation of strategy and plays an important role in work group member's creativity and team citizenship. Various theories from classical theories like trait, group, contingency, path-goal and the modern theories includes the charismatic, transformational, social learning and substitutes theory explained about leadership characteristics and styles. Whetten and Cameron provide a more empirical derivation of effective leadership skills, the ten skills identified by them are:

1. Verbal communication (including listening)
2. Managing time and stress
3. Managing individual decisions
4. Recognizing defining and solving problems
5. Motivating and influencing others
6. Delegating
7. Setting goals and articulating a vision
8. Self – Awareness
9. Team – building
10. Managing conflict

## Review of Literature

In the present information age, managers need to motivate workers and the Bhagavad Geeta is a rich resource available to the managers to motivate their workforce. In particular, Geeta mentions that all work done without faith is nothing. Sincerity is vital for all interconnectivities between deeds and needs. A business needs to maintain a culture of integrity in order to sustain trust, inside and outside (Chow Hoi Hee and Gurd, 2010). In the application of the Geeta to leadership, results are usually intangible and invisible; work becomes worship, thus increasing in crises and adopting a positive perspective to the same situation (Ratick, 2007). Transformational leadership characteristics, which emanate exclusively from

personal qualities of the leader, have a very strong positive relationship with Karma Yoga. Managers practicing Karma Yoga can very easily practice transformational leadership and vice-versa. Thus the concepts of Karma Yoga and transformational leadership are highly correlated and have great promise for organizational development. A manager can become a transformational leader by adopting the principles of Karma Yoga in his working (Satpathy, 2008).

Effectiveness of its executives is very important for the success of an organization's business (Bao, 2009). The role behaviours and personal traits of managers are the major criteria for their effectiveness (Tsui and Ohlott, 1988). To be effective, the development managerial skills should cater to the current and projected needs of the organization. It is the critical responsibility of senior management to identify the core competencies of the enterprise and to ensure that the competencies required by managers, specialists and the workforce in general are adequate and appropriate. Competent people are the key to future success and offer organizations their only sustainable competitive advantage (Pickett 1998).

Leadership qualities and commitment to effectiveness of an individual are one of the most important aspects of managerial effectiveness. Although the terms manager and management are different from leader and leadership and seldom take advantage of each other's contributions (House and Aditya, 1997); these terms can be used interchangeably (Kotter, 1998, Hickman, 1990, Yukl, 1998, Barker, 2000, Alimo-Metcalge and Lawler, 2001, Bolden, 2004; Raelin, 2004). Leadership is an imperative managerial trait desirable at all levels within and across organizational hierarchies including senior, middle and first-line levels of management. This is referred to as managerial leadership; and is to an extent different from organizational leadership and the organizational leader role of directors, senior executives and top managers (Russ-Eft, et. al., 1996). The current and future success of an organization is a reflection of the effectiveness of the senior management team, their vision and leadership, and the combined acknowledge and skills of the organization's work force. Much attention has been given to the effectiveness of senior managers and their performance by theorists, management researchers, developers and practitioners, in developing countries and developing economies (Copeman, 1971; Kotter, 1982; McCall and Lombardo, 1983; Margerison and Kakabadse, 1984).

Asanas (postures), Pranayama (breathing practices intended to influence vital forces), Kriyas (cleaning process), and Mudras (certain muscular locks) are taught as physical practices, while various meditative techniques work at the mental level. All these practices are intended to develop a certain type of awareness within oneself. This in turn is expected to bring about a change in the emotional and visceral functions and through them a change in the intellectual and somatic functions of the individual. Bhole (1977).

In companies that introduced the yoga / meditation programmes, managers and employees, who regularly practiced yoga / meditation, improved significantly in overall physical health, mental well-being and vitality, when compared to controlled subjects with similar jobs in the same companies. Psychosomatic Medicine (1984).

According to Indian Psychological Perspectives, regular practice of meditation will lead to reduction in Rajasic qualities (restless, struggling, more desirous, lack of clear discrimination, distorted understanding, egoistic), Tamasic qualities (depressed, lethargic, distended to work, negligent, undisciplined, arrogant, ignorant, uncertain and dull) and increase of Satvic qualities (discriminative intellect, self-controlled, serene, virtuous, generous, gentle, detached, seeking self and aware of the unity underlying all diversities. Kuppaswamy (1985).

Yukl (2011) focuses at how leaders enhance the meaning of spirituality in their day to day to work involving the followers. Spiritual leadership is a blending of natural and spiritual qualities utilized for influencing God's people to accomplish God's purposes. Spiritual leadership doesn't focus on leader-centric approaches but more on "engaging all group members to meet spiritual needs to enhance organizational commitment and performance" (Fry. et.al., 2011 & Samad. et al 2015) Because the principal of yoga practice seeks to improve the mind and the body (Patanjali & Feuerstein, 1989), this study aimed to find an effective way to strengthen and develop the mental and physical health of individual members, So that they can improve their job satisfaction and quality of work, and potentially building bonds among members of an organization.

### Objectives of the Study

1. To Study and understand effectiveness of leadership through Yogic practices
2. To identify factors that brings out effectiveness of a leader
3. To study and understand about yoga and various practices of yoga
4. To study and understand the benefits of Yoga

### Scope of the Study

The study aims to find the effectiveness of leaders who are practicing Yoga in various Yoga centers in Madurai Zone. It also aims to identify the factor that brings out effectiveness of leaders and benefits of Yoga to them.

### Research Methodology

This present study employed exploratory-cum descriptive research design, since the aim of study is to probe the aspects of yoga practices, leadership effectiveness and subsequent behavior outcome and also understand the causal relationship between those identified aspects.

The data collection method employed for the study is through scheduled questionnaire, administered to the respondents who are engaged in yogic practices. The area of study is the yoga centers of urban area of Madurai Zone. The responses were collected on their personal, career backgrounds, details of yoga practices, opinion of leadership traits, view on yoga practices and its outcome on their work place execution and finally their trait variation before and after practicing yoga. The respondents have been approached only by considering the yoga practicing institutions only. Convenient sampling technique is used to collect the data from the respondents in order to attain the desired objective of the researcher and the samples size selected for the study is 480 Yoga practitioners of various Yoga centers in Madurai Zone.

### Limitations of the Study:

The study is confined to the Madurai Zone in Tamilnadu. The sample only includes some major urban areas of Madurai. This research does not differentiate among Yogic practices in any specific area but is exploring effectiveness of Yogic practices among leaders in an organization

### Results and discussion

The table given below shows the demographic description of the sample. The table shows the respondent's personal and professional background. With regard to age background of respondents it is observed from the table 49 percent are above 50 and 26 percent are between 40-50 years of age. It is found that

69.2 percent are male respondents. It is observed that 78 percent are married and 22 percent are unmarried. Regarding their cadre of work 49 percent are in functional level managerial cadre and 32 percent are

operational level. It is also observed from the table that 68 percent are vegetarian and 23 percent are Non-vegetarian.

**Table No.1: Showing Demographic Background**

Sl.No	Attribute	Category	No. of Respondents	Percent to Total
1	Age	Less than 40	119	24.8
2		40 to 50	124	25.8
3		More than 50	237	49.4
1	Gender	Male	332	69.2
2		Female	148	30.8
1	Food habit	Vegetarian	320	66.7
2		Non-Vegetarian	111	23.1
3		Eggterian	49	10.2
1	Level of management	Operational	153	31.9
2		Functional	235	49
3		Top	92	12
1	Marital Status	Married	372	77.5
2		Unmarried	108	22.5

Source: Primary data

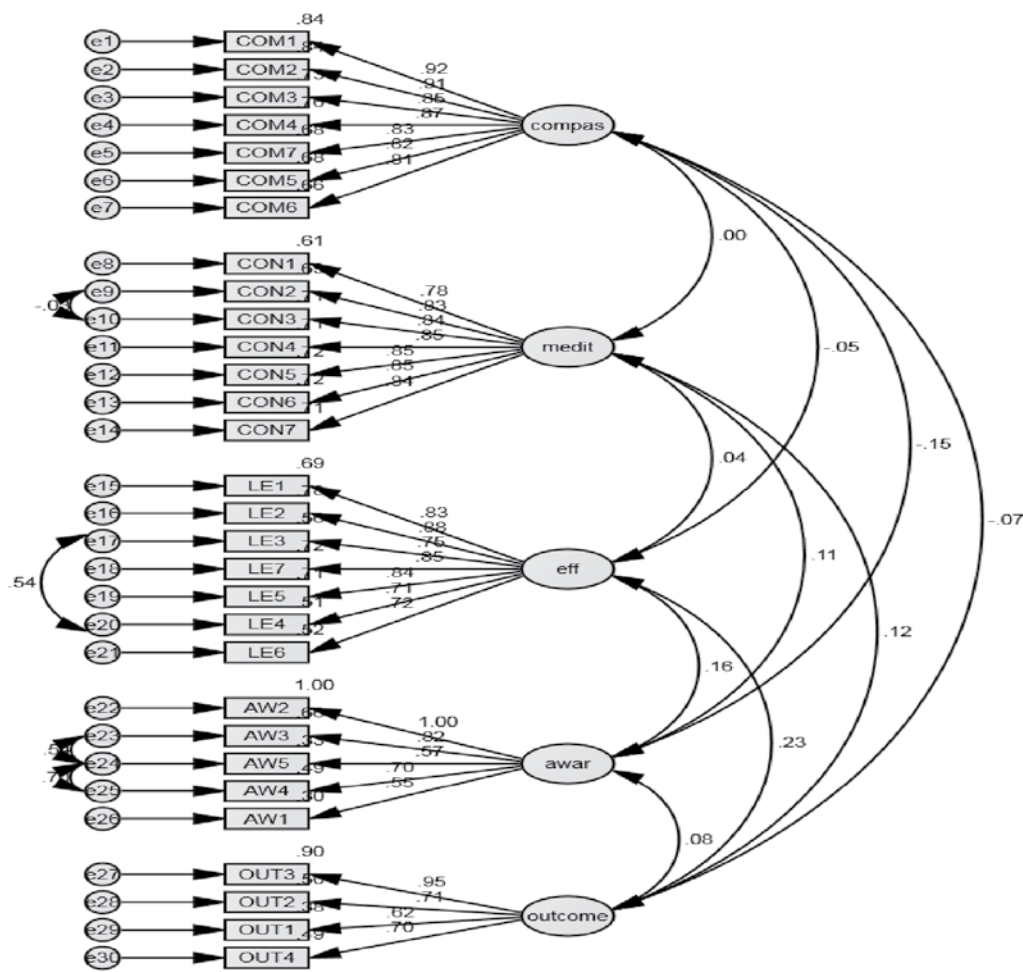
**Table No.2: Yoga practices pattern among the respondent**

Sl.No	Attribute	Category	No. of Respondents	Percent to Total
1	Frequency of practicing yoga	Daily	210	43.8
2		Twice in a week	173	36
3		Weekly once	65	13.5
4	Hours of Practice	Occasional	32	6.7
1		Less than half-an hour	161	33.5
2		1/2hours-1hours	270	56.2
3	Preferred time for Practice	More than one hour	49	10.2
1		Early morning	303	63.1
2		Morning	97	20.2
3	Reasons to Practice Yoga	Evening	80	16.7
1		To reduce stress	84	17.5
2		For Physical Fitness	108	22.5
3		For mental Fitness	81	16.9
4		For Physical &Mental Fitness	80	16.7
5		Social harmony	84	17.5
6		Spiritual advancement	43	9

Source: Primary data

Table 2 shows the yoga practices pattern among the respondents, it is found that 56.3 percent practice yoga from half to one hour and 33.5 percent practice yoga for less than half an hour. In terms of respondent's preference for time to practice yoga, it is found

that 63.1 percent prefer to practice yoga during early morning and 16.7 percent during evening. It is learnt that 22.5 percent practice yoga for physical fitness, 17.5 percent to reduce stress, 16.9 for mental fitness and 16.7 percent for physical and mental fitness.

**Figure 01: Showing the Measurement Model with Modification Indices**

\*\*-. compass – Compassion, medit – Mediation eff- Leadership Effectiveness awar- Awareness outcome – Leadership Outcome

**Table 3 Showing the Model Validity scores**

	CR	AVE	MSV	MaxR(H)	Compassion	Mediation	Leadership Effectiveness	Awareness	Leadership Outcome
<b>Compassion</b>	0.952	0.740	0.024	0.957	<b>0.860</b>				
<b>Mediation</b>	0.941	0.696	0.014	0.942	-0.001	<b>0.834</b>			
<b>Leadership Effectiveness</b>	0.925	0.639	0.055	0.933	-0.049	0.043	<b>0.799</b>		
<b>Awareness</b>	0.857	0.557	0.026	0.997	-0.155**	0.114*	0.161***	<b>0.746</b>	
<b>Leadership Outcome</b>	0.836	0.567	0.055	0.918	-0.074	0.118*	0.234***	0.085†	<b>0.753</b>

The above table shows the model validity obtained for all constructs framed through exploratory factor analysis and modelled for confirmatory factor analysis. The convergent validity of all items under each construct satisfied the required convergence of more

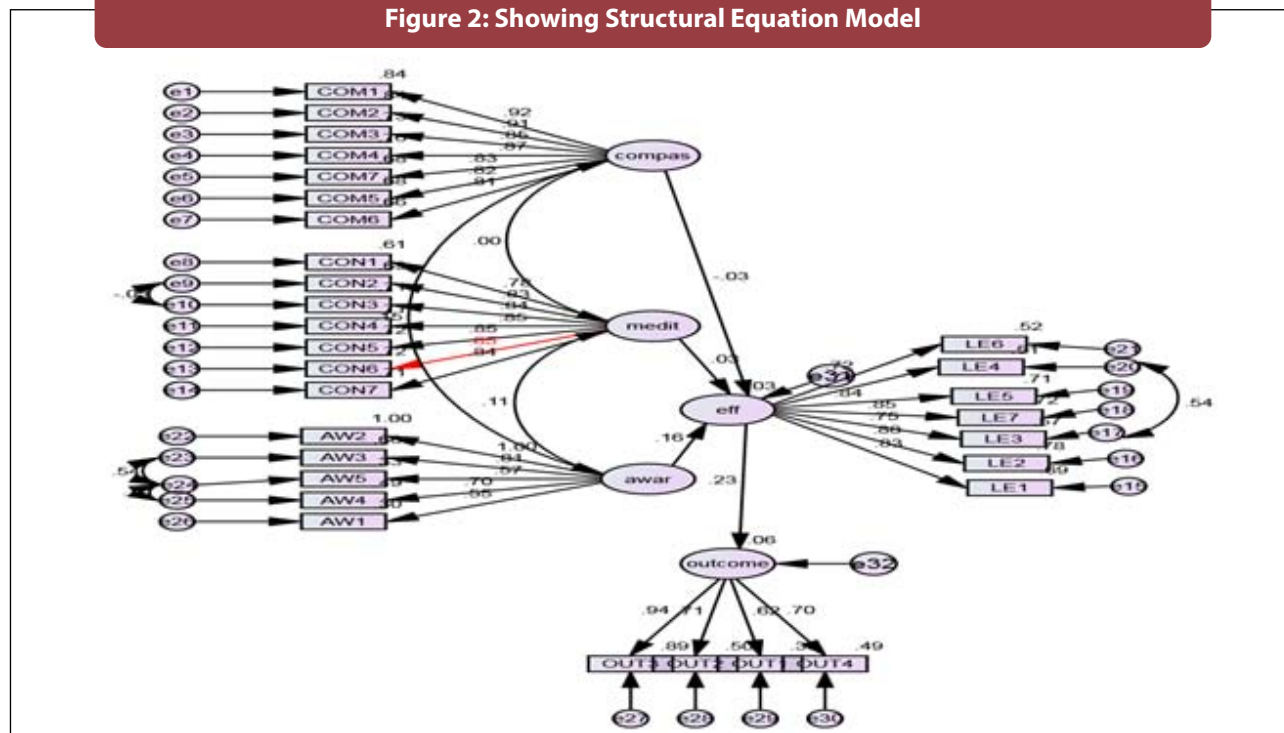
than 0.7, the average variance for five constructs are more than 0.05, the composite reliability also more than 0.7 for the five constructs. It is also understood the required discriminant validity also obtained for each constructs and which is more than 0.7.

## Structural Equation Modeling

After confirming the model fit it is necessary to test the structural equation model. SEM finds the relationship

between the construct (Latent Variable) and its direct or indirect effect changes in the other constructs in the model (Byrne, 2001). The theoretical SEM model is shown in figure.

Figure 2: Showing Structural Equation Model



\*\* - compass – Compassion, medit – Mediation, eff- Leadership Effectiveness, aware – Awareness, outcome – Leadership Outcome

Table Showing: Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
Leadership Effectiveness	< ---	Compassion	-.019	.035	-.534	.593	Not supported
Leadership Effectiveness	< ---	Mediation	.026	.046	.563	.574	Not supported
Leadership Effectiveness	< ---	Awareness	.206	.064	3.224	.001	Supported
Leadership Outcome	< ---	Leadership Effectiveness	.182	.038	4.796	***	Supported

\*\* Significance at 5% level

The above figure shows the direct effect of one latent variable on the other as proposed in the research model. There is direct effect of compassion, concentration, awareness on leadership effectiveness which subsequently influence on leadership outcome.

In SEM the endogenous variable (Dependent Variable) should have residual error term (disturbance or Latent error). In this model three exogenous variable namely compassion, concentration and awareness and two endogenous variable namely leadership effectiveness and outcome. The path was

from compassion to leadership effectiveness, concentration to leadership effectiveness and awareness to leadership effectiveness and leadership effectiveness to leadership outcome.

The outcome of exploratory factor analysis outcome gives the five factors that have emerged namely: Compassion, Awareness, Mediation, Leadership effectiveness and Leadership outcome. From the SEM model outcome that is run on the five confirmed factors this shows the results as: there is positive influence of awareness on leadership effectiveness-(as the



standardized estimated value is 0.206) this indicates that one incremental level of awareness statistically improve 20.6 percent of leadership effectiveness. Compassion and meditation the other three factors identified for yoga practices do not show significant influence on leadership effectiveness and they fail to support the hypotheses.

## Conclusion:

For an effective leader constant personal growth is needed. The art of leadership is a never ending process of learning. There are many ways to develop our leadership qualities. Uncovering the essence of our being is important in leadership development. Leader can undergo personal growth training that may involve a combination of physiological and psychological exercises. This approach is aimed at empowering participants to take greater responsibility for their own lives and ultimately their organizations. The concept of self-awareness (or) knowing our self is central to both yoga and leadership. Learning to be an effective leader requires introspection, adherence to ethics and moral standards which is available in Yogic practices.

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## Role of Postal Services in Indian Subcontinent in the Current Epidemic A Discussion Based Notional Study in Punjab and Haryana Circle Headquarters

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### Abstract

A virtual diary log based study from CPMG Ambala, SSPO Ambala, DAP Ambala and CPMG Chandigarh, have been taken. Observation at the above stations have supplemented to the study. Study have been taken using following 6 key indicators, namely, Medical Facilities, Cleanliness, Preparedness, Precaution and Protection, General Remarks on Sanitization and Greenery, and Efficiency of Operations and Operationalization. In such hard times, department of posts is actively releasing its important role in the crucial execution of the day to day affairs of the nation. Apt facilities at Both CPMG Ambala and Chandigarh have been observed. Cleanliness is an all observed phenomenon. Apt preparedness, precaution and protection at Both CPMG Ambala and Chandigarh have been observed. Mask usage was not observed as such at CPMG Chandigarh. Sanitization and Ecological Balance was an all observed phenomenon.

**Keywords** COVID-19 Pandemic, Postal Services, India Post, North-Western India. **JEL Classification:** C93, D22, D62, D78, E21, F01, F59, F64, G18, G21, H23, H53, H84.

### Introduction

Our nature mother is very kind to humanity, still a balancing force of this universe. It repents from the community what it's owes up. See the recent situation, where across globe it is visible that the mother earth is healing itself. Thousands of animal and bird species are coming back to the surroundings they had left decades ago, or even a century ago, whether it be the dolphins in Marine Drive or Thames, or the deer's walk in Calgary or California.

The COVID-19, popularly pronounced as the Novel

Corona Virus, is a recent vastly spreading epidemic, having affected the whole globe, with its far reaching disastrous impact. US is on the notch with having around 4 lakh positive cases. In India, Mumbai is the single city having highest number of cases, even more than a few states, emerging as the center of epidemic on the lines of New York.

Indian Postal Services is one of the largest postal network in the world having 1,55,531 post offices all over the country. Initially India Post having 23,344 post offices prior to independence, serving to needs of 15,038 persons and covering 53 square miles area per post office, have grown up to present 1,55,531 post offices, out of which 1,39,882 i.e. 89.94% are in rural areas and 15,649 i.e. 10.06% are in urban areas having 1,81,477 Departmental and 2,37,341 Gramin Dak Sewak as on 30.03.2018, serving 8,770 people in average, i.e. 6455 in rural and 29,458 in urban area covering an area of 21.14 sq. kms per post office. The first post office in India was established by East India Company in the year 1688 in Bombay followed by Calcutta and Madras. It was named as "Company Mail". The Post Office Department of the East India Company was first established on March 31, 1774 at Calcutta, followed in 1778 at Madras and in 1792 at Bombay. The present type of post office came in to being in the year 1854 under the post office Act of 1854. The Indian post office has a huge network of branches with an unique outreach in rural areas. In the year 1861, total number of post offices in India was 889. The number of post offices in India increase from 23,344 in 1947 to 1, 55,531 as on 31-03-2018 (Department of Posts, 2019).

In the current situation of pandemic, where department of posts, along with department of telecommunication is serving as the fourth leg of the

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administrative chair of the country, after the administration, security and medicine, providing its role in official communication and articles' flow in the country. In such hard times, department of posts is actively releasing its important role in the crucial execution of the day to day affairs of the nation. The present study is a discussion based summation, depicting the role of postal services in the current epidemic, based on the views given by different officials in Punjab and Haryana Circle Headquarters. A virtual diary log based study from CPMG Ambala, SSPO Ambala, DAP Ambala and CPMG Chandigarh, have been taken.

As the issue of COVID-19 is a recent one, with a study on postal services already a lesser taken topic in India and abroad, we didn't found a study of the kind truly relevant to review. Hence, being only a research paper, indirectly attached studies are not included as review.

## Methodology

Observations and views of India Post Officials were taken from key centers of earmarked north-western region of India, namely, Chandigarh, Amritsar / Jalandhar, Ludhiana, Ambala, Delhi, Shimla / Dharamsala Head Post Offices. CPMG Haryana Circle Key Officials have been met and made aware of the grant of permission and conduct of research, during my visit at CPMG Ambala for Initial Field Induction. SSPO Ambala having visited for Pilot Survey was also taken in the study. CPMG Chandigarh officials were met to know the status. Discussion based role of postal services in the current epidemic, based on the views given by different officials in Punjab and Haryana Circle Headquarters (CPMG Ambala, SSPO Ambala, DAP Ambala, Ambala Cantt Head Post Office, India Post Payment Bank Ambala Cantt., India Post Payment Bank Chandigarh and CPMG

**Figure 1. Researchers' visits and observations in the field**



Chandigarh) has been, hence, taken under consideration. Observation at the above stations have supplemented to the study.

Study have been taken using following 6 key indicators: 1. Medical Facilities, 2. Overall Cleanliness Mark, 3. Preparedness to the Challenge, 4. Precaution and Protection taken up, 5. General Remarks on

Sanitization and Greenery, and 6. Efficiency of Operations and Operationalization. Ecological Momentary Assessment (EMA) Methodology of Data Collection is applied, using Elicitation and Feedback studies for the purpose. Other Virtual Resources have been referred.

**Figure 2. Observation from online sources**

## Results and Discussion

AD (BD&T) at CPMG Ambala assures, "Delivery of Masks to each and every employee, and access to hand sanitizers is our core focus, in addition to taking all the available precautionary and necessary measures at the places under the Circle". AD (Grievances) at CPMG Chandigarh comments, "As per the government orders, we are assuring frequent cleaning of whole premises. Access to hand sanitizer at each entry point and key offices is being stressed out".

1. Medical Facilities: Apt medical facilities at Both CPMG Ambala and Chandigarh have been observed. DAP Ambala Main Office, having settled within the CPMG Ambala Complex, is mutually receiving all those medical facilities upto mark. SSPO Ambala is again observed equipped with adequate amenities for its first aid requirements. Head Post Office Ambala Cantt is observed adequately equipped with all resources and facilities, having apt medical first aid and amenities. India Post Payment Bank Ambala Cantt, having settled within the HO Ambala Cantt Complex, is mutually receiving all those medical facilities upto mark. India Post Payment Bank Chandigarh, having settled within the CPMG Chandigarh Complex, is mutually receiving all those medical facilities upto mark.
2. Cleanliness: Cleanliness is all observed phenomenon, hence is deemed upto mark in the existing

situation. Apt measures for the maintenance of cleanliness is there at all the stations observed, including CPMG Ambala, DAP Ambala Main Office, SSPO Ambala, Head Post Office Ambala Cantt, India Post Payment Bank Ambala Cantt, India Post Payment Bank Chandigarh and CPMG Chandigarh Complex. Having lesser external interaction, DAP Ambala sub office has marginal cleanliness observed. ASD to SSPO Ambala comments, "Fighting to the epidemic is our most sought after goal. We try to ensure our best possible efforts to ensure safety and cleanliness".

3. Preparedness: Apt preparedness at Both CPMG Ambala and Chandigarh has been observed. DAP Ambala Main Office, having settled within the CPMG Ambala Complex, is mutually following all those preparedness upto mark. SSPO Ambala is again observed equipped with adequate amenities for its preparedness. Head Post Office Ambala Cantt is observed adequately equipped with all resources and facilities, having apt preparedness. India Post Payment Bank Ambala Cantt, having settled within the HO Ambala Cantt Complex, is mutually equipped with all those preparedness. ASD to SSPO Ambala adds, "If we are successfully able to tackle the disease spread in our premises, only then we will be able to serve the nation in such hard time". Having lesser external interaction, DAP Ambala sub office has lesser preparedness observed. India



Post Payment Bank Chandigarh, having settled within the CPMG Chandigarh Complex, is mutually equipped with all those preparedness upto mark. Mask usage was not observed as such at CPMG Chandigarh and IPPB Chandigarh Premises.

4. **Precaution and Protection:** Apt precaution and protection at Both CPMG Ambala and Chandigarh have been observed. DAP Ambala Main Office, having settled within the CPMG Ambala Complex, is mutually following all those precaution and protection upto mark. SSPO Ambala is again observed equipped with adequate amenities for its precaution and protection. Head Post Office Ambala Cantt is observed adequately equipped with all resources and facilities, having apt precaution and protection. India Post Payment Bank Ambala Cantt, having settled within the HO Ambala Cantt Complex, is mutually following all those precaution and protection upto mark. Having lesser external interaction, DAP Ambala sub office has lesser no. of precaution observed. Protective measures abeyance is also observed as such.
5. **General Remarks on Sanitization and Ecological Balancing:** Sanitization and Ecological Balance was an all observed phenomenon, hence is deemed upto mark in the existing situation. Apt measures for the maintenance of cleanliness are there at all the stations observed, including CPMG Ambala, DAP Ambala Main Office, SSPO Ambala, Head Post Office Ambala Cantt, India Post Payment Bank Ambala Cantt, India Post Payment Bank Chandigarh and CPMG Chandigarh Complex. Having lesser external interaction, DAP Ambala sub office has marginal sanitization observed. The place score well on the greenery front, having good contributions made by the staff. ASD to SSPO Ambala comments, "Fighting to the epidemic is our most sought after goal. We try to ensure our best possible efforts to ensure safety and cleanliness". The Head Post Office at Gurgaon, during the Initial Field Screening has not observed upto mark on the cleanliness, sanitization and green cover parameters. The picture was a bit better, but still weak in case of Head Post Offices at Ludhiana, Jalandhar and Kapurthala.
6. **Efficiency of Operations and Operationalization:** India Post is running through the length and breadth at every stretch using its different initiatives. For example, SPO Una is providing mobile

post office van in its division, especially designed for the current hard situation. Already, Dak Sevaks are providing many services at home to needy, especially; DBT scheme of central / state government, even in far flung hilly and / or encroached pockets. PMG Chandigarh, ADBD and DPS, under CPMG Chandigarh are assuring every effort to assure facilitation to the needy condemn. CPMG Haryana and its DAP, SSPO offices were working hard since inception with its different initiatives, to assure best services to the community in the region and are regularly planning towards the release of facilitation activity, in terms of financial allocation (DBT), to best address the current need of hour, of locale in the region, to minimize the inconvenience to the community.

Overall, the offices observed have assessed efficiently working in the current hard situation. Better prevention at some of the offices observed deficient is advised, to tackle the epidemic as well.

## Summation and New Directions

In the current situation of pandemic, where department of posts, along with department of telecommunication is serving as the fourth leg of the administrative chair of the country, after the administration, security and medicine, providing its role in official communication and articles' flow in the country. In such hard times, department of posts is actively releasing its execution in the day to day affairs of the nation. Apt facilities at Both CPMG Ambala and Chandigarh have been observed. Cleanliness is an all observed phenomenon. Apt preparedness, precaution and protection at Both CPMG Ambala and Chandigarh have been observed. Mask usage was not observed as such at CPMG Chandigarh. Sanitization and Ecological Balance was an all observed phenomenon. The department presents a good image.

## Acknowledgement

My humble thanks to the authorities and officials, for their due help in conduct of this micro study, using different virtual methods, in such a hard situation. My due thanks to the officials and authorities, including our Honourable Dean and Head of Department, to provide remote access with all research tools and resources, in such a succinct period. My Due Thanks to the Chief Postmaster General at the Ambala and Chandigarh respective circle headquarters, to duly granting the written / oral permission for the grant of conduct of research work in the circle, including this micro assessment in Punjab and Haryana Postal Circles. - Rohit Kanda.



## References and Bibliography

Authors duly acknowledges to the referred and overlooked Books, Journals, Reports and Websites of relevance, including "The economics of a pandemic: the case of Covid-19" by Paolo Surico and Andrea Galeotti, under London Business School, European

Research Council and Wheeler Institute for Business and Development at University of London, U.K. In addition, the contents referred from the respective annual reports of India Post, up to the year are also acknowledged, as issued by Department of Posts, Government of India.

**Figure 3. Reference Clicks of the Offices visited**



## Book Review

### Emotional Intelligence: AUTHENTIC LEADERSHIP

By HBR Publishing

Published by Harvard Business School Publishing Corporation

Published in –2018,

Pages: 140

Language: English

ISBN: 978-1-63369-391-3

### Authors' profile

This book is a part of The HBR Emotional Intelligence Series, which features essential reading on the human side of professional life from the pages of Harvard Business Review. This particular book includes the scholarly work of Bill George, Peter Sims, Andrew N. McLean, Dian Mayer, Herminia Ibarra, Emma Seppala, Rob Goffee, Gareth Jones, Sylvia Ann Hewlett, Sarah Green Carmichael and Adi Ignatius.

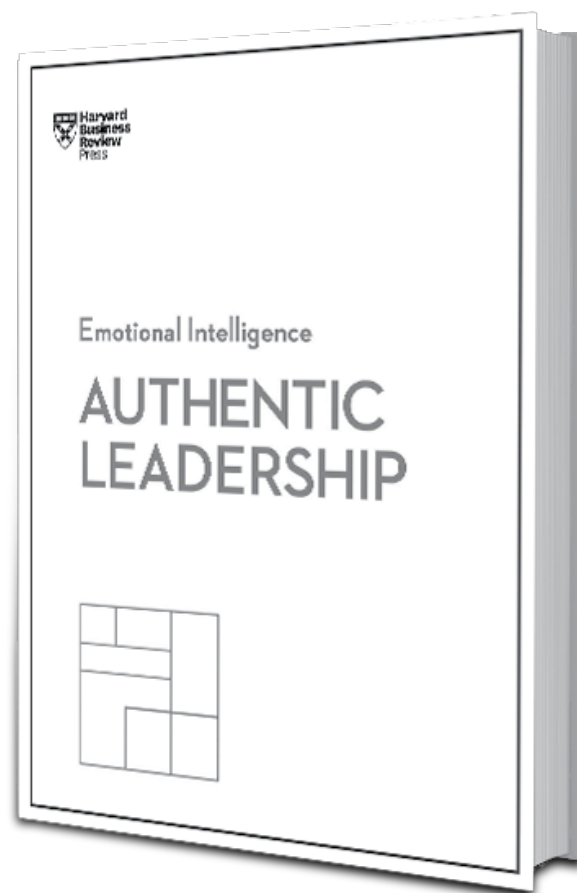
### Appreciation and Critique

This book explains the role of authenticity in emotionally intelligent leadership using lots of small cases, examples and situations. One will learn; how to discover one's authentic self, when emotional responses are appropriate, how conforming to specific standards can hurt and when one need to feel like a fake.

This is a collection of seven scholarly articles focused on the above theme, which are must read for everyone from the field of Human resource management and Organization Behavior and leaders particularly.

1. 'Discovering your authentic leadership – Why self-awareness is so critical' by Bill George, Peter Sims, Andrew N. McLean and Dian Mayer:

Interesting article that focus on discovering one's authentic leadership through conducting intensive interviews with wide range of leaders. Authentic leaders frame their life stories in ways that allow them to see themselves not as passive observers of their lives but rather as individuals who can develop self-awareness from their experiences. Authentic leaders act on that awareness by practicing their values and principles, sometimes at substantial risk to themselves.



They are careful to balance their motivations so that they are driven by these inner values as much as by a desire for external rewards or recognitions. Authentic leaders also keep a strong support team around them, ensuring that they live integrated, grounded lives.

2. 'The authenticity paradox – To grow, you need to feel like a fake' by Herminia Ibarra:

Another interesting article that tries to decode what 'Adaptive Authenticity' really means and suggest some means to achieve that. Remaining authentic about who you are can be a recipe for staying stuck in the past. Leadership identity should change each time you move on to bigger and better things. To grow as leaders, one has to stretch the limits of who we are – doing new things that makes us uncomfortable but that teach us through direct experience who we want to become. Such growth doesn't require a radical personality makeover. Small changes – in the way we carry ourselves, the way we communicate, the way we interact – often make a world of difference in how effectively we lead.

3. 'What bosses gain by being vulnerable – The psychology of human connection' by Emma Seppala:

In this article, using live cases, author has tried to explain the advantages of embracing authenticity and vulnerability (the root of human connection) in every leadership role like; 'Your staff will see you as human being; they may be prompted to share advice; your team begins to feel more horizontal than vertical if you are part of hierarchical structure; etc.' Rather than feeling like another peg in the system, your team members will feel respected and honored for their opinions and will consequently become more loyal.

4. 'Practice tough empathy – When you care, you show your true self' by Rob Goffee and Gareth Jones:

In this article, author very clearly bring out the importance of tough empathy, quoting relevant examples, in the challenging roles of leadership. Such leaders not only communicate authenticity, which is the precondition for leadership, but they will show that they are doing more than just playing a role through empathizing with the people truly and deeply. Tough empathy means giving people what they need, not what they want.

5. 'Cracking the code that stalls people for color – Sacrificing identity to conform' by Sylvia Ann Hewlett:

In this article, author through the extensive research work brings out the issues related to Inclusivity, especially at the senior leadership roles. Manifestation of 'Executive Presence' characterized by Gravitas, communication skills and appearance - a code (key characteristics) written by and for white men, to be demonstrated by senior leaders, sometime act as a deterrent for men and women of color, i.e. African American, Asian, Hispanic and Caucasian. Because feedback is either absent, overly vague, or contradictory, executive presence remains an inscrutable set of rules for professionals of color – rules they are judged by but cannot interpret and embody except at considerable cost to their authenticity. Consequently, in a workplace where unconscious bias continues to permeate the corridors of power and leadership is mostly white and male, professionals of color are measurably disadvantaged in their efforts to be perceived as leaders. But winning in today's fiercely competitive global economy requires a diverse workforce that "matches the market".

6. 'For a corporate apology to work, the CEO should look sad – Make your emotions match your message' by Sarah Green Carmichael:

In this research-based article, author, using relevant examples tried to shed light on what makes some apologies effective and what make others backfire. The conclusion drawn by the author is that being honest and specific about the source of the problem while seeking apology not only cheers up investors, it

likely helps the company turn around the issue more quickly. Conversely, the companies that blamed external factors were often vague and seen as less honest. Message delivered through this article by the author was 'when you mess up, admit it and look appropriately sad about it'.

7. 'Are leaders getting too emotional – Tears are OK if they're rare' by Adi Ignatius and Sarah Green Carmichael:

In this article, which is based on interview with Gautam Mukunda of HBS and Gianpiero Petriglieri of INSEAD, authors with relevant examples, convey the importance of being authentic when the leaders express their emotions and empathy – the leaders should feel the pain and concerns of his/her team and not just understanding the circumstances. Ability to think more deeply about what these feelings are telling you as a leader about what's happening to the people that you are responsible for and then articulate them (emotionally) in a way that is useful and befitting. Leader should be mindful about how he/she is expressing the emotions (outrage, anger, frustration, etc.) in different situations and ensure that the responses are appropriate, consistent and authentic.

In nut shell, the book (which is in fact a collection of scholarly articles) is a must read for all the leaders at all levels and the academicians/practitioners/researchers from the Human Resources and Organizational Behavior domain.

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## Book Review

### Introduction to Machine Learning

by Ethem Alpaydin

The MIT Press Essential Knowledge series

The MIT Press

Massachusetts Institute of Technology

Cambridge, Massachusetts 02142

Fourth Edition Published in – March 24, 2020,

Pages: 712 (Hardcover)

Language: English

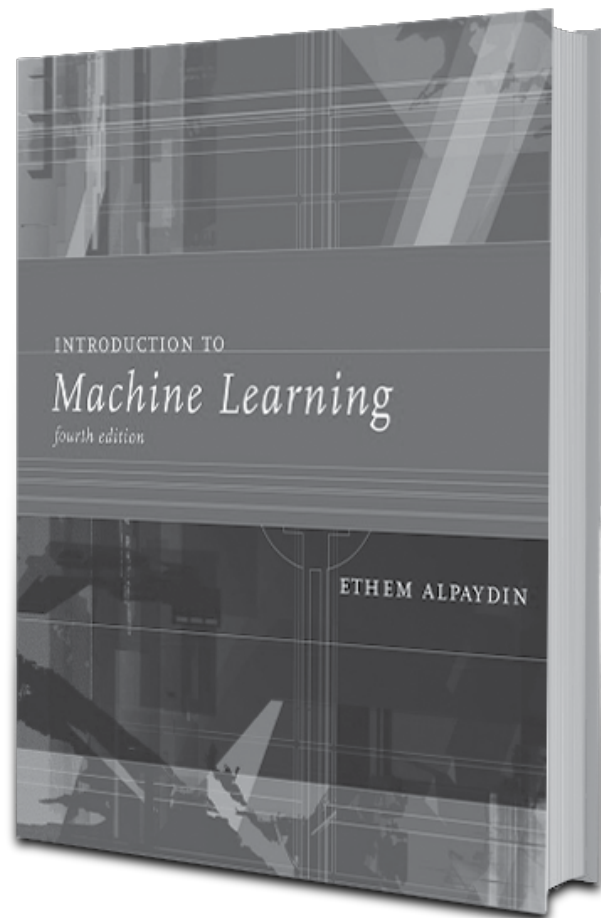
ISBN: 978-0262043793

### About the Author

Ethem ALPAYDIN is Professor in the Department of Computer Engineering, Özyeğin University, Istanbul Turkey and is a member of the Science Academy, Istanbul. He received his PhD from the Ecole Polytechnique Fédérale de Lausanne, Switzerland in 1990 and was a postdoc at the International Computer Science Institute, Berkeley in 1991. He was a Fulbright scholar in 1997. He was a visiting researcher at MIT, USA in 1994, IDIAP, Switzerland in 1998 and TU Delft, The Netherlands in 2014.

### Appreciation and Critique

The text deals with a quiet revolution that has been taking place in computer science for the last two decades. In this book, machine learning expert Ethem Alpaydin offers a concise overview of the subject for the general reader, describing new technologies, its evolution, explaining important learning algorithms, and presenting example applications. This is a revised fourth edition of comprehensive machine learning, book offers new coverage of recent advances in the field of technology machine learning in both theory and practice. This book includes development in deep learning and neural networks. This book talk about the programs that learn to recognize people from their faces, understand speech, drive a car, or recommend which movie to watch—with promises to do more in the future. It is the basis of the new approach in computing where we do not write programs but collect data; the idea is to learn the algorithms for the tasks automatically from data. As computing devices grow more ubiquitous, a larger part of our lives and work is recorded digitally, and as “Big



Data” has gotten bigger, the theory of machine learning—the foundation of efforts to process that data into knowledge—has also advanced.

The author has considered various methods of representing and dealing with machine learning, covered a broad series of topics not usually included in introductory machine learning texts. The fourth edition covers a new chapter on deep learning that discusses various aspects of training, regularizing and structuring deep neural networks. The author has also included supervised learning, parametric methods, Bayesian decision theory, semiparametric methods, non parametric methods, multivariate analysis, hidden Markov models, reinforcement learning, kernel machines, Bayesian estimation, statistical testing and graphical models in this fourth edition.

Deep neural networks such as convolutional and generative adversarial networks is covered in detail. New materials in the chapter on reinforcement learning that includes the use of deep networks, the policy gradient methods and deep reinforcement learning is included. In the chapter on multilayer perceptions on auto encoders, discussion on the popular method of

dimensionally reduction. New appendixes offer background material on linear algebra and optimization.

End of the chapter exercises help readers to apply the concepts learned and discussed. This revised fourth edition is a comprehensive textbook with in depth coverage of the recent advances in machine learning in deep learning and neural networks.

Finally, this book explores and gives broad overview of different algorithms and methodologies available in the machine learning field. Each chapter reads almost independently. The fourth edition is more recent, more detailed and slightly more math intensive.

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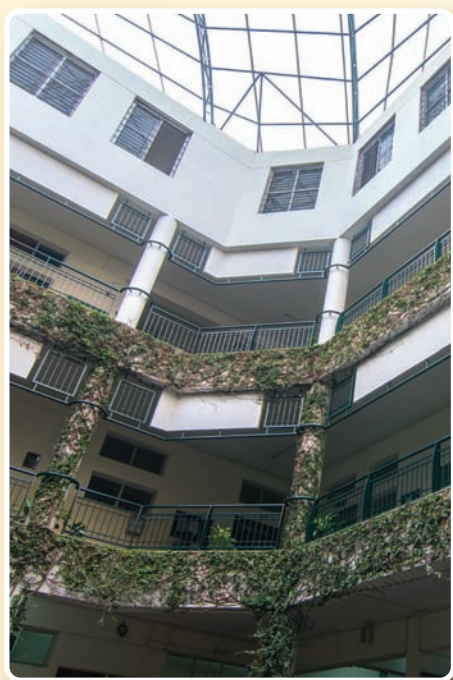
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