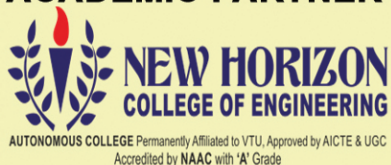# PROCEEDINGS
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Key Note Speaker

An astute and result oriented professional with over 22 years of extensive experience in operations, business development, academics and institution building. Received the *Award for "Outstanding Contribution towards Education 2016 & 17"* from World Sustainability Council at DUBAI. Also due to his contribution to the field of finance, he was appointed as a consultant for Abu Dhabi Stock exchange and also he is working on a prestigious project in developing an application for United Nations. Currently employed as *Associate Professor and Director of Experiential Learning, New York Institute of Technology, Abu Dhabi Campus, UAE.*

He holds the Post-doctoral fellowship from University Kebangsaan Malaysia and Ph.D. in Finance from the University of Madras, India. His area of expertise is primarily with corporate finance and conducts focused research in the Behavioral finance and company analysis. He has co- authored several text books in Finance which are mainly focused on Indian markets. He made intellectual contributions that impact on the academic community in the area of corporate and Behavioral fiancé through papers published in competitive journals in this domain space (Finance India, Journal of investment, Money and Banking, International Journal of Economics and Finance…). He has also made contributions through service to the academic community, as recognition of his scholarship, through her inclusion as a reviewer and/or discussant for several academic conferences and also acting as an Editor of an

International Journal. His research in the field of finance also resulted in contribution to teaching and learning by way of the receipt of a NYIT ISRC grant award. His Intellectual contributions have furthered higher education initiatives through his continued collaborative experiential education work with students into the annual Corporate Challenge Competition. His Intellectual contributions, by way of faculty-mentored student research projects were presented by students at International conferences and also got published International journals. So far he has published 25 international journal publications, 12 Books of which 4 are text books and participated in 25 international conferences worldwide.

FOREWORD
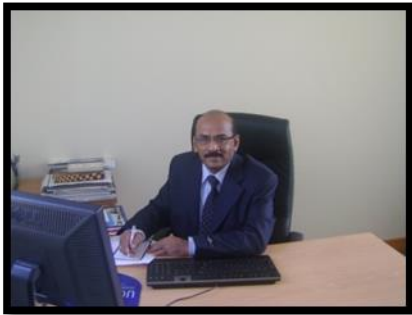
Dr.K.PrakashVel,
Professor,
University of Wollongong in Dubai.

It gives me immense pleasure in writing a foreword to the '**ARC 2018 XI INTERNATIONAL CONFERENCE ON APPLIED RESEARCH IN ENGINEERING AND MANAGEMENT SCIENCES**.

ARC is a forerunner in creating and exchanging knowledge in the field of Business Management featuring major developments in the global economy and markets. They have been successful in organizing conferences to exchange skills and acumen on theory and practice on current and emerging management principles, ideas, concepts and research methods facilitating analysis among academicians, scholars and students, both at the post graduate and doctoral levels. I strongly believe that the conference would not only inspire the delegates participating from different parts of the World, but also further add to the existing literature in different research domains in business management.

I am positive that the one day International Conference would be beneficial to the participants. I extend my sincere wishes for a successful conference.

Dr. K. PrakashVel

FOREWORD

Gantasala V. Prabhakar, Ph.D

Professor & Assistant Dean,
School of Management
New York Institute of Technology,
Abu Dhabi Campus, UAE

Knowledge stems from extensive research undertaken by the multitude of experts in academia and the corporate. It then becomes quintessential that research-based findings that contribute to extant knowledge must be shared. One of the integral elements of Nonaka and Takeuchi's SECI model is Knowledge Sharing. I have believed that bringing researchers from across the globe working in their domains of expertise on a common platform is in the direction of creating strong Communities of Practice. Academic Research Publishers has set a benchmark in organizing these congregations of knowledge and research pools and presenting opportunities for knowledge sharing and in turn fuelling possibilities of knowledge creation. ARC has successfully over the years provided the base to present, discuss and enhance research developments in each of the management functions.

ARC has also garnered increasing patronage of participants who represent all the major continents and that in itself has been very inspiring and satisfying for me to be a part of their success. The conferences organized have seen an overwhelming response from global experts and is a testimony of the credentials that ARC embodies and has stood for.

It is my privilege to applaud their vision, their efforts and to be part of **ARC 2018 XI INTERNATIONAL CONFERENCE ON APPLIED RESEARCH IN ENGINEERING AND MANAGEMENT SCIENCES**. Given the calibre of the participants and the values that are enshrined by conferences organized by ARC, I am very assured that the two day conference will be a resounding success and will draw appreciation and support from all associated with this noble endeavour.

Gantasala V. Prabhakar, Ph.D

FOREWORD

Dr. R. Krishna
Director – PG Studies
CITech, Bangalore.

It is with immense pleasure that I write this Foreword for the the Proceedings of the **ARC 2018 XI INTERNATIONAL CONFERENCE ON APPLIED RESEARCH IN ENGINEERING AND MANAGEMENT SCIENCES**, organised by the Academic Research Conferences/Publishers, Abu Dhabi, UAE

I am informed that the responses are overwhelming from all corners in the form of quality research papers submitted for review/approval for presentation during the conference. I am sure, the Proceedings of the conference will serve as an excellent reference book to the Management teachers the world over. I trust also that this conference will be an impetus to stimulate further study and research in all the areas.

Wishing Godspeed in all the endeavours.

Dr. R. Krishna.

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ARC 2018-BALI
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DATE: August 15th 2018.
LOCATION: Kuta Central Park, Bali, Indonesia

TIME	AGENDA	PLACE
08:00-08:30	**REGISTRATION**	**Portal Hall**
09:00-09:15	**CONFERENCE INNAGURATION**	**Portal Hall**
09:15-9:30	**Inaugural & Welcome address:** **Ms. Hemapriya** **Director, ARC**	
09:30-10:00	**Key Note address:** **Dr. Ravichandran Krishnamoorthy** Associate Professor, School of Management, New York Institute of Technology, Abudhabi, UAE	
10:00-11:00	**Panel Discussion:** **"Importance of Research in Higher Education"** **Moderated by Dr. Ravichandran**	
11:00-11:15	**Tea Time and Academic Exchange**	**Conference Lounge**
11:15-01:00	**Technical Session 1**	**Portal Hall**
01:00-02:00	**LUNCH BREAK**	**Conference Lounge**
02:00-03:00	**Technical Session 2**	**Portal Hall**
03:00-03:30	**ARC Board Meeting**	**Portal Hall**
04:45-05:00	**Tea time**	**Conference Lounge**

DAY 1
Conference Schedule
Kuta Central Park, Bali, Indonesia

SESSION CHAIRS

Dr. Rupa Gunaseelan,
Professor, BSMED, Bharathier University,
Coimbatore. India

Dr. J. Vijayakumar,
Associate Professor and Head,
Department of Electronics and
Instrumentation Bharathiar University
Coimbatore, Tamil Nadu, India

15-08-2018, Wednesday
Session 11:15 am to 04:45 Pm

REF. No.		TIME
1	**A Study On Inland Fisheries And Its Impact On The Development Of West Godavari District Of Andhra Pradesh** **Authors : Dr. S. Krishnaraj**	11:15-11:30
2	**Voyage of Fish Trade among Fisherwomen: A Ramble from Conventions to Contemporary and Beyond** **Authors: Dr. Preethi Keerthi DSouza and Mrs. P.V Sumitha**	11:30-11:45
3	**An Effective Fuzzy Dynamic Solution Strategy to Facilitate Supplier Selection In Healthcare Organization.** **Authors: S. S. Appadoo, Y. Gajpal and A. Chamoli**	11:45-12:00
4	**Marketing Fear: Studying The Impact of Bengali Horror Movie on The Bengali Audience and The Market** **Authors: Dr. Ritwij Bhowmik, Dr. Surajit Saha and Mr. Bappa Maji**	12:00-12:15
5	**Influence Of Supply Chain Collaboration On Performance At Acceler Global Logistics Service Providers In Kenya** **Author: Dr. Emmanuel O. P. Awuor**	12:15-12:30
6	**The Impact Of Macro Economic Determinants On The Performance Of The Indian Stock Market** **Author: Dr. C. Vadivel**	12:30-12:45
7	**Certain Investigations on Betelvine Plants Disease Identification Using Digital Imaging Technique** **Author: Dr. J. Vijayakumar**	12:45-01:00
	Lunch Break **01:00-02:00 P.M**	

8	Psychological Outcomes and Coping Strategies of Work Family Conflict by Professional Women- A Review Authors : Dr. Rupa Gunaseelan and Dr. Bindu Anto Ollukkaran	02:00-02:15
9	Cultural differences on finance managers' behavior in Sri lanka Authors : Jayamaha KV and Rathnasingha DLPM	02:15-02:30
10	"Seva prathinidhis as intercessories: A Study on their Role in shg's towards Asset Formation." Authors: Ms. P.V Sumitha, Dr. Preethi Keerthi DSouza and Dr. M. G. Krishnamurthy	02:30-02:45
11	Achieving Online Customer Loyalty Authors: Dr. Ahmed Zamil and Dr. Saji George	02:45-03:00
12	Comparative Study on Technical Efficiency of Humanities and Social Sciences Faculties in Sri Lankan Universities Authors: Ariyarathna Jayamaha and K.K.K. Dharmathilaka	03:00-03:15
Tea Break **04:45-5:00 P.M**		

CONTENTS

Proceeding of
ARC – BALI
ARC 2018 XI INTERNATIONAL CONFERENCE ON APPLIED RESEARCH IN ENGINEERING AND MANAGEMENT SCIENCES
(ICAREMS-2018)

A Study on Inland Fisheries and its Impact on the Development of West Godavari District of Andhra Pradesh

Dr. S. Krishnaraj

Associate Professor/Placement officer

BSMED, Bharathiar University, Coimbatore, Tamil Nadu, India

krishacs@gmail.com

ABSTRACT

This study is done to think about the data with respect to Inland fisheries cultivating and its effect on the improvement of West Godavari area of Andhra Pradesh which lies in west drift a portion of India. This territory is picked as my study since fundamental thought is in regards to provincial improvement here. This locale was at one time a horticultural region from which it has been totally changed to water social region. Individuals are in need to enhance their way of life so they began changing their financial exercises. This brought part of changes as they were received to new environment. Present aquaculture is blasting in this specific range. Way of life was to some degree changed to a degree. Despite the fact that creation of fisheries is on right track they were not ready to defeat their issues amid generation. Part of obstacles is confronted by ranchers. While doing research part of issues came into spotlight. In this locale there is no appropriate base for generation, to test nature of seed there are no legitimate labs and there is legitimate cool storerooms. Advertising channels are having brokers' offer in which ranchers are not ready to acquire benefits from the end customers. There is part of venture required for inland fisheries so they are expecting money related backing from the administration. Aquaculture is one of the significant parts producing pay for India so this ought to be considered as an essential division by the legislature and legitimate backing is normal by them from inland fisheries agriculturists.

Keywords: Aquaculture, Inland Fisheries, Fisheries Agriculturists

BACKGROUND OF THE STUDY

West Godavari District is cut out of Old Godavari District. As it is the West Coast of India shut by Bay of Bengal it was suitably named as "West Godavari", with Headquarters at Eluru and appeared in the year 1925. Inland catch fisheries are a vital part of numerous neighbourhood economies in West Godavari area of Andhra Pradesh. With a 16 kms in length coast and various other lasting water sources, angling is an essential non-agrarian industry. Inland fish and their fisheries serve vital wholesome, financial, social, which go about as a key segments of doable biological system capacity all through the world. Especially in creating nations, inland fisheries go about as a key wellspring of protein, vital unsaturated fats, minerals, and micronutrients for a huge number of individuals. The status of inland fisheries depends vigorously upon the amount and nature of freshwater which are prevalently affected by components outer to the fisheries. One of the major inland fish creating locale in Andhra Pradesh is West Godavari area. Ranchers in beach front Andhra Pradesh are changing themselves from customary horticulture. The wellsprings of fishery are the Godavari waterway, the Kolleru lake, a

great number of tanks and lakes. Furthermore, taking to aquaculture like fish to water. They effectively develop, advertise and even fare fish to various parts of nation. The greater part of enormous players work the production network instrument by themselves. Apart from fish cultivation, some rich agriculturists own ice factories, while others have pressing units. An expansive degree of seaside areas and fruitful grounds which are having rich asset possibilities of prolific terrains are changed over into fish lakes. This area gives colossal vocation straightforwardly and in a roundabout way particularly in the beach front districts. The blast has justifiable reason motivation to back it up. Fish cultivating gets a larger number of benefits than agribusiness. Growing two yields of a paddy a year requires Rs.10000 to Rs.15000 per hectare in capital costs for which benefits would run from Rs.4000 to Rs.7000. Then again even customary fish cultivating nets Rs.35000 in benefits, every year, on capital ventures of Rs.50000-60000.Despite start-up costs being higher, operational expenses are a large portion of that of agribusiness, as fish cultivating requires less work.

PURPOSE OF STUDY

Inland fisheries and fish contribute a more prominent part in guaranteeing worldwide nourishment security. This wellspring of sustenance gives crucial micronutrients and creature protein for neighbourhood groups, for the most part in creating world. The estimation of freshwater fisheries creation to improvement human sustenance and wages is much more prominent than gross national generation figures recommend. Creation in substantial numbers is produced by little scale exercises, with exceedingly large amounts of support in getting and cultivating, as well as in preparing and showcasing. In particular

goes about as a best wellspring of job for financially in reverse individuals in nation. Be that as it may, these days commitment of these inland fisheries towards financial advancement has been disintegrating because of different difficulties confronted by agriculturists. So this study clarifies in point of interest the way agriculturists desires are to be come to help them to beat their obstacles.

OBJECTIVES OF THE STUDY

The primary objective of the study includes:

➢ To study the impact on the development of West Godavari district of Andhra Pradesh by inland fisheries farming

➢ To identify the ways and means of marketing activities that can be carried out in the field of inland fisheries farming.

➢ To analyze the potential problems of fish production.

SCOPE OF THE STUDY

This study is to find out information regarding inland fisheries in West Godavari district of   Andhra Pradesh and its impact on the development of that area. Main scope of the study is to analyze the potential problems faced by the farmers of inland fisheries. This area is mainly chosen as it is hub for inland fisheries. Such information regarding problems can bring certain changes by knowing what are requirements by the farmers to overcome their problems and develop their standard of living.

RESEARCH METHODOLOGY

Current study has been done by exploratory research based on the objectives stated above. The study is based on both primary and Secondary data. By administers direct personal investigation, required data collected by

the survey tool of questionnaire. The data so collected was properly coded and analysed with the help of statistical packages. Sampling Design

Sample size: 100

Sample frame: West Godavari District

Sampling Frame: Convenient sampling

Survey: Questionnaire

SWOT ANALYSIS

Strengths

- Strengths of all inland fisheries are shared as everyone who cultivate fishes in freshwater follow the same traditional way of inland fishing. Farmers who have thought of cultivating or who are already cultivating have an efficient technical know-how and are able to develop more empirical knowledge about aquatic ecosystems. Inland fishing adopts techniques which are harmless to environment.

- There is availability of better technologies for seed, feed production, managing health of various types of fisheries.

- Availability of effective methodologies like farmer participatory approaches like PRA etc.

- Great scope for development of aquaculture as it is India's one of the best economy generating sector.

- Legislative support like CAA Act-2005, fisheries & land lease policies.

Weakness:

- Lack of an organized extension service.

- Lack of control over climate and market.

- Improper organizational structure.

- Lack of availability of proper transport facilities.

- Inadequate research on controlling fish diseases.

- Lack of planning and infrastructure flexibility.

- No proper incentives provided due to no proper production.

- Involvement of middle men's share.

Opportunities

- Underutilization of potential aquaculture in coastal and inland areas.

- Availability of latest IT communications.

- Employment opportunities.

- There is great scope for development of rural areas.

- Standard of living in rural areas is developed.

Threats:

- There is lot of threat due to climate fluctuations.

- No awareness regarding unemployed skilled laborers.

- High demand for incentives from the present laborers.

- Lack of knowledge regarding markets.

- Quality of fish seed.

RESULTS BASED ON PRIMARY SURVEY

Respondents having age between 20 to 30 range are 8%,31 to 40 range are 40%,41 to 50 range are 23% and above 50 are 29%.

Size of firms ranging from 1 to 10 acres are 26%, 11 to 20 are 47%,21 to 30 are 21% and more than 30 are 5%.

There are 6% people who cultivate their crop once in a year,90% people who cultivate twice in a year,4% people cultivate thrice in a year and no one cultivates four times a year.

People who experience low maintenance cost in their production are 17%,medium maintenance cost are 73% and high maintenance cost are 10%.

7% of people strongly agree that price of fish is based on customers demand, 45% of people agree that price of fish is based on customers demand,47% of people are in neutral state that price of fish is based on customers demand,1% of people strongly disagree that price of fish is based on customers demand.

1% of people always cope up with fish diseases,25% of people often cope up fish diseases,69% of people sometimes cope up with fish diseases and 5% people cope up with fish diseases in seldom manner.

4% of people rated that the impact of fish diseases on fish production is very much, 81% of people rated that the impact of fish diseases on fish production is sometimes, 10% of people rated that the impact of fish diseases on fish production is frequently occurring,5% of people rated that the impact of fish diseases on fish production is seldom.

1% of people rated that the impact of lack of extension service on fish production is very much,6% of people rated that the impact of lack of extension service on fish production is sometimes,16% of people rated that the impact of lack of extension service on fish production is frequently occurring,50% of people rated that the impact of lack of extension service on fish production is seldom, 27% of people rated that the impact of lack of extension service on fish production is never happening.

13% of people rated that the impact of low quality of fish seed on fish production is very much,30% of people rated that the impact of low quality of fish seed on fish production is sometimes,47% of people rated that the impact of low quality of fish seed on fish production is frequently occurring,9% of people rated that the impact of low quality of fish seed on fish production is seldom, 1% of people rated that the impact of low quality of fish seed on fish production is never happening.

38% of people rated that the impact of low quality of water on fish production is very much,22% of people rated that the impact of low quality of water on fish production is sometimes,23% of people rated that the impact of low quality of water on fish production is frequently occurring,7% of people rated that the impact of low quality of water on fish production is seldom, 10% of people rated that the impact of low quality of water on fish production is never happening.

8% of people rated that the impact of high investment for pond preparation on fish production is very much,14% of people rated that the impact of high investment for pond preparation on fish production is sometimes,14% of people rated that the impact of high investment for pond preparation on fish production is frequently occurring,51% of people rated that the impact of high investment for pond preparation on fish production is seldom, 13% of people rated that the impact of high investment on fish production is never happening.

21% of people rated that the impact of mortalities caused by long transports on fish production is sometimes, 24% of people rated that the impact of mortalities caused by long transports on fish production is frequent,38% of people rated that the impact of mortalities caused by long transports on fish production is seldom,17% of people rated that the impact of mortalities caused by long

transports for pond preparation on fish production is never occurred.

39% of people rated that the impact of climate on fish production is very much, 34% of people rated that the impact of climate on fish production is sometimes,5% of people rated that the impact of climate on fish production is frequent,6% of people rated that the impact of climate for pond preparation on fish production is seldom.16% of people rated that the impact of climate on fish production is never.

15% of people rated that the standard of living is high, 70% of people rated that the standard of living is medium ,14% of people rated that the standard of living is low,1% of people rated the standard of living is very low.

94% of people stated that number of laborers per acre is one,6% of people stated that number of laborers per acre is two.

Hypothesis based Studies and Results

Hypothesis No: 1

H0: There is an impact on fish diseases with respect to the size of the firm

H1: There is no impact on fish diseases with respect to the size of the firm.

From ANOVA table it is clearly known that significant value between the fish diseases and size of the firm is 0. 583. So by this it can stated alternate hypothesis is accepted.

Hypothesis No: 2

H0: There is an impact on lack of extension services with respect to the size of the firm.

H1: There is no impact on lack of extension service with respect to the size of the firm.

From ANOVA table it is clearly known that the significant value between the lack of extension services and size of the firm is 0. 064. So by this it can be

stated that alternative hypothesis is accepted.

Hypothesis No: 3

H0: There is an impact of low quality of fish seed with respect to the size of the firm.

H1: There is no impact of low quality of fish seed with respect to the size of the firm.

From ANOVA table it is clearly known that the significant value between low quality of fish seed and size of the firm is 0. 555. So by this it can be stated that alternate hypothesis is accepted.

Hypothesis No: 4

H0: There is an impact of low quality of water with respect to the size of the firm.

H1: There is no impact of low quality of water with respect to the size of the firm.

From ANOVA table it is clearly known that the significant value between low quality of water and size of the firm is 0. 688.So by this it can be stated that alternate hypothesis is accepted.

Hypothesis No:5

H0: There is an impact of high investment for pond with respect to the size of the firm.

H1: There is no impact of high investment for pond with respect to the size of the firm.

From ANOVA table it is clearly known that the significant value between high investment for pond and size of the firm is 0. 039. So by this it can be stated that Null hypothesis is accepted.

Hypothesis No: 6

H0: There is an impact of mortalities caused by long transport with respect to the size of the firm.

H1: There is no impact of mortalities caused by long transport with respect to the size of the firm.

From ANOVA table it is clearly known that the significant value between

mortalities caused by long transport and size of the firm is 0. 576. So by this it can be stated that alternate hypothesis is accepted.

Hypothesis No: 7

H0: There is an impact of high cost for fish seed with respect to the size of the firm.

H1: There is no impact of high cost for fish seed with respect to the size of the firm.

From ANOVA table it is clearly known that the significant value between high cost for fish seed transport and size of the firm is 0. 096. So by this it can be stated that alternate hypothesis is accepted.

Hypothesis No:8

H0: There is an impact of climate with respect to the size of the firm.

H1: There is no impact of climate with respect to the size of the firm.

From ANOVA table it is clearly known that the significant value between climate and size of the firm is 0. 008. So by this it can be stated that null hypothesis is accepted.

RECOMMENDATIONS

- Government should take an appropriate step to make farmers to cope up their problems.
- Proper financial support should be provided to farmers.
- Infrastructure like cold storages, labs should built for them to improve their quality of fish and as well as they can reach the market when there is demand.
- Farmers should be educated about the precautions to be taken during climate fluctuations.
- Knowledgable technicians should be appointed by government for them to guide farmers.
- Even from farmers side they should not exploit natural resources available.

- Government should communicate with the farmers on regular basis and know their expections.

CONCLUSION

This study brought into limelight various problems faced by inland fisheries farming in West Godavari district of Andhra Pradesh. Inland fisheries farming is successfully implemented and practiced in this area.Various requirements has to be considered for making the production move on forward successfully. But for every successful output various steps has be taken to overcome the hurdles. From this research this is clearly known about the fact that the people involving in such fisheries cultivation are facing many problems and they are waiting for the hand to help them.

Ongoing production is well but there is no growth from past two years. Before everyone used to cultivate shrimp along with fisheries but they were not able to cope up shrimp diseases and even price went down due to more supply than demand .So people in this area completely moved to fisheries.

Eventhough production of fisheries is good but people expectations are not met.There is no proper marketing channel available for them to sell theirs products.Involvment of middle men 's share is taking away their profits.Infrastructure such as cold storages doesnot exist,transport facilities are not better when compared to other places.Lack of quality seed and there is no enough research done on fish diseases.This is causing huge losses in their production and even there are not able to get the returns for their investment.Major drawback is there is no control on climate and market.These two factors keeps on fluctuating on which profits are completely based.Lack of proper lab facilities making them worse to come out of the situations.

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ANOVA

		Sum of Squares	Df	Mean Square	F	Sig.
Fish diseases	Between Groups	.921	4	.230	.716	.583
	Within Groups	30.519	95	.321		
	Total	31.440	99			
Lack of extension service	Between Groups	6.700	4	1.675	2.301	.064
	Within Groups	69.140	95	.728		
	Total	75.840	99			
Low quality of fish seed	Between Groups	2.315	4	.579	.759	.555
	Within Groups	72.435	95	.762		
	Total	74.750	99			
Low water quality	Between Groups	3.971	4	.993	.566	.688
	Within Groups	166.619	95	1.754		
	Total	170.590	99			
High investment for pond preparation	Between Groups	12.666	4	3.166	2.633	.039
	Within Groups	114.244	95	1.203		
	Total	126.910	99			
Mortalities caused by long transports	Between Groups	2.999	4	.750	.727	.576
	Within Groups	97.991	95	1.031		
	Total	100.990	99			
High cost for fish seed	Between Groups	7.964	4	1.991	2.035	.096
	Within Groups	92.946	95	.978		
	Total	100.910	99			
Climate	Between Groups	27.518	4	6.879	3.677	.008
	Within Groups	177.722	95	1.871		
	Total	205.240	99			

Voyage of Fish Trade among Fisherwomen: A Ramble from Conventions to Contemporary and Beyond

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ABSTRACT

A common sight some decades back were women, particularly belonging to the mogaveera community, setting up their business of fish trade in and around the streets of Mangalore in Dakshina Kannada District. These head loaders would purchase fish from the Bunder port, sort the fish as per their trade needs in baskets made from bamboo strips and creepers, and sell them from house to house, door to door. After a stretch of their daily path was walked, they would take up a place in the street corners and conduct trading activities for the entire day or until their sales were done. This was a routine phenomenon. Slowly with the passage of time the city corporation authorities identified some places as fish markets in Mangalore and these fisherwomen had a place to conduct their trade. The fisherwomen from other communities as well joined the trade since it was an income oriented activity. The fishing traders also set up a cooperative society and with united efforts carried out trade. But in the recent past there is a sudden decline in the participation of women and even youngsters, both, men and women in fisheries. Thus a gap is created and has given rise to a research question as to why this trend and what is the future of this trade practice. The researchers in the paper make an attempt to find the road map of their travel in fisheries trade from the conventional method to the contemporary times. An attempt is also made to find light in the road ahead for this trade.

KEYWORDS: Fish Trade, Fisher Women, Journey, Rural Opportunity.

An Effective Fuzzy Dynamic Solution Strategy to Facilitate Supplier Selection in Healthcare Organization

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Abstract

In this paper, we proposed a fuzzy dynamic model to the Technique for order performance by similarity to ideal solution (TOPSIS) model to the supplier selection problem in the healthcare organization. As discussed in the literature, the healthcare organization face considerable challenge in choosing appropriate supplier to effectively manage their organization. We believe that health care organization should establish proper partnerships with potential suppliers as commonly done in most supply chain management in order to lower costs, improve quality, reduce lead time, and increased flexibility. Our fuzzy model formulation rest on the assumption that precise values for the model parameters are unknown but sample data is available for estimating the various parameters in the TOPSIS model. In line with the multi-dimensional characteristics of modern supply chain, an application to the supplier selection problem in the health care organization demonstrates the feasibility of the proposed method. The approach taken is this paper is somewhat different to existing studies and in our view compliments existing fuzzy TOPSIS models formulation.

Keywords: TOPSIS, Objective Weights, Entropy, Healthcare, Feasibility, Linguistic Variables, Supply Chain Management, MCDM. AMS subject classification: 62M10 (60F05, 60G52, 60K05)

Marketing Fear: Studying the Impact of Bengali Horror Movie on the Bengali Audience and the Market

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Abstract

Horror films, since its inception, is one of the most popular and predominant cinematic genres of cinema. Over the years, and in major film-industries of the world, it became one of the proven revenue earning genres. Indian Bengali film-industry (aka Tollywood) is also no exception to this. Several noted Bengali film-makers, since the mid of last century, have profoundly contributed to enrich this filmic genre. The major Bengalihorror film conventional resort to the eminent Bengali literature. In recent years, the number of Bengali horror movies has also increased with the growing audience base. The main focus of this paper is to identify the impact of the contemporary horror movies on the (Indian) Bengali audience and the domestic film market.We are going to conduct exploratory research to signify the emphasis of our study. This unique research study project is one of a kind in the history of Bengali film-study. The research will assist the future directors and producers of Tollywood to expand their domestic audience base with potential Bengali horror films.

Key Words: Bengali Cinema, Box-office, Horror movie, Cinema as an Art, domestic film market & Bengali History.

Influence of Supply Chain Collaboration on Performance at Acceler Global Logistics Service Providers in Kenya

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Abstract

Supply Chain Collaboration is considered a strategic tool, which attempts to minimise operating costs and thereby enhance value for the stakeholders by linking all participating players throughout the supply chain, from suppliers to customers. The study examines the effect of supply chain collaboration performance at Acceler Global Logistics. The study results should thus form a basis for understanding supply chain collaboration in a logistics service industry. Acceler Global Logistics Limited is a freight logistics company based in Kenya. It offers freight logistics, customs brokerage, warehousing, cargo transportation, distribution and transit operations in Kenya and in East and Central Africa. The study used case study research design and the target population were the employees of the firm. The target population for the study was 115 staff members of Acceler Global Logistics. Stratified random sampling technique was used in getting the final study sample size of 35 being 30% of the target population. The data was collected using closed ended questionnaires to allow for quantitative data analysis. The results of the study indicate that managers do not carry out activities that are directly involved with reducing delays and costs. Majority of staff in Acceler Global Logistics concur that there has been an overall poor performance associated with transport and logistics processes and procedures. A smooth flowing supply chain operation, meeting lead times and customer satisfaction is a key area for efficiency and productivity. In conclusion, the study found that there were various areas that the organisation needed to look into at ensuring proper control of activities. These includes customer satisfaction, reduce lead times, proper information flow in all key departments, implementation of purchasing procedures and proper record keeping for a smooth running of transport and logistics operations in the supply chain sector.

Key words: Supply Chain Collaboration, Supply Chain Performance, Logistics Service Providers in Kenya

BACKGROUND OF THE STUDY

In an increasingly dynamic and competitive business world, proper management of the supply chain is a key feature for developing important competitive advantages (Rao, Philips and Johnson, 2006; Prajogo and Olhager, 2012). Supply Chain Collaboration is considered a strategic tool, which attempts to minimise operating costs and thereby enhances value for the stakeholders by linking all participating players throughout the supply chain, from suppliers to customers (Lee and Whang, 2004). Most concepts of supply chain collaboration explicitly recognise the existence of two types of flows through the chain; there is a flow of goods and an equally important flow of information. Supply chain collaboration must comprise both information and material, and cannot restrict itself to only one. Higher levels of collaboration are characterised by increased logistics-related communication, greater coordination of the firm's logistics

activities with those of its suppliers and customers, and more blurred organisational distinctions between the logistics activities of the firm and those of its suppliers and customers (Lee and Whang,2004). Coordination, collaboration, and cooperation are often used more or less interchangeably for describing integrative efforts among partners to improve the overall efficiency of the supply chain (Prajogo and Olhager, 2012).

Internet represents a key to business information exchange and to the development of electronic commerce. In today's business environment, for example in Japan, investing in the Internet and getting the most from it has become a major competitiveness factor (Prajogo and Olhager, 2012). Logistics play a key role in the economy, and the market volume of logistics has already reached a substantial level in many economies. Companies that are successful worldwide have long recognised the critical role logistics plays in creating added value.

In Kenya, some freight forwarding firms have started collaborative activities in supply chain but not fully covering all areas. The collaborative supply chain structure is a relatively new research area, although many studies have been made in establishing the relationship and also partnership between manufacturer and customer or supplier. While some studies have focused on the review of relations with partners in the supply chain, others focus on managing a supply chain as a single system (Romano,2003). It is against this background that the study sought to investigate the influence of supply chain collaboration on performance at Acceler Global Logistics Limited. The specific objectives of the study were: To examine the effects of internal collaboration processes on performance at Acceler Global Logistics; To determine the influence of supplier collaboration processes on performance at Acceler Global Logistics; To assess the influence of customer collaboration processes on performance at Acceler Global Logistics; and, to evaluate the influence of logistics collaboration process on performance at Acceler Global Logistics

An Overview of Acceler Global Logistics Limited

Acceler Global Logistics Limited is a freight logistics company based in Kenya. It offers freight logistics, Customs brokerage, warehousing, cargo transportation, distribution and transit shed operations in Kenya and in East and Central Africa. It is located at the Freight Terminal section of the Jomo Kenyatta International Airport in Nairobi and co-ordinates sea freight business from their branch office located in Mombasa. In order to ensure seamless movement of goods, they have established administrative presence at all Customs border points in Kenya. The organisation being a global leader in supply chain management provides customer focused solution to a wide range of industries. Its comprehensive range of innovative logistics solution encompasses the complete supply chain from design and consulting through warehousing and distribution service to integrated information management and e-commerce support.

STATEMENT OF THE PROBLEM

Customers at Acceler Global Logistics have in the past complained about delayed deliveries and the cost they incur as a result of the delays, thus high chances of losing the business for the firm. The fact that often the customer cannot access the information from the comfort of his office, makes planning and decision making difficult. It is therefore important to ensure that customers are well informed on whereabouts of their goods and can access this information when required. Supply chain collaboration is important for smooth information flow which results to efficiency and good customer service.

Many logistics service providers have suffered enormous loses in terms of lost sales estimated at 20 billion dollars worldwide (Prajogo and Olhager 2012). This has resulted in many firms doing some extensive investment to redeem the lost customer retention. Lack of collaboration across the supply chain has become a lacuna and that is the

motivation to undertake the study. According to Flynn, Huo and Zhao (2010), supply chain collaboration is widely considered by both practitioners and researchers a vital contributor to supply chain performance. The supply chain function of Acceler Global still remains in traditional logistics links like storage, transportation and distribution. They fall far short in aspect of value-added services such as processing, distribution, zero inventory management, logistics consulting and training and logistics information service.

SIGNIFICANCE OF THE STUDY

Using Acceler Global Logistics as a reference point, the study makes an interesting contribution to the understanding of the general and specific contribution on the role of supply chain collaboration on firm performance. It will also serve the interest of the private sector business organisations as well as the general public as a source of enlightenment since it contributes to existing literature on supply chain collaboration and firm performance. The study results and literature review forms an important basis for information for policy makers, researchers and academicians interested in supply chain collaboration.

SCOPE AND LIMITATION OF THE STUDY

The study sought to find out the effect of supply chain collaboration on logistics firm performance in Kenya using Acceler Global Logistics as a case study. The study considered only four aspects of supply chain collaboration which include: internal collaboration, supplier collaboration, customer collaboration and logistics collaboration. The target population for the study consisted of 115 employees of Acceler Global Logistics. The time scope of the study was between the months of May and August 2016. It was difficult to access information on financial performance of the company since it is not listed in the Nairobi Stock Exchange. Hence it was not possible to validate the results of the study from

secondary data. Hence, a major limitation for the study.

LITERATURE REVIEW

Internal Collaboration Processes and Performance of Acceler Global Logistics

Internal collaboration processes entails having the internal relations between supply and demand adjust to optimise the flow of products or services at a faster transmission so that the operation of enterprises improve on operational efficiency and business competitiveness (Prajogo , Olhager, 2012). Decision-making internal collaboration refers to a number of aspects on the synergy between the plans. Operation collaboration refers to the operation of upstream and downstream supply chain between the human resources (such as procurement, marketing, design) as well as the sharing of material resources (Romano, 2003).). Internal supply chain collaboration will involve the operation of enterprises of various flow and business department, coordination and restructuring, so that various departments within enterprises connected, open and effective information sharing for optimal overall operation and a more efficient operation.

Supplier Collaboration Processes and Performance of Acceler Global Logistics

Supplier activities includes placing strategic activities with suppliers, involving suppliers' capability to generate new products during the design stage, production planning, and inventory management, having a rapid response order processing system with suppliers (Cheng,2011). Installing a supplier network that ensures reliable delivery and exchanging information with suppliers. Supplier collaboration has to do with data flow between two or more companies and constitutes a way towards achieving process collaboration under which the supplier actually takes control over the inventory and purchasing functions of the buyer. The coordination and collaboration between the companies along the supply

chain makes a reduction of suppliers a necessity according to the interpreters of supply chain management (Lee and Whang, 2004). This fundamental belief can be directly derived from the beliefs of coordination and collaboration along the material flow and win-win relationships. Having few suppliers permits not only coordination and collaboration along the material flow but also win-win relationships.

The ways firms relate with suppliers have changed considerably. Manufacturing firms are getting more and more focused on their core competence thus their reliance on strategic supplier increases (Li and Woo, 2004). Among the changes, three key aspects of supplier relationships are highlighted here. First, the trend now is to build a long-term relationship with suppliers rather than short-term contracts. Second, in conjunction with the first point, firms now use fewer suppliers over a longer period of time rather than keeping a large base of suppliers which allow them to change suppliers for almost every contract. The benefits of having low price resulted from creating competition among suppliers are now changed into low total cost of ownership due to long-term and large volume of purchases. Third, the relationship with suppliers has been enhanced into strategic level where suppliers are now considered as the integral part of the firm's operations. This change has led to various avenues of collaboration, including joint improvement program, early supplier automation in product design, profit and risk sharing. One aspect of strategic supplier relationship is extended longevity (Prajogo and Olhager, 2012). Create, maintain and improve relations between organizations aim at achieving business goals that organizations cannot achieve lonely. In supply chain configuration, inter organisational relationships is usually obtained through partnerships or buyer – seller relations. Supplier participation in the supply chain shows agreement between manufacturing organizations and their participants. This includes sharing essential information (Cheng, 2011).

Customer Collaboration and Performance of Acceler Global Logistics

Customer activity concerns processes dealing with planning, implementing, and evaluating relationships between service providers and service recipients. Customer relationship management (CRM) focuses not only on inbound customer relationships but also on outbound customer relationships in SCM. Customer activity involves the ability to communicate the delivery of products and services to end-user customers, both locally and globally (Li and Woo, 2004). Customer activity is principally about the sharing of product information with customers, accepting customer orders, interacting with customers to manage demand, having an order placing protocol in the system, sharing order status with customers during order scheduling, and providing information during the product delivery stage.

Coordination in the supply chain has many different forms and the purpose. It is important to be aware of the amount of actual demand to have the knowledge of the correct level of Inventory, design products in a way that enables delivery at the right time, right place to consumer in order to attract customer satisfaction and be successful in a competitive market (Li and Woo, 2004). The integrated supply chain structure is relatively new research area, although many studies have been made in this relationship and also partnership between manufacturer and customer or supplier. In an integrated supply chain, development of strong strategic partnerships with customers will facilitate understanding and the anticipation of the manufacturer's needs in order to better meet its changing requirements. The mutual exchange of information about products, processes, schedules and capabilities helps manufacturers develop their production plans, produce goods on time, and improve delivery performance.

Increasing competition not only guides organizations to improve their

internal operations (process control and inventory management) but also focuses on the automation of customers in the entire processes of chain. Thus, suppliers' involvement in delivering value to customers causes competitive capabilities such as quality, delivery, flexibility and cost (Prajogo and Olhager, 2012).

Logistics Collaboration Processes and Performance of Acceler Global Logistics

Logistics was defined as process of scheduling run and control the flow, storage of raw materials, inventory in manufacturing, final product and its related information at the minimum cost. According to this definition, the entire process of logistics combine a large number of activities with suitable automation in order to implement the right to meet customer needs to reach smooth flow of operations through the chain and the most portion of profit for organization and customer (Stock, Greis and Kasarda, 2000). Logistics also includes the flow of materials and goods from the supplier of raw material to consumer of finished goods.

The goal of logistics management is planning and coordinating all activities which are necessary to achieve desired levels of quality and customer service with the lowest possible cost. Logistics is thus a link between marketing and operational activities. Logistics working area within the organization start from supply and management of raw materials to delivery final product to market and customers (Mojtaba and Rad, 2011). Logistics collaboration decreases various problems such as bullwhip effect and gives the organizations and partners the opportunity to benefit from vertical automation that is quality, reliability, planning and control and lower cost. Improved logistics automation between supply chain partners yields a number of operational benefits including reduction in costs, lead time, and risks as well as improvement in sales, distribution, customer services, service levels and customer satisfaction (Stock *et. al.* 2000).

Logistics processes play a key role for collaboration between organizations (Romano, 2003). Improving the logistics collaboration is an important factor for achieving operational benefits such as reduced costs, delays, hazards, improved sales, distribution, customer service, service levels and customer satisfaction, Prajogo and Olhager (2012). Logistics is responsible for coordinating companies, suppliers, and distribution centers in order to achieve all possible outcomes and supply chain goals, including timely delivery, and minimising costs. Romano (2003) concluded that the higher participation levels leads to operational efficiency in the supply chain system.

Firm Performance

The firm performance is one of the most important constructs in management research. The definition of firm performance could vary from one and another. According to (Richard and Devinney, 2010), organizational performance encompasses three specific areas of firm outcomes: financial performance (profits, return on assets and return on investment); product market performance (sales and market share); and shareholder return (total shareholder return and economic value added) On the other hand, firm performance can also be measured using perceived performance approach (also referred to as subjective performance measure) where Likert-like scaling is used to measure firm performance from the top management perspectives (Selvarajan, Ramamoothy, Flood, Guthrie, Mac Curtain and Liu, 2010).

Organizational performance is a method of measuring the success of the organization to ensure that it achieves its goals. The success of an organization is gauged from several indicators both qualitative and quantitative (Fry, Stoner and Hattwich, 2010). These include financial performance and non-financial performance. Performance measures may be cost-oriented or non-cost oriented and can be internal or external. Although organizational performance is the most extensively used dependent variable in organizational research, it still remains vague and loosely defined. Performance

has been traditionally conceptualised in terms of financial measures; but some scholars have proposed a broader performance construct that incorporates non-financial measures including among others market share, product quality, and company image.

Conceptual Framework

As shown in figure 1.0, the independent variables are internal collaboration, supplier collaboration, customer collaboration and logistics collaboration while the dependent variable is firm performance.

Higher levels of collaboration are characterised by increased logistics-related communication, greater coordination of the firm's logistics activities with those of its suppliers and customers and more synergy between the logistics activities of the firm and those of its suppliers and customers.

RESEARCH METHODOLOGY

This study used a case study research design with the population being the employees of Acceler Global Logistics. The target population for the study was 115 with a sample size comprised of 35 which represents 30% of the target population and fulfils the minimum threshold sample suggested by Mugenda and Mugenda (2013) who recommended 30% of the target population as an adequate sample size in a descriptive case study survey. Data of this study was collected through a questionnaire distributed among selected managers and staff of Acceler Global Logistics.

Content validity which was employed by this study is a measure of the degree to which data collected using a particular instrument represents a specific domain or content of a particular concept. The study used 'split-halves' and 'internal consistency' method to measure reliability. 'Split-halves' method will be used by comparing the two halves of the responses to each other and similarities identified (Cooper and Shindler, 2014).

Internal consistency was tested using Cronbach's Alpha. Cronbach's

Alpha is a measure of internal consistency, that is, how closely related a set of items are as a group. A high value of Alpha is often used as evidence that the items measure an underlying (or latent) construct (Warmbrod, 2001). Reliability with a predetermined threshold of 0.7 is considered acceptable (Mugenda and Mugenda, 2013).That is, values above 0.7 indicated presence of reliability while values below signified lack of reliability of the research instrument. The set of questions asked are as discussed in the section of findings and discussions, however, a whole questionnaire can be availed fro scrutiny.

A pilot study was conducted at AGS Frasers Kenya which is a logistics service provider before actual data collection. Piloting enhanced the instrument's validity and reliability as well as ensured familiarity with the administrative procedures in data collection (Cooper and Shindler, 2014). The results helped the researcher to correct inconsistencies arising from the instruments, which ensures that they measure what it ought to measure.

After data collection, the filled-in and returned questionnaires were edited for completeness, coded and entries made into statistical package for social sciences (SPSS version 22). Coding is technical process where raw data are transformed into easily tabulated form by way of assigning symbols. This helps in condensing the responses into few categories for the purposes of data analysis (Kothari, 2004).

Both descriptive and inferential statistics was used to analyse the data. Descriptive analysis was conducted on primary data. Mean and standard deviations were used as measures of central tendencies and dispersion respectively. Correlation was used to analyse the degree of relationship between the variables in the study. Further, regression was be used to obtain an equation which describes the dependent variable in terms of the independent variable based on the regression model. Data was presented in

the form of frequency distribution tables, graphs and pie charts that facilitated description and explanation of the results.

This research was carried out for academic purposes. All respondents were treated with utmost confidentiality and an assurance of non-disclosure maintained. This enabled the researchers to get honest and accurate data from the respondents. Permit to conduct the research in terms of ethical clearance was obtained in Kenya from the National Council of Science and Technology (NACOSTI).

RESULTS AND DISCUSSION

Effects of Internal collaboration process

The study sought to determine the effects of internal collaboration process on performance. The respondents were therefore required to rate statements provided to them on a five point likert scale (1 being to a "less extent"; 2 being to "some extent"; 3 being to a "moderate extent"; 4 being to a "large extent"; and 5 being to a "very large extent". According to the analysis of the results, the respondents revealed that different departments decide jointly about company objectives as shown by a mean of 3.72 and a standard deviation of 1.2955. The summary of the results are shown in table 2.0.

The results concur with Cheng (2011), who observed that internal activity is largely concerned with access to key operational data in a real time base from the integrated database, properly linking integrated information system to the variety of internal departments within an organisation, readily accessing inventory information throughout the supply chain, retrieving inventory status in real time, conveniently utilising a computer-based planning system between marketing and production, and significantly integrating SCM information systems for production processes.

Effects of Supplier collaboration processes

According to Zhao, Flynn, and Yeung (2008), supplier collaboration process has to do with data flow between two or more companies and constitutes a way towards achieving process collaboration, under which the supplier actually takes control over the inventory and purchasing functions of the buyer. The second objective of the study sought to determine the influence of supplier on firm performance in Kenya. The respondents indicated that the firm works with suppliers to make production plans as evidenced by a mean of 3.0303 and standard deviation of 1.45676. The respondents indicated that supplier automation processes contribute to firm's performance to a great extent (mean = 3.5455, standard deviation=1.36079. The summary of the findings are shown in table 3.0.

Effects of Customer Collaboration Processes

Majority of the respondents indicated that Acceler Global Logistics has worked well with their customers for a long time and agreed that customer collaboration processes has contributed to firm's performance (mean of 3.3939 and standard deviation = 1.28756. The summary of the findings are shown in table 4.0. The responses from a 5 point likert scale thus shows that most of the respondents are in agreement with the role played by customer collaborative activities on the total firm performance.

Effects of Logistics collaboration processes

According to Fry, Stoner, and Hattwich, (2010), logistics is responsible for coordinating companies, suppliers, and distribution centers in order to achieve all possible outcomes and supply chain goals, including timely delivery, and minimizing costs.The fourth objective of the study sought to evaluate the influence of logistics automation on firm performance. The respondents indicated that the firm inform trading partners in advance of changing needs and exchange

of information that helps in the establishment of business planning (mean=3.6934, standard deviation =1.079). The summary of the findings are shown in table 5.0

Prajogo and Olhager (2012) observed that improving the logistics collaboration processes is an important factor for achieving operational benefits such as reduced costs, delays, hazards, improved sales, distribution, customer service, service levels and customer satisfaction. Logistics is responsible for coordinating companies, suppliers, and distribution centers in order to achieve all possible outcomes and supply chain goals, including timely delivery, and minimising costs.

Firm Performance

The respondents agreed that firm has stronger growth in sales revenue and is better able to acquire new customers as shown by a mean of 3.6565 and a standard deviation of 1.00512. The summary of the results are shown in table 6.0. This result provides an understanding that Acceler Logistics is geared towards better performance with enhanced collaborations on various aspects of the supply chain. The limitation of the study was lack of access to secondary data on firm performance that could have been used to validate these results.

Correlation Analysis

The study conducted Spearman's rank correlation coefficient which is a non-parametric test. This a technique used to test the direction and strength of the relationship between two variables. Spearman's rank correlation show whether any one set of numbers has an effect on another set of numbers. It uses the statistics Rs which falls between -1 and +1. In reference to table 4.9.1, the correlation matrix indicates that internal automation processes was highly correlated with supplier automation processes (.902) and moderately with customer automation processes (.509).

The correlation matrix reaffirms the results in the descriptive analysis that internal collaboration processes, supplier

collaboration processes, logistics collaboration processes, and customer collaboration processes influence firm performance.

Multiple Regression Analysis

In addition, the researcher conducted a multiple regression analysis so as to determine the influence of supply chain collaboration on firm performance in Kenya. Multiple regression is a statistical technique that allows us to predict a score of one variable on the basis of their scores on several other variables (Cooper and Shindler, 2014). The main purpose of multiple regressions is to learn more about the relationship between several independent or predictor variables and a dependent or criterion variable.

The researcher conducted a multiple regression analysis so as to determine the relationship between firm performance and the four independent variables.

The regression equation ($Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4$) now becomes:

$$Y = 1.224 + 0.217 X_1 + 0.118 X_2 + 0.299 X_3 + 0.272 X_4$$

Whereby   Y = Firm Performance

X_1 = Internal collaboration processes

X_2 = Supplier collaboration processes

X_3 = Customer collaboration processes

X_4 = Logistics collaboration processes

According to the regression equation established, taking all factors (internal collaboration processes, supplier collaboration processes, customer collaboration processes and logistics collaboration processes) constant at zero, firm performance realised would be 1.224. The data findings analyzed also shows that taking all other independent variables at zero, a unit increase in internal collaboration processes results to a 0.217 increase in firm performance. A unit

increase in supplier collaboration processes will lead to a 0.118 increase in firm performance; a unit increase in customer collaboration processes will lead to a 0.299 increase in firm performance, whereas units increase in logistics collaboration processes will lead to a 0.272 increase in firm performance. These results infer that internal collaboration processes, supplier collaboration processes, customer collaboration processes and logistics collaboration processes enhances firms performance.

Coefficient of Determination

The coefficient of determination is a measure of how well a statistical model is likely to predict future outcomes. The coefficient of determination, r^2 is the square of the sample correlation coefficient between outcomes and predicted values (Kothari, 2004). As such it explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (firm performance) that is explained by all the four independent variables (internal collaboration, supplier collaboration, customer collaboration and logistics collaboration).

Predictors: (Constant), internal integration, supplier integration, customer integration, logistics integration.

The four independent variables that were studied, explain only 79.6% of the firm performance as represented by the R^2. This therefore means the four independent variables only contribute about 79.6% to firm performance while other factors not studied in this research contribute 20.40% of firm performance. Therefore, further research should be conducted to investigate the other factors (20.40%) that influence performance of Acceler Global Logistics.

CONCLUSION

In light of the results, the study concluded that the firm's performance is influenced to a great extent by internal collaboration processes which enable

operational issues to be solved. It has been revealed that Acceler Global Logistics builds long –term relationship with suppliers rather than short term, which is a prerequisite for effective collaboration at all levels of the supply chain. Indeed customers provide sales forecast for products to be transported. This has the advantage of reducing bullwhip effect and facilitating both agile and lean supply chains. It also emerged from the results that supply chain collaboration facilitates profit maximisation and improves business performance.

Practitioners should enhance supply chain collaboration by recognising internal, supplier and customer collaboration processes as a strategic tool for competitive advantage, since competition today is based on supply chain versus supply chain and not business versus business. Furthermore, researchers and practitioners can use a survey instrument in this study for understanding the nature of operational collaboration (internal, supplier, logistics and customer) factors and their impact on performance in the organisations.

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Independent Variables   **Dependent Variable**
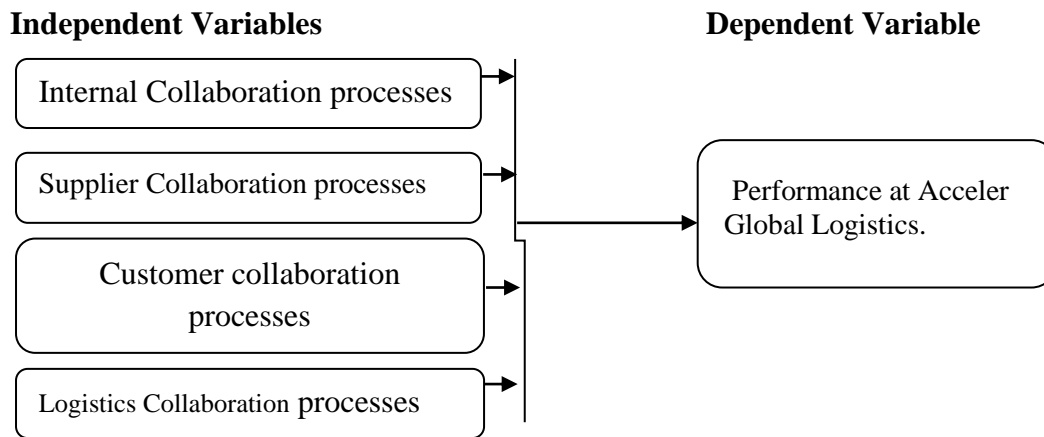
Figure 1.0: Conceptual Framework

Table 2.0: Effects of Internal collaboration processes

Statement	Mean	Standard Deviation
Rate the extent to which different departments decide jointly about company objectives	3.7273	1.2955
To what extent does the firm contributes in internal collaboration processes which enables them to solve operational problems	4.0939	0.92618
Rate the performance of the firm's information management system that integrates all departments	3.5152	1.19283
To what extent does internal collaboration brings in new strategies that involve the operation of the firm	3.3939	1.16195

Table 3.0: Effects of Supplier collaboration processes

Statement	Mean	Standard Deviation
To what extent does the firm collaborate with its suppliers?	3.303	1.45676
Rate supplier collaboration processes contribution to firm's performance.	3.5455	1.36079
To what extent are our suppliers trustworthy when dealing with problems as they arise in the course of operation effectively	3.9697	1.20217
	4.0000	1.1897
To what extent does Acceler Global Logistics builds long-term relationship with suppliers rather than short-term contracts	4.0100	1.08131

Table 4.0: Effects of Customer collaboration processes

Statement	Mean	Standard Deviation
Customer collaboration processes has contributed to firm's performance	3.3939	1.28756
The customers provides the firm with sales forecast for products to be transported	4.0252	3.9394
Our customers share sales information with us through information management systems	3.8543	1.08700
The customers are loyal and satisfied with services offered	3.7443	1.07700
The firm works with the customers to make production plans	3.3030	0.80326

This result supports similar studies done by Cheng (2011), which established that supply chain consists of all parties involved, directly or indirectly, in fulfilling a customer request. The supply chain not only includes the manufacturer and suppliers, but also transporters, warehouses, retailers, and customers themselves.

Table 5.0: Effects of Logistics collaboration processes

Statement	Mean	Standard Deviation
Rate the extent to which trading partners are informed in advance of changing needs and exchange of information that helps in the establishment of business planning.	3.6934	1.079
Rate how the firm keeps their trading partners informed of the issues that affect its business.	3.6631	1.169
Rate the contributions of the logistics collaboration process on the firm's performance.	4.1429	1.10254
Does excellent logistics activities entail by transportation, warehousing and distribution facilities.	3.9643	0.76192
Rate how the integration of logistics activities has enabled mobilisation firm's resources and enhance greater innovativeness.	3.8500	0.67566

Table 6.0: Firm Performance

Statement	Mean	Standard Deviation
Rate the firm's growth in sales revenue.	3.6565	1.00512
Rate the firm's market share.	3.5603	0.71202
To what extent is the firm able to increase sales volumes from existing customers	3.5261	1.00304
Rate the effect of Supply chain collaboration in facilitating profit maximisation and improved business performance.	3.5150	0.86173

Table 7.0: Correlation Analysis

	Internal collaboration processes	Supplier collaboration processes	Customer collaboration processes	Logistics collaboration processes	Firm performance
Internal collaboration processes	1				
Supplier collaboration processes	0.902	1			
Customer collaboration processes	0.509	0.800	1		
Logistics collaboration processes	0.853	0.483	0.356	1	
Firm performance	0.971	0.960	0.862	0.955	1

*. Correlation is significant at the 0.05 level (1-tailed).

Table 8.0 Multiple Regression Analysis

	Unstandardized Coefficients		Standardized Coefficients	t	T-critical	Sig.
	B	**Std. Error**	**Beta**		2.643	
(Constant)	1.224	0.312		2.358	2.643	0.000
Internal collaboration processes	0.217	0.1440	0.185	.776	2.643	0.0387
Supplier collaboration processes	0.118	0.1264	0.089	.849	2.643	0.038
Customer collaboration processes	0.299	0.0715	0.235	2.0936	2.643	0.044
Logistics collaboration processes	0.272	0.0847	0.023	0.4069	2.643	0.046

NB: T-critical Value 2.643 (statistically significant if the t-value is less than 2.643: from table of T-values).
Independent Variable: Firm Performance

The Impact of Macro Economic Determinants on the Performance of the Indian Stock Market

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Abstract

The study investigates the effect of macroeconomic determinants on the performance of the Indian Stock Market using monthly data over the period January 1991 to December 2011 for eight macroeconomic variables, namely, Interest Rate, Inflation, Exchange Rate, Index of Industrial Production, Money Supply, Gold Price, Silver Price & Oil Price, and two stock market indices namely Sensex and S&P CNX Nifty. By applying Augmented Dickey Fuller Unit root test, Johansen Cointegration test, Granger Causality test and Vector Error Correction Model (VECM), the study found that Interest Rate is I(0); Sensex, Nifty, Exchange Rate, Index of Industrial Production, Gold Price, Silver Price and Oil Price are I (1); and Inflation and Money Supply are I (2). It also found the long run relationship between macroeconomic variables and stock market indices. The study also revealed the causality run from exchange rate to stock market indices to IIP and Oil Price.

Keywords: Macroeconomic determinants, Indian Stock Market Return, Unit Root Test, Cointegration Test, Granger Causality Test and Vector Error Correction Model

INTRODUCTION

Financial markets play a crucial role in the foundation of a stable and efficient financial system of an economy. Numerous domestic and international factors directly or indirectly affect the performance of the stock market. The relationship between macroeconomic variables and a developed stock market is well documented in literature. The present study extends the existing literature in the Indian context. This study takes into consideration eight macroeconomic variables - **Interest Rate, Inflation, Exchange Rate, Index of Industrial Production, Money Supply, Gold Price, Silver Price and Oil Price,** and two widely used composite indices of the stock market of India - Sensex and S&P CNX Nifty.

Money supply and Inflation have a positive relationship among themselves.

However, Money Supply and Inflation have a dual effect on stock returns. First, increase in Money Supply will increase Inflation, which will again increase expected rate of return. Use of high expected rate of return will decrease value of the firm and will result in lower share prices. Secondly, increase in Money Supply and Inflation increases future cash flow of the firm, which in turn, increases expected dividend, and will increase stock prices. For this reason, the relationship between Money Supply, Inflation and Stock Return need to be investigated.

A depreciation of the domestic currency against foreign currencies increases export, therefore exchange rate should have a negative relationship with the stock return. But, at the same time, depreciation of domestic currency increases the cost of imports which indicates a positive relationship between

them. Hence, the relationship between exchange rate and stock returns needs to be checked. The Index of Industrial Production reflects the growth rate of industries. Positive relationship is expected between the Index of Industrial Production and Stock return. Gold and silver are used as investment avenues. Increase in gold and silver prices attracts investors towards the commodity market, which might decrease investor preference towards the equity market. This indicates that a negative relationship is expected between gold and silver, and stock market returns. For oil supply, India is dependent on the international oil market. Therefore, higher international oil prices increase cost of production, which might decrease profit of firms, and hence decreases stock prices. Therefore, the expected relationship between oil price and stock price is negative.

The aim of this paper is to investigate the effects of macroeconomic **determinants on the performance of the Indian stock market.** The remainder of the paper is organized in the following sections. Section 2 provides Review of Literature. Section 3 discusses Data and Methodology. Empirical Analysis is presented in Section 4. The study is concluded in Section 5.

LITERATURE REVIEW

Literature related to this study is divided into the following two parts.

Macroeconomic Factors Affecting Foreign Stock Markets

Shanken and Weinstein (2006) concluded that only Index of Industrial Production is a significant factor for stock markets. Yang and Wang (2007) concluded that in the short run, although bivariate causality exists between RMB exchange rate and A-share stock index, bivariate causality does not exist between RMB exchange rate and B-share stock

index. Frimpong (2009) concluded that with the exception of exchange rate, all other macroeconomic variables impact stock prices negatively. Aydemir and Demirhan (2009) reported bidirectional causal relationship between exchange rate and all stock market indices. Adebiyi et al. (2009) established a causal relationship from oil price shocks to stock returns, and from stock returns to real exchange rate. Ali et al. (2010) found that co-integration exists between industrial production index and stock prices.

However, no causal relationship was found between other macro-economic indicators and stock prices in Pakistan. Cagli et al. (2010) found out that the stock market is co-integrated with gross domestic product, U.S. crude oil price, and industrial production. Hosseini and Ahmad (2011) found both long and short run linkages between stock market indices and macroeconomic variables like crude oil price (COP), money supply (M2), industrial production (IP) and inflation rate (IR) in India and China. Buyuksalvarci (2010) concluded that interest rate, industrial production index, oil price, foreign exchange rate have a negative effect, while money supply has a positive influence on Turkish Index return. On the other hand, inflation rate and gold price do not appear to have any significant effect. Daly and Fayyad (2011), after studying seven countries (Kuwait, Oman, UAE, Bahrain, Qatar, UK and USA), found that oil price can predict stock return better after a latest rise in oil prices. Liu and Shrestha (2008) found that a co-integrating relationship exists between stock prices and the macro-economic variables like money supply, industrial production, inflation, exchange rate and interest rates. Azizan and Sulong (2011) found that the Malaysian stock market is more integrated with other Asian countries' economic variables. It also found that stock prices and exchange rates of

other Asian countries have the most impact on Malaysian stock markets.

Macroeconomic Factors Affecting the Indian

Stock Market

Ahmed (2008), by applying Toda and Yamamoto Granger causality test, variance decomposition and impulse response functions, concluded that stock prices in India lead economic activity except movement in interest rate. Interest rate seems to lead the stock prices. Debasish (2009a) concluded that spot price volatility and trading efficiency was reduced due to introduction of future trading. Debasish (2009b) found that the futures market clearly leads the cash market. It also found that the index call options lead the index futures more strongly than futures lead calls, while the futures lead puts more strongly than the reverse. Debasish (2009c), by using GARCH analysis, confirmed no structural change after the introduction of futures trading on Nifty. Besides Bansal and Pasricha (2009) found volatility is significantly reduced after the permission of foreign investment in the equity sector. Goudarzi and Ramanarayanan (2011) established that BSE500 stock index and FII series are co-integrated and bilateral causality exists between them. Gupta (2011) concluded that foreign institutional investment affects stock prices significantly.

Ghosh et al. (2010) found that dollar price, oil price, gold price and CRR have a significant impact on stock market returns. However, food price inflation and call money rate do not affect stock market return. Agrawal and Srivastava (2011) found bidirectional causality between exchange rate and stock market; and positive significant relationship between volatility in stock returns and exchange rates through the GARCH model.

Agrawalla and Tuteja (2007) provided evidence of a stable long run equilibrium relationship between stock market developments and economic growth in India. Srivastava (2010) concluded that in the long term, stock market was more affected by domestic macroeconomic factors like industrial production, wholesale price index and interest rate than global factors. Agrawalla and Tuteja (2008) reported causality running from economic growth proxies by industrial production to share price index. In support to this, Padhan (2007), by applying Toda-Yamamota non-causality tests, found that both the stock price (BSE Sensex) and economic activity (IIP) are integrated of order one, i.e. I (1) and bi-directional causality exists.

DATA AND METHODOLOGY

The aim of this paper is to investigate the effects of macroeconomic determinants on the performance of the Indian Stock Market. The study uses monthly data over the period January 1991 to December 2011. Data for all macroeconomic variables except oil price is collected from the database of the Indian economy maintained by Reserve Bank of India. International oil prices data is collected from the database of International Monetary Fund. Sensex and S&P CNX Nifty data is obtained from the respective stock exchanges.

Table 1 indicates symbol and proxy used for macroeconomic variables. The following model is used to identify the effect of macroeconomic variables on stock market return:

SENSEX = f (IR, IF, ER, IIP, MS, GP, SP, OP)

NIFTY = f (IR, IF, ER, IIP, MS, GP, SP, OP)

The result of ADF unit root test is reported in Table 4. The null hypothesis of

no unit roots for all the variables except Interest Rate are not rejected at their level in both the models (i.e. constant and constant & trend) since the ADF test statistic values are higher than the critical values. This shows that Interest Rate is I(0). After taking the first difference again, ADF test statistics are compared with critical values, and found that null hypothesis of unit root are rejected for all variables except Inflation and Money Supply. *, **, *** indicates ADF test value is significant at 1%, 5% and 10% level of significance respectively.

For constant model, critical values at 1%, 5% and 10% level of significance are -3.4563, -2.8729 and - 2.5729 respectively.

For constant and trend model, critical values at 1%, 5% and 10% level of significance are -3.9950, - 3.4278 and - 3.1373 respectively.

In the next step, the cointegration between non-stationary variables has been tested by the Johansen's Trace and Maximum Eigenvalue tests. The results of these tests are shown in Table 5. At r $\leq$ 5, first time hypothesis of no cointegration is not rejected. Therefore, both the tests indicate that five cointegrating vectors exist at 5% level of significance.

Now, the pair-wise Granger Causality test is performed between all possible pairs of variables to determine the direction of causality. Only rejected hypotheses are reported in Table 6. The results show that the Exchange Rate granger causes both stock market indices, i.e. both Sensex and Nifty. Both these stock market indices, in turn, granger cause IIP and Oil Prices.

CONCLUSION

This paper investigated the effect of macroeconomic determinants on the performance of the Indian Stock Market by using monthly data for the period January 1991 to December 2011. The empirical analysis found three interesting results. First, Interest Rate is I(0); Sensex, Nifty, Exchange Rate, Index of Industrial Production, Gold Price, Silver Price and Oil Price are I(1); Inflation and Money Supply are I(2). Second, there exists a long run equilibrium relation between stock market indices and all macroeconomic variables. Third, it provides evidence of causality running from exchange rate to stock market indices to IIP and Oil Price.

The findings of this study have some important policy implications. First, exchange rate contains some significant information to forecast stock market performance. Therefore, Reserve Bank of India should try to maintain a healthy exchange rate. Second, as Index of Industrial Production is a highly significant factor, policy makers should try to support industry growth through appropriate policy. Third, Money supply and Inflation are major factors affecting stock markets, so the regulatory body should try to control them through Repo and Reverse Repo rates. Fourth, commodity prices like Gold, Silver and Oil are also major determinants of stock markets. Mostly prices of these commodities are determined at the global level, but still by proper import duty and local taxes, policy makers should try to maintain competitive price levels. Finally, autonomous regulatory bodies and visionary system of government can definitely contribute in efficient working and development of the Indian Stock Market.

Table 1: Description of Data

Name of Variables	Symbol Used	Proxy Used
Interest Rate	IR	Weighted Average Call Money Rates
Inflation	IF	Consumer Price Index (CPI)
Exchange Rate	ER	Monthly Average Rupees per unit of US $
Index of Industrial Production	IIP	General Index Numbers Of Industrial Production
Money Supply	MS	Broad Money(M3)
Gold Price	GP	Mumbai Average Price Rupees per 10gms.
Silver Price	SP	Mumbai Average Price Rupees per kg.
Oil Price	OP	International Crude Oil Price, Dated Brent, US$ per barrel
Stock Indices	Sensex, Nifty	Sensex Closing Price, S&P CNX Nifty Closing Price

Table 2: Pair-wise Pearson Coefficient of Correlation

	SENSEX	NIFTY	IR	IF	ER	IIP	MS	GP	SP	OP
SENSEX NIFTY	1.00	0.99	-0.33	0.88	0.44	0.91	0.92	0.87	0.84	0.92
	0.99	1.00	-0.33	0.89	0.45	0.92	0.93	0.88	0.85	0.93

Table 3: Results of Augmented Dickey-Fuller Unit Root Test

	Level	First Difference		
	Constant	Constant & Trend	Constant	Constant & Trend
Name of Variable	ADF Test Value	ADF Test Value	ADF Test Value	ADF Test Value
Sensex	-0.72821	-1.9118	-15.1027*	-15.0804*
S&P CNX Nifty	-1.00876	-2.49364	-6.95845*	-6.951165*
Interest Rate	-6.41185*	-7.66021*	-14.4251*	-14.41896*
Inflation	1.625297	-0.54835	-2.07243	-2.748777
Exchange Rate	-2.69988***	-2.93564	-11.7991*	-11.87369*
Money Supply	2.593617	1.984509	1.672333	-0.985938
IIP	3.646512	0.557808	-6.17785*	-7.29449*
Gold Price	5.853275	3.37149	-6.91757*	-15.36092*
Silver Price	2.892092	1.502587	-5.43735*	-6.068685*
Oil Price	-1.22174	-3.86585**	-10.0131*	-10.02126*

Table 4: Results of Johansen's Cointegration Test

	H_0	Trace Test	5% Critical Value	Maximum Eigenvalues Test	5% Critical Value
Sensex and Macroeconomic Variables	r = 0	393.6571*	197.3709	119.5208*	58.43354
	r ≤ 1	274.1363*	159.5297	76.30895*	52.36261
	r ≤ 2	197.8273*	125.6154	67.21131*	46.23142
	r ≤ 3	130.6160*	95.75366	52.23492*	40.07757
	r ≤ 4	78.38109*	69.81889	36.99501*	33.87687
	r ≤ 5	41.38607	47.85613	21.53232	27.58434
	r ≤ 6	19.85375	29.79707	13.52732	21.13162
	r ≤ 7	6.326431	15.49471	6.109237	14.26460
	r ≤ 8	0.217194	3.841466	0.217194	3.841466
Nifty and Macroeconomic Variables	r = 0	395.7781*	197.3709	118.5463*	58.43354
	r ≤ 1	277.2318*	159.5297	80.38487*	52.36261
	r ≤ 2	196.8470*	125.6154	68.23802*	46.23142
	r ≤ 3	128.6089*	95.75366	51.62558*	40.07757
	r ≤ 4	76.98336*	69.81889	34.95963*	33.87687
	r ≤ 5	42.02374	47.85613	21.03714	27.58434
	r ≤ 6	20.98659	29.79707	14.16242	21.13162
	r ≤ 7	6.824175	15.49471	6.692389	14.26460
	r ≤ 8	0.131786	3.841466	0.131786	3.841466

Trace test & Max-eigenvalue test indicates 5 cointegrating eqn(s) at the 0.05 level

Certain Investigations on Betelvine Plants Disease Identification Using Digital Imaging Technique

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Abstract

The cultivation of betelvine plants is very much affected by foot rot disease produced by the fungus of Phytophthora parasitica and outcome of the cultivator is big loss for betelvine plants cultivation. The aim of this research paper is to identify the foot rot disease infected in the betelvine plants using digital imaging techniques. The digital images of the uninfected betelvine leaves and the digital images of the infected in foot rot diseased betelvine leaves at different stages are collected from different betelvine plants using a high resolution digital camera and collected betelvine images are stored with JPEG format. The digital image analyses of the betelvine leaves are done using the digital image processing toolbox in MATLAB. The median values for all betelvine leaves are computed and calculated median values are stored in the system. The median values of test betelvine leaves are computed and compared with the stored median values. As the consequence of this evaluation, it is identified whether test betelvine leaves are affected by foot rot disease or not. Finally, this research work is helps to recognize the foot rot disease can be acknowledged before it spreads to complete crop.

Keywords— Piperaceae; Piper betel; Foot rot disease; Phytophthora parasitica

INTRODUCTION

The green heart shaped leaves of betelvine are popularly known as Paan in Hindi. The fresh leaves of betelvine are commonly known as vettilai in Tamil. The biological name of betelvine is Piper betel. It belongs to the family Piperaceae. The betelvine plants (usually the male betelvine plants) are cultivated throughout India except the dry northwestern parts. Further, the female betelvine plants also rarely produce any flower or fruit in the Indian climate. There are about 70 varieties of betelvine in the world, of which about 30 in West Bengal and 40 are found in India. In Tamilnadu, based on the color, size and taste there are many varieties of betelvine leaves are mostly available and some of the most popular varieties are vellaikodi, Karpoori, pachaikodi and

Sirugamani. In this paper only consider Karpoori variety of betelvine leaves. The group of research is going on in the field of betelvine plants disease analysis for various research centers within the country under the name "ALL INDIA COORDINATED RESEARCH PROJECT ON BETELVINE" [6]. The most important diseases of betelvine plants are Powdery mildew disease, Leaf Rot disease, Foot Rot disease and Leaf Spot disease. It occurs in a very powerful form and if not controlled, causes unlimited damage and even total demolition of the entire of betelvine plantations. The cultivator is not able to recognize the disease at an early stage to initiate preventive action due to the non-availability of modern technology. So for each cultivator, to have access to the modern technology there is a need to construct modern commercial farm used

to identify the disease well in advance to enhance the cultivation. Digital Image processing is used as a tool for early identification of the foot rot disease. Basically when a farmer visualizes the foot rot disease for betelvine plant is in the fully developed stage after which identification cannot save the betelvine plant. The foot rot disease spreads to the complete crop and the total plantation gets destructed within few days. Foot Rot disease appears on the disease starts from the roots or rootlets. Human eye cannot predict the disease at an early stage. So we are using computerized image analyzing system in which minute change in the form of color in leaves can be detected at an early stage.

MATERIALS AND METHODS

Foot Rot is produced by the fungus Phytophthora parasitica that lives in the soil and attacks betelvine roots, stem and betelvine leaves. The foot rot affected betelvine plants are shown in Figure 1. The above ground level parts, betelvine leaves or stem do not show any other sign of infection such as lesions or rotting for the starting stage. Such betelvine plants when pulled out easily break at the collar region and underground parts such as roots and rootlets are found to be in the state of decay and they are black or brown in color and in decaying condition. The raining conditions the progress of the foot rot disease is developed quickly, whereas under dry conditions the progress of the foot rot disease is slow. The betelvine leaves are correctly washed to eliminate the dust components. Digital imaging technique is divided into three phases. Normal or uninfected betelvine leaves phase, foot rot disease infected betelvine leaves phase and test betelvine leaves phase. Normal or uninfected betelvine leaves phase consists of without any disease infected in the betelvine leaves. The infected betelvine leaves phase

consists of visually unidentifiable infected betelvine leaves to visually identifiable infected betelvine leaves. The samples are collected various stages of foot rot disease. Test leaves phase consists of visually unidentifiable infected betelvine leaf, samples are collected at uninfected or normal betelvine leaves and various stages of the foot rot disease infected betelvine leaves. Ten samples from each phase were taken for this paper. The size of all the betelvine images is 256x256. To eliminate the background using digital imaging software and background was chosen to be white color and these digital images are stored in the system. These stored normal and foot rot disease infected betelvine leaves are given as input to the MAT LAB and RGB color components are separated. median values are calculated for front and back view of each component and calculated median values are stored in the system and test betelvine leaves are given as input to the MAT LAB and RGB color components are separated and the median values are calculated for front and back view of each component and calculated median values are stored in the system. To compare all the stored normal, infected and test betelvine leave median value results and identify either foot rot disease infected or not in the test betelvine leaves. The front and back view red component median values are shown in the figure 2 and figure 3. The front and back view green component median values are shown in figure 4 and figure 5. The front and back view blue component median values are shown in figure 6 and figure 7. In normal betelvine leaves, the median value for front view red component ranges from 125 to 174 and the median value for back view red component ranges from 193 to 214.The foot rot disease infected in first day betelvine leaves, the median value for front view of red component ranges from 114 to 123 and the median value for back

view red component ranges from 117 to 189. The foot rot disease infected in second day betelvine leaves, the median value for front view red component ranges from 104 to 113 and the median value for back view red component ranges from 165 to176. The foot rot disease infected in third day betelvine leaves, the median value for front view red component ranges from 96 to 103 and the median value for back view red component ranges from 151 to 164. The foot rot disease infected in fourth day betelvine leaves, the median value for front view red component ranges from 81 to 95 and the median value for back view red component ranges from 127 to 149. The foot rot disease infected in fifth day betelvine leaves, the median value for front view red component ranges from 69 to 80 and the median value for back view red component ranges from 81 to 126. In first two test betelvine leaves, the median value for front view red component ranges from 125 to 174 and the median value for back view red component ranges from 193 to 214. In third and fourth test betelvine leaves, the median value for front view of red component ranges from 114 to 123 and the median value for back view red component ranges from 117 to 189. In fifth and sixth test betelvine leaves, the median value for front view red component ranges from 104 to 113 and the median value for back view red component ranges from 165 to176. In seventh and eighth test betelvine leaves, the median value for front view red component ranges from 96 to 103 and the median value for back view red component ranges from 151 to 164. In normal betelvine leaves, the median value for front view green component ranges from 171 to 203 and the median value for back view green component ranges from 194 to 223. The foot rot disease infected in first day betelvine leaves, the median value for front view green component ranges from 147 to 166 and the median value for back view green component

ranges from 179 to 191. The foot rot disease infected in second day betelvine leaves, the median value for front view green component ranges from 129 to 146 and the median value for back view green component ranges from 163 to 178. The foot rot disease infected in third day betelvine leaves, the median value for front view green component ranges from 108 to 128 and the median value for back view green component ranges from 147 to 162. The foot rot disease infected in fourth day betelvine leaves, the median value for front view green component ranges from 82 to 107 and the median value for back view green component ranges from 136 to 146. The foot rot disease infected in fifth day betelvine leaves, the median value for front view green component ranges from 54 to 81 and the median value for back view green component ranges from 122 to 135. In first two test betelvine leaves, the median value for front view green component ranges from 171 to 203 and the median value for back view green component ranges from 194 to 223. In third and fourth test betelvine leaves, the median value for front view green component ranges from 147 to 166 and the median value for back view green component ranges from 179 to 191. In fifth and sixth test betelvine leaves, the median value for front view green component ranges from 129 to 146 and the median value for back view green component ranges from 163 to 178. In seventh and eighth test betelvine leaves, the median value for front view green component ranges from 108 to 128 and the median value for back view green component ranges from 147 to 162. In last two test betelvine leaves, the median value for front view green component ranges from 54 to 81 and the median value for back view green component ranges from 122 to 135. In normal betelvine leaves, the median value for front view blue component ranges from 79 to 159 and the

median value for back view blue component ranges from 133 to 184. The foot rot disease infected in first day betelvine leaves, the median value for front view blue component ranges from 69 to 78 and the median value for back view blue component ranges from 104 to 129. The foot rot disease infected in second day betelvine leaves, the median value for front view blue component ranges from 57 to 68 and the median value for back view blue component ranges from 83 to 103.The foot rot disease infected in third day betelvine leaves, the median value for front view blue component ranges from 43 to 56 and the median value for back view blue component ranges from 68 to 82.

The foot rot disease infected in fourth day betelvine leaves, the median value for front view blue component ranges from 33 to 42 and the median value for back view blue component ranges from 55 to 67. The foot rot disease infected in fifth day betelvine leaves, the median value for front view blue component ranges from 21 to 32 and the median value for back view blue component ranges from 42 to 54. In first two test betelvine leaves, the median value for front view blue component ranges from 71 to 78 and the median value for back view blue component ranges from 125 to 131. In third and fourth test betelvine leaves, the median value for front view blue component ranges from 69 to 78 and the median value for back view blue component ranges from 104 to 129. In fifth and sixth test betelvine leaves, the median value for front view blue component ranges from 57 to 68 and the median value for back view blue component ranges from 83 to 103. In seventh and eighth test betelvine leaves, the median value for front view blue component ranges from 43 to 56 and the median value for back view blue component ranges from 68 to 82. In last two test betelvine leaves, the median

value for front view blue component ranges from 21 to 32 and the median value for back view blue component ranges from 42 to 54.

To compare all the ten test sample betelvine leaves of median values from stored median values of normal and infected leaves. The result is first two test samples of Karpoori variety betelvine leaves are uninfected or normal leaves. In third and fourth test samples of Karpoori variety betelvine leaves are foot rot disease infected in first day. In fifth and sixth test samples of Karpoori variety betelvine leaves are foot rot disease infected in second day. In seven and eighth test samples of Karpoori variety betelvine leaves are foot rot disease infected in third day. In last two test samples of Karpoori variety betelvine leaves are foot rot disease infected in fifth day.

CONCLUSION

The above proposed techniques convey that the betelvine plants foot rot disease can be identified early stage and thus preventive action can be taken well in advance such that the entire plantation can be saved before the foot rot disease starts to spread. The method of detecting the foot rot disease is cost effective. This method can also be extended to detect diseases of all kind to initiate early preventive action.

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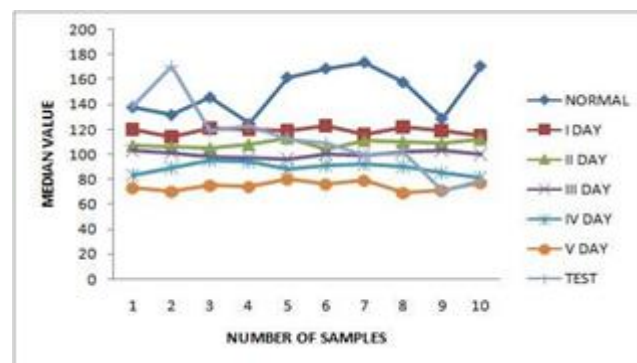Fig.1. Foot Rot Disease Affected Betelvine Plants

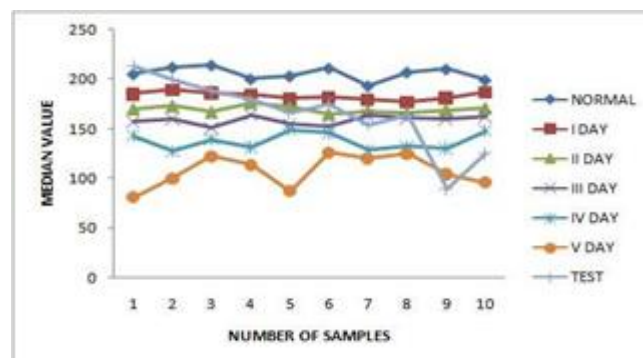Fig.2. Front view Red component median value
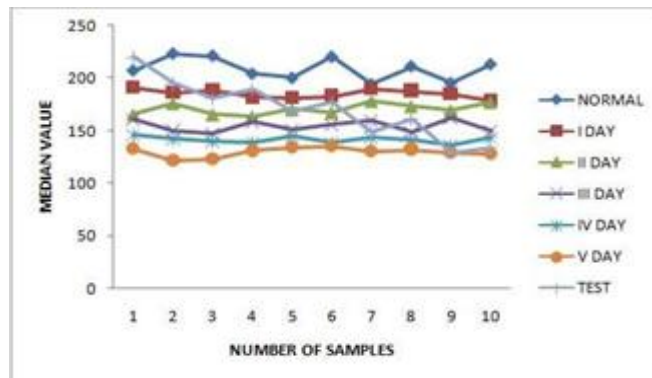

Fig.3. Back view Red component median value

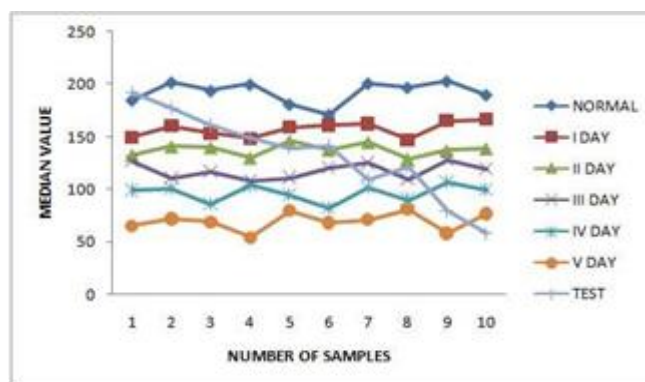Fig.4. Front view Green component median value

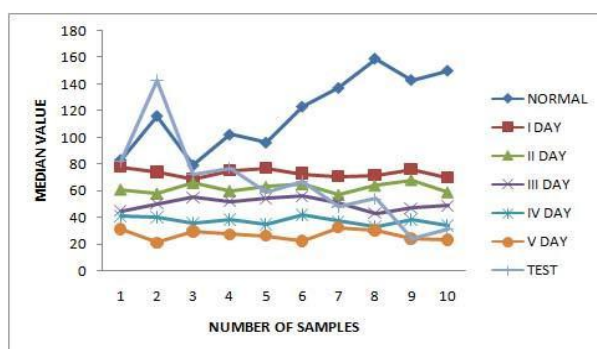Fig.5. Back view Green component median value

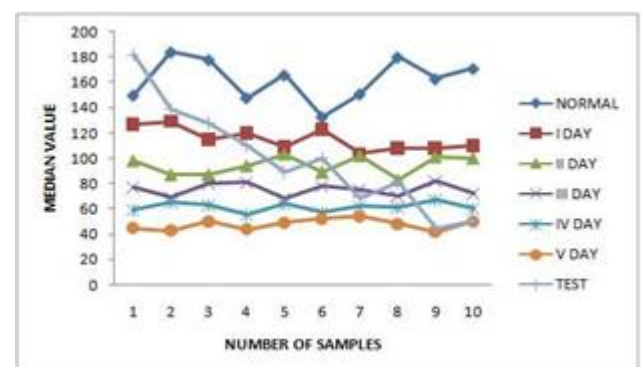

Fig.6. Front view Blue component median value   Fig.7. Back view Blue component median value

Psychological Outcomes and Coping Strategies of Work Family Conflict by Professional Women- A Review

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Abstract

A work environment can be identified as the place that one works, which means the milieus around a person. It is the social and professional environment in which a person is supposed to interact with a number of people. The work environment has a significant impact upon employee performance and productivity Organizational work stress is a condition arising from the mutual interaction of an individual and the environment which will force the individual to deviate from their normal functioning. This paper attempts to study psychological outcome and the coping strategies of professional women in their work pace. This study tries to focuses on women bank managers in thrissur district. The qualitative results revealed that low self confidence is the prime factor which is created by work family conflict among the women mangers in the banks followed by depression and anxiety. The women managers ranked for the flexible work options as the approach to reduce work family conflict at the same time assistant managers ranked for increasing the accountability of the managers to proper implementation of work family balance strategies.

INTRODUCTION

Work family conflict is the greatest concern for the employers in the organizations now. It has seen that work-family conflict is an episode in the life of every employee. There are many factors like globalization, liberalization which increased competition among organizations and has forced them to improve the operational efficiency of employees. Moreover, increase in the work participation of women especially in banking sector had made the women managers in a stretched situation of performing the dual role. These changes and advancements quite often lead to interference, conflict and competing demands between the expectations of the workplace and personal needs at home (Lambert *et al.,* 2006).

Work-life balance (WLB) is a common challenge throughout the industrialized world. Employees all over the world are facing challenges how to balance work and personal life (Ramachandra Aryasri & Suman Babu, 2007).Balancing of work and family is a potential source of stress. Longer working hours, increased demands from family is the common indicator of family to work conflict. (Grroundlund, Anne, 2007). Individual work attitudes such as job satisfaction, job involvement are regarded as important indicators of quality of work life. The significant explanatory variables for anxiety are frustration, after-hours work and age (Karofshy Paul, 2001). Work to Family Conflict and Family to work Conflict have found to be negatively correlate with job and life satisfaction and health

outcomes (Hennessy.D.Kelly, Robert .W.Lent,2008).Work family conflict was related to depression, burnout, turnover, non attendance behavior and low job performance.(Boyar.L. scott, Charles.M. Carson Donald.C. Mosley, Carl.P. Maertz, Allison. W. Pearson, 2006).

REVIEW OF LITERATURE

Stress is a consequence of or a general response to an action or situation that places special physical or psychological demands or both on a person. When the ability of an employee mismatches the physical or psychological demands of the job and its environment, he will be in the stressful situation. The stressors that originate from the work place are known as work stressors. Previous researchers have reported that women tend to report high level of psychological distress than men. (Gyllensten and Palmer, 2005).

The individuals with extraversion, anxiety, toughness, independence, adjustments, leadership and creativity influence work- related behaviors including problem solving, sensitivity, assertiveness, self discipline , drive and interpersonal style. (Francis, 2007) The personality traits like agreeableness, extroversion and openness are associated with work involvement (Bozionelos, 2004). From the studies of Appel and Appel (2008) it reveals that, as age increases and educational level increases emotional exhaustion decreases.

Work- family conflict is higher among women, younger despondence and those with higher level of education. (Voydanoff, 2005). In 1997, there reported greater difficulty in balancing their work and family demands than did their counterparts in 1977(Winslow, 2005). Devine et al., (2006) conducted the research that aims at theory-guided constructivist research to understand how low-wage employed parents' experiences

of work-family spillover affected their food choice coping strategies. These parents described affective, evaluative, and behavioral instances of work-family spillover and role overload as normative parts of everyday life and dominant influences on their food choices. They used food choice coping strategies to: 1) manage feelings of stress and fatigue, 2) reduce the time and effort for meals, 3) redefine meanings and reduce expectations for food and eating, and 4) set priorities and trade off food and eating against other family needs. According to the studies of He,zhao & Archbold (2002) show that to ameliorate the stress associated with work family conflict, the police management should play a leading role in creating greater flexibility in accommodating police officers professional, personal and family needs.

Shahzad et al., (2011) report that there is a negative relationship between work life policies and turnover intention and a positive relationship between job stress and turnover intention. Thus it is the responsibility of the management to design such strategies that reduce the stress level of employees. Work life programs can be significantly helpful to increase morale of employees, decrease absenteeism and retain organizational knowledge. 'Flexible' working time patterns and managerial adjustments to working times are the coping strategies from the employer's point of view. The article of Hyman, Scholarios and Chris (2005) shows that the boundaries between work and household are not static but due to the continuous process of social negotiation in which the differential power and resources available to both the employer and employees, it has become critical to the outcome. The study conducted by Shidaye et al., (2011) says that group cohesion, seeking the help of assistants, better work culture of the

organization are the coping strategies used by the anesthesiologists for reducing their stress and improving work life balances.

METHODOLOGY

The population of the study consisted of all the managers and assistant managers in scheduled commercial banks located in Thrissur district of Kerala state. The population size of the women managers in scheduled commercial banks in Thrissur district was 756 (Source: Basic Statistical Returns of Scheduled Commercial Banks in India (2001-2010)).

The sample size is calculated on the basis of the formula

$$n = \frac{Z^2 P(1 - P)}{d^2}$$

where n = sample size,

Z = Z statistic for a level of confidence usually Z is taken as 1.96,

P = expected proportion which is 0.3 and d = precision which is taken as 0.05

Among the total bank mangers in Kerala about 30 percent are women managers. Hence P is taken as 0.3. The sample size drawn from the population is 323 women managers which are derived using descriptive statistics method. However two of the schedules were not complete and schedules that are incomplete were avoided and thus the remaining sample of 321 becomes the sample size of the study. Two stage sampling method has been adopted to select the women managers. The banks were selected on the basis of quota sampling and the name list of women managers was collected and women managers' data is pooled. Using simple random sampling 323 women managers were selected, the method applied was computerized randomization. Based on the sampling design a total of 323 respondents were selected for the study, and out of which 321 were responded. The data that were collected from the respondents through the questionnaire were classified and tabulated to facilities the application of statistical tools. Here, the data that were collected was fed in to Statistical packages for Social Science (SPSS), popularly used for statistical software from social research analysis.

ANALYSIS AND INTERPRETATION

Ranking the difference in opinion and to compare the psychological outcome of work family conflict of managers and assistant managers in the banks,

The various psychological outcomes were ranked by the women managers and assistant managers were includes in this section. This construct includes stress intolerance, anxiety, depression, getting angry for small issues, emotional exhaustion, low self confidence, discontent, problem of adjustability, lack of interest and burn out.A score of 1, 2… 10 is given to the rank 1, rank 2… rank 10. Mean of these scores were worked out and factors were ranked according to the mean score in such a way that the score which got smallest mean has got the first rank and the score which was got highest mean has given highest rank.

H_0: There is no difference of opinion between managers and assistant managers on psychological outcome towards work-family conflict.

Mean score and ranks given in the above table shows that low self confidence is the prime factor which create conflict among the women mangers in the banks followed by depression and anxiety. So the null hypothesis is accepted. Correlation between the ranks of managers and assistant mangers (0.952) was found to be significant at 0.01 levels. This shows that their ranking was

almost same and the psychological factors they experience are almost same.

Ranking of coping strategies of women managers and assistant managers to work family conflict

This section contains the coping strategies ranked by the women managers and assistant managers to reduce work family conflict.

H_0: There is no significant difference of opinion between managers and assistant managers on strategies to reduce work-family conflict.

According to the perception of the respondents, flexible work option is the best strategy for reducing the work family role conflict. One more strategy suggested by respondent is that if manager's accountability is increased work family balances strategies may be achieved to some extend at least. So the null hypothesis is accepted. Correlation value between the ranks of managers and assistant mangers is 0.943and it was found to be significant at 0.01 levels. This shows that their ranking was almost same and the opinion about the strategies to be adopted for reducing conflict is almost same among Managers and Assistant Managers. Rank order correlation was applied and the value is 0.943.It was found that there is significant relation between opinion of managers and assistant managers' o n strategies to be adopted for reducing conflict.

FINDINGS AND SUGGESTIONS

The low self confidence is the prime factor which is created by work family conflict among the women mangers in the banks followed by depression and anxiety.

The women managers ranked for the flexible work options as the approach to reduce work family conflict at the same time assistant managers ranked for increasing the accountability of the managers to proper

implementation of work family balance strategies. However, when total rank is taken, the best strategy for reducing the work family role conflict is flexible work options. The long working hour, meeting deadlines, lack of time which constitutes the work demand is high and due to this, they are not able to perform household activities. The main strategies that can be used to reduce work stress are psychologically supporting training programs and conducting awareness campaigns to enable participants to make a proper balancing of works and home affairs. Job design should be in such a way that job monotony is minimized .Role clarity should be given as per the requirement. Roles should be given after analyzing the capabilities of the candidates. The bank management should focus on bringing more management development programs for assistant women managers periodically for improving the managerial competencies. They should specifically concentrate on time management strategies, prioritization of work, goal setting strategies to reduce work demand. The training should also give attention to improve leadership skills to that would enable them to adopt leadership styles according to the subordinates, situation and gender.

An ideal atmosphere should be created for cordial internal relationship between the staff members. There is a great scope for future research in this area. It can be searched and found out that the ways and means of conducting psychologically supportive training programs. Another interesting area for the research is identifying the personality traits that can cope up with the work stress.

CONCLUSION

A fit worker is a productive worker. It is becoming a universal realization that job demands in modern organizational practice have increased chances of work

stress. It's becoming crucial for managers to identify sources and formulate strategies to reduce work stress. It is argued that stress can be productive to a certain extend as well as unproductive if it exceeds her capacity. However negative stress is what causes adverse effects in employee's productivity.

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Table 1

Ranking of mean score to psychological outcome of work family conflict among women managers and assistant managers

Factors	Manager		Assistant Manager		Total	
	Mean Score	Rank	Mean Score	Rank	Mean Score	Rank
Stress intolerance	4.68	5	4.45	5	4.53	5
Anxiety	4.09	2	4.36	4	4.26	3
Depression	4.11	3	4.29	3	4.22	2
Getting angry for small issues	4.62	4	4.16	2	4.33	4
Emotional exhaustion	7.48	8	6.81	8	7.06	8
Low self confidence	3.61	1	3.84	1	3.75	1
Discontent	5.63	7	5.69	7	5.67	7
Problem of adjustability	5.10	6	5.16	6	5.14	6
Lack of interest	6.69	9	7.38	9	7.13	9
Burn out	8.98	10	8.83	10	8.88	10
Correlation of the ranks of assistant mangers and managers = 0.952**						

Table 2

Mean score to strategies to reduce the work and family conflict among the respondents

Strategies	Manager		Assistant Manager		Total	
	Mean Score	Rank	Mean Score	Rank	Mean Score	Rank
Increase managers accountability for proper implementation of Work Family Balance Strategies	2.35	2	1.97	1	2.11	2
Flexible work options	1.74	1	2.23	2	2.05	1
Creating the culture of acceptance and encouragement to support work life balance	3.11	3	3.10	3	3.10	3
Provide training to improve competencies for balancing work and family	3.78	4	4.09	4	3.97	4
Conducting family oriented social events	4.63	5	4.51	5	4.55	5
Proper communication of work family balance strategies to staff	5.40	6	5.10	6	5.21	6
Correlation of the ranks of assistant mangers and managers = 0.943**						

Cultural Differences on Finance Managers' Behavior in Sri Lanka

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Abstract

Finance Managers have been the outriders of globalization in the past decade. With rapid expansions in organizational operations in recent years, role of finance managers in the modern business environment has never been so vital for the survival of organizational operations in the long run. Understanding behavioral influences of finance managers that cannot be explained via traditional capital market theories allows to better comprehend decisions taken by managers in the modern era. Entering new grounds, this study aims to recognize influences of cultural differences on the behavior of finance managers in Sri Lanka. Further, consequences of variation in personal traits of finance managers are explored on the influences of culture on the behavior of finance managers. The study uses a quantitative method to collect data required based on 'Value Survey Module -2013' developed by Geert Hofstede and Michael Minkov (Hofstede & Minkov, 2013). With SMEs being the backbone of the economic development in the country, the sample of respondents is taken from finance managers employed by small and medium scale enterprises in Sri Lanka. At the heart of the study, data collected are analyzed using indexes recommended by Hofstede & Minkov (2013). The results of this study confirms that cultural differences have a direct influence on behavioral patterns of finance managers of Sri Lanka that can be hardly explained via traditional capital market theories. It is vital that these differences are considered in making strategic decisions of organizations.

Keywords: Behavioral finance, National culture, Finance managers

INTRODUCTION

Known for its regional diversity, Sri Lanka is a culturally rich nation that is based around fusion of traditional art, dance and music. Nourished by Buddhism in the 2nd century B.C and by ancient Indian invasions and colonial occupations by Portuguese, Dutch, and British has left various cultural marks on the behavior of Sri Lankans. The very unique rich cultural diversity within the country contributes to the behavioral identity of Sri Lanka (Hennayake, 2006; Holt, 2011).

With the rapid expansions and developments in Sri Lankan business environment, understanding and managing cultural impact on values and beliefs has become a necessity for survival of the modern era businesses. This enables to effectively manage behaviors in organizational context while taking advantage of cultural diversity within the country. Further Hoecklin (2000) details, mishandling cultural differences can lead otherwise successful managers and organizations to become ineffective and frustrated when working across diverse cultural backgrounds. However, by effectively handling these differences will lead to innovate business practices, effective learning within organizations and sustain competitive advantage in the long run.

Finance managers in Sri Lanka have been the outriders of globalization of companies during the last decade. Finance managers are responsible for assisting in all aspects of the administrative, financial, capital and operations of the assigned portfolio within the organization (Hughes, 2005). Many researchers have identified that behavior of finance managers are expected to be influenced by their

education, age, experience and qualifications gained by them. However, not so much from cultural background of such individual (Beckmann, Menkhoff, & Suto, 2007; Yiwei Chen, 2003).

The study aims to recognize the unique rich cultural diversity in Sri Lanka on the behavior of finance managers in the country. The heart of this research questions whether cultural differences, as identified identified by cultural theory selected, have any systematic influence on finance managers in the country and how the influence of culture vary from individual to individual depending on their personal traits including gender, ethnic group, age, education level and experience of such individual.

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"Seva Prathinidhis as Intercessories: A Study on Their Role in Shg's Towards Asset Formation"

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Abstract

"Give a man a fish and you feed him a day but teach him how to fish

and you feed him a lifetime" **- Maimonides**

An intercessory has many role to play in the success attainment of their protegees. In a SHG the main intercessory are the Seva Prathinidhis (SP). They are community level volunteers who out of self-interest and the interest of society help the women of SHGs towards asset formation. As community volunteers, Seva Prathinidhis actively engage with the members of the community. He/she is involved in the formation and smooth functioning of SHGs. Every SP puts in effort based on his experience and reach to see that the SHGs under their ambit do reach a level wherein the women of SHG's attain a sense of satisfaction and fulfilment through asset creation. Present research focus is on women empowerment through SHGs and the role SP play in creation of SHG; their functioning, their development and asset formation. In this paper the role of SPs is evaluated on the performance indicators derived from Literature review on the basis of responses of SHG members who belong to SHGs of Karkala Taluk of Udupi District functioning under Shri Kshetra Dharmasthala Rural Development Project (SKDRDP), an institution that is providing access to formal financial products and services for the poor and unbanked in its area of operation. The overall objective of this study is to assess the present role of SP and to give a future directive path to enhance the performance of SP in a more organized manner. The researcher have understood that with a management touch to the functioning and performance of SP the ultimate objective of asset formation will have a facelift which is the need of the hour.

Key words: Seva Prathinidhis (SP), SHG, SKDRDP, Microfinance, Empowerment. Asset, Asset creation.

Achieving Online Customer Loyalty

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Abstract

With technology spearheading innovations and with massive reach of information technology across the globe it has but become evident the incorporation of technology by business and marketers to reach out to consumers to garner their loyalty. This study aims to explore which of the internet services are being used by companies to achieve customer loyalty. The researcher chose four of internet services (email, World wide web, Mailing list, and Instant messages) to find out the relative effectiveness in achieving online customer loyalty. The study was able to find out that customer loyalty is extremely important for any company's continuity and profitability. Globalization and economic openness have imposed on the companies the use of internet services in marketing, customer relationship management, advertising of products etc. One of the important findings suggest the use of emails as the most effective tool to garner customer loyalty followed by world wide web, mailing list and lastly the instant messages.

Keywords: Online Customer loyalty, Internet, email

INTRODUCTION

The world of communications has witnessed and continues to witness rapid developments due to technological progress, both in terms of means and the exchange of information and knowledge, which is available around the clock. And after it was takes a long time and high cost, business enterprises found that using such technology enables them to communicate with current and potential customers sustainably around the globe whenever they want with a little cost. Organizations nowadays seek to perform sustainable communication with customers to achieve customer satisfaction that results to customer loyalty. Deng et al (2010) pointed out that customer satisfaction is due to the coupling of emotion surrounding the uncertain expectations about the clients previous perceived perceptions of consumption experience, and it is often considered as a critical determinant of intention of repurchase. While customers loyalty is achieved after achieving customer's cumulative satisfaction. In the light of the fierce competition, companies are looking for the fastest and cheapest way to achieve these goals, organizations have found their desired cause through the use of ICTs.

Therefore this study will focus on how organization can achieve customer loyalty through using digital means.

The Study Problem and Questions:

Historically, organizations were used traditional ways to marketing their products or to communicate with customers in seldom cases (Schultz and Kitchen, 2004). But in these days communication with customers has become a vital activity that due to its purposes. Communication with customers may aims to enhancing customer relationship management, branding the company and its products, advertising about new products, catering new information to the customers, motivating customers to sustainable use of the product, and engaging customers in production and marketing policies. The

achievement of any of these tasks requires the use of modern communication tools that characterized by security and speed. Therefore the problem of this study takes the following statement "Achieving Online Customer loyalty is the preferred by modern organization".

This problem will be discussed by the following questions:

Are organizations encouraged to use modern technology to communicate with customers rather than traditional means?

How organizations can achieve online customer loyalty?

What are barriers facing organizations in their attempts to accsess online customer loyalty?

The Study Significance:

Achieving customer loyalty is an aspirational goal of organizations, because customer loyalty generates the sustainable dealing of the customer with the organization and its products and services. The significance of this study lies in how the creation the ability of the organization to achieve online customer loyalty.

The Study Objectives:

The main purpose of this study is to determine which of internet facilities is the most likely in achieving customer loyalty, and to ranking these facilities according to their use by companies.

Methodology:

This study relies on descriptive approach, where the researcher will address a number of previous studies in order to identify the most effective internet facility that received the highest degree according to the literature.

Data Collection:

The main source of data needed for this study is the related literature by reviewing a number of research papers to derive the useful data. The services provided by the internet are; electronic mail (e-mail), world wide web file transfer protocol (FTP), Chat rooms, mailing list, instant message and news groups. This

study will satisfy by the services that my play a role in achieving customer loyalty; Electronic mail, World Wide web, Mailing list, and instant messaging.

Hypotheses:

H01: By using electronic mail organizations can achieve online customer loyalty.

H02: World wide web has a positive impact on achieving online customer loyalty.

H03: Through mailing list, organization can communicate with the largest number of customers to access online customer loyalty.

H04: By using instant messages technology organizations can achieve online customer loyalty.

Variables Definition:

Electronic Mail:

It is commonly Known as e-mail used to exchange digital messages from an organization or individual to one or more recipients. An email message consists of the message envelop, the message header and the message body. And the message can include attachments, graphic or video/audio clips (Cerf, 2015).

World Wide Web (www):

It is an internet technique devoted to global information sharing, where the customer can get the needed information about the organization, products, prices, and etc through the search engines; Google, Yahoo, Bing (Lee, 2015).

Mailing List:

It is a collection of names and addresses used by a person or by an organization to send material to many recipients. This list often includes a number of individuals or firms who are forming a group.

Short Message Service (SMS):

SMS often referred to as texting, sending text messages or text messaging. The service allows for short text messages

to be sent from one cell phone to another cell phone, or from the web to other cell phone (Fendelman, 2011).

Theoretical Background:

Customer Loyalty:

In the marketing world, customer loyalty still considered from the most important goals of an organization. Because the effects of customer loyalty extend to the organization's continuity and profitability (Helgesen, 2010). The literature has pointed out that customer delight is the most likely to generate customer loyalty, in addition to provide customer by excellent service and quality products that represent an added value for the customer (Yang and Peterson, 2004). Beck (2012) has defined the loyal customer in terms of purchasing times which may increase through data flow to the targeted customers. He gave an example in Folica firm (an online retailer of hair and beauty products), that increased its customers loyalty by contacting them through their email to submit data and through catering some incentives for them while kookim et al (2004) have addressed the definition of customer loyalty according to behavioral theory, attitudinal theory and integrated theory. The behavioral theory attributes the customer loyalty to the continuity of previous purchases, then measures customer loyalty by rate of purchase, frequency of purchase and possibility of purchase. The attitudinal theory considers the loyalty of customer from the psychological issues, the preference and the sense of conviction toward a particular product or service.

Reasons and tools of achieving customer loyalty:

Nowadays the internet allows customers to get multiple options from several sources wherever they live. This appears clearly when entering the consumer to any store or web site to shop anywhere in the world , and finds in front of him a great variety of goods, and different trademarks and names and sources of a single commodity. This was due primarily to economic openness and globalization and advanced IT, which led to a shift of many states to a policy of market economy especially after the emergence of the World Trade Organization (WTO), which led to create a global market dominated by competition.

As a result of increased competition between companies, resulting from multiple factors such as; globalization, economic and cultural openness, and the spread of global companies across the globe, which resulted in the availability of multiple products on one hand, and the diversity of categories of a single product on the other hand leading to increased purchase options to the customer, forcing firms to increase customer focus. All, these factors contributed in making organizations more aware that customers are the foundation of their existence. Therefore, an organization that is keen to maintain its presence, will seek to build customer loyalty, because, customer loyalty is very important for the company in accomplishing its long-term goals, and as stated by (Nguyen, 2007) "the success of the organization in achieving their goals depends largely on the efficiency of management of its relations with customers". Also, best practice of customer loyalty management that will grow the organization's name and products in the customer minds.

Previous Studies:

A Study by David XU et al, 2011, under the title: **"The Effects of Service and Consumer Product Knowledge on Online Customer Loyalty"**

This study aimed to add new variables to those that were studied in a number of previous studies, these variables are the sacrifice that is merging with service outcome, that are forming together a significant dimension to the service when predicting online customer loyalty.

The study was conducted on 128 students in a public university (88 females & 40 males).

The results showed that service quality and sacrifice as major elements of service process, impact perceived service outcome, and these three service dimensions have a moderate role in

creating online customer loyalty, but they may affect positively the customer loyalty towards websites supported by service technologies.

A Study by Rafiq et al, 2013, under the title: **"Building Customer Loyalty in Online Retailing: The Role of Relationship Quality"**

This study aimed to show the challenges That face the e-retailers in their attempt to achieve online customer loyalty. This study was conducted by relying on an online survey which has been conducted on 491 online grocery shoppers by the use of an internet Panel administrated by market research company. The results showed that the relationship satisfaction, perceived relational investment and effective commitment have a strong and positive impact on e-loyalty, while trust has a strong effect in relationship satisfaction, and that means that trust has indirect effect on achieving e-loyalty,

A Study by Erdogmus and Cicek (2012), under the title: **"The Impact of Social Media Marketing on Brand Loyalty."**

This study aimed to identify the role of social media marketing in creating online brand loyalty of the consumers. The study was conducted on a sample of 338 individuals who are caring to follow one brand or more on the social media in Turkey. Data was collected through distributing a questionnaire on the respondents. The data analysis showed that brand loyalty of the customers is positively affected in four cases: 1- when the brand is presented through a consumer-friendly Campaign. 2- when the brand is presented in a relevant content. 3- using popular content. 4- when the brand appears on many platforms, and with applications on social media.

Also customers prefer to watch the brand through funny contents, such as using music, technological related and etc.

A Study by Wen WU, 2011, under the title: **"Customer Loyalty Explained by Electronic Recovery Service Quality: Implications of the Customer Relationship Re-Establishment for Consumer Electronics E-trailers."**

This study aimed to discuss and explore the relationships among electronic service quality, customer satisfaction, electronics recovery service quality and customer loyalty for consumer electronics e-trailers. The study. was conducted on a sample of 121 participants from online consumer electronic shoppers who received the e-mail invitation to share in the online survey. Data was collected across the period from August 4, 2005 Until October 3, 2005. The results showed a positive effect to the electronic recovery service quality on consumer loyalty, but it has no effect on perceived value and customer satisfaction, while the perceived value and customer satisfaction were the two significant mediator variables in the relationships between electronic service quality and customer loyalty.

There are a wide range of online services that can be used in building customer loyalty, such as:

Internet:

It is a worldwide system of computer networks a network of networks in which users at any one computer can, if they have permission, get information from any other computer, and they can talk directly to users at other computers (Tech Target, 2011).

Short Message Service (SMS):

SMS often referred to as texting, sending text messages or text messaging. The service allows for short text messages to be sent from one cell phone to another cell phone, or from the web to another cell phone (Fendelman, 2011).

Electronic Mail (email):

E-mail is a system of world-wide electronic communication in which a computer user can compose a message at one terminal that can be regenerated at the recipient's terminal when the recipient logs in (Collins English Dictionary, 2003).

All these digital means can be used by business organizations for multiple purposes such as;

- Promotion of their products.

- Marketing these products and sell them.

- Communicate with current customers and potential customers.

- And to build better relationships with these customers to access customer satisfaction and then customer loyalty.

The progressive development in information and communications technology has led to the emergence of methods and terminology were not familiar in the world of business and finance, such as;

- E-marketing.

- E-commerce.

- E-service.

- Internet advertising and more.

Online Options for Achieving Online customer loyalty:

It is known that the establishment of a permanent and continuous relationship with customers is an indicator to distinguish the organization from other organization, so we see organizations that aim to achieve success, and increase profits, and maintain the survival, strive to establish strong relationships with their customers through provision, of what to achieve their satisfaction and increases the degree of their loyalty to the organization and / or its products .

The establishment, strengthening and maintaining such objective, requires the organization to provide all that can satisfy customers both at the product level, or at the level of ongoing communication with customers, or the level of information that the customer cares about them, even without being requested directly. Many organizations, especially those that use electronic means to communicate with their customers, tend to publish data and information of interest to all individuals whether they are customers of the organization or not, on their websites. But information relating to customers, are telling them out through one or some online channels which contains a degree of confidentiality and privacy .

For example, a bank may announce the opening of a new branch in a particular region on its website, so can a large number of people found this announcement and can benefit from it, in addition to, that the residents of that area will feel that the bank became interested in meeting their needs, thereby increasing the motivation to deal with this bank, which means, expanding the base of the bank's customers. This is the key step of the journey of customer loyalty. As for existing customers, the bank shall provide them with information and data through e-mail or other means, in order to maintain and retain those customers. In this regard (Egner, 2010) pointed out that" when buyers make a purchase online directly, companies can learn a lot about an individual's profile and preferences", and this learning can be considered as a kind of feedback of free, because it gives the organization the important information about the customer such as, place of residence, his purchasing behavior, his ability to pay, and his preferences that meet his satisfaction. All this information allows the company to build a deeper and meaningful relationship online with the customer. Egner (2010), has stated that during the economic slowdown, the implementation of the business by using digital channels becomes limited, such as doing business by using: websites, social media and email. The digital channels are no longer limited to the implementation of the business such as buying and selling, but extended to be used in customer service operations on a large scale.

The technological progress has provided the opportunity for organizations to be present on the internet, as they can link to its own website, along with commerce, which allowed the organization to learn the experiences of customers through sale, or through the broker in the sale.

Business today relies on customer satisfaction and loyalty; this is because competition is no longer limited to product and its quality, where competitors became

able to produce similar products or even more quality. Producers and online sellers must know that online trading on the internet may generates many of the competitive threats to the organization's products , also can make the dealing transactions of the organization with its customers or potential customers appear impersonal and lacking in human contact. Hence, the question arises: How can an organization use the benefits of the internet whilst at the same time creating and maintaining personal relationships?

Nowadays, organizations are in front of many options to build customer loyalty on-line. According to Brooks (2010), e-mail is probably the most widely used. E-mail customers, regular newsletters, advance notices, special offers, personalized news or links and articles that the organization thinks might be of interest of them. However, many companies may fail, may lose a large part of their customers because of not adopting the policy of responding to e-mail. Since internet users expect immediate response to their emails, but the reality has proved that many of the companies failed to create loyal customers either because of lack of response or because of the slow response. In a survey of 325 British web sites, only 62% responded to a simple email query, this means that 38% did not respond at all (www.buchanan.co.uk). Another example, an Australian Car insurance company took seven days to respond to a request for a car insurance quote. It has been better for this company and other companies that do not use e-mail in the answer to customer's requests, providing them with only the phone number. Because if the organization is not ready to treat with emails seriously then it is better not to provide an email address.

Automated email responses are from the key factors in creating customer loyalty effectively. If the company announced the possibility of dealing with it by e-mail, it must determine who will lead the response, and additional internal procedures such as, backups for when the nominated person is away, in what time frame they are to be answered, and it appropriate, how responses are to be

authorized. Companies can manage this technology to have auto-responders to acknowledge all queries, with standard answers to frequently asked questions, and even work flow process that notify senior managers if a response has not been sent within the companies and large organizations are designing their websites in a manner to save the customer's time and money and effort, and that because it is no longer compelled to go to where they are to receive a particular service.

In addition to the use of e-mail by most of companies, one can see that some other companies focus on using another internet service. Ikea company for example uses the world wide web (Google) for this purpose specially in USA market (Misra, 2014 Cited in Eldameh, 2017). Norizan and Nor Asiah (2010) Pointed out that companies Can increase customer loyalty in e-commerce by making their websites easy to use and increase the attractiveness and security of their website. While Keller (2009) Pointed out that companies can increase the customer loyalty not only by placing a Tv ads on their website, but the company should send online messages in order to making sure of that the targeted customer has watched the ad on the website.

Hypotheses Testing:

According to the above debate many companies rely on using email to achieve online customer loyalty and this means the acceptance of the first hypothesis which stipulates on:

H01: By using electronic mail organizations can achieve online customer loyalty. While some companies are tending to use the world wide web to communicate with customers. Also this means that the we accept the second hypothesis which stipulates one

H02: World wide web has a positive impact on achieving online customer loyalty.

For the mailing list the researcher did not found in the literature that it used by companies to achieve online customer loyalty, so we deny the third hypothesis which stipulates on

H03: Through mailing list, organization can communicate with the largest number of customers to access online customer loyalty. The instant messages are in use by companies especially to illustrate their advertisement for the potential customer, so we accept the fourth hypothesis which stipulates on

H04: By using instant messages technology organizations can achieve online customer loyalty.

RESULTS AND RECOMMENDATIONS

Results:

The most important results of this study are:

Customer loyalty is very important for companies where it affects the company's continuity and profitability.

Globalization and economic openness have imposed on the companies the use of internet services in marketing, customer relationship management, advertising of products and services and etc.

Companies are more likely to depend on email rather than other internet service in building and increasing customer loyalty, so the email bakes the first rank from among the variables followed by the company website, and the world wide web, and pin ally the messages.

RECOMMENDATIONS

The researcher recommends the following:

Companies should replace the use of the traditional marketing communications and turn to use electronic communicational tools, that are characterized by the low costs, easy to use and speed in response.

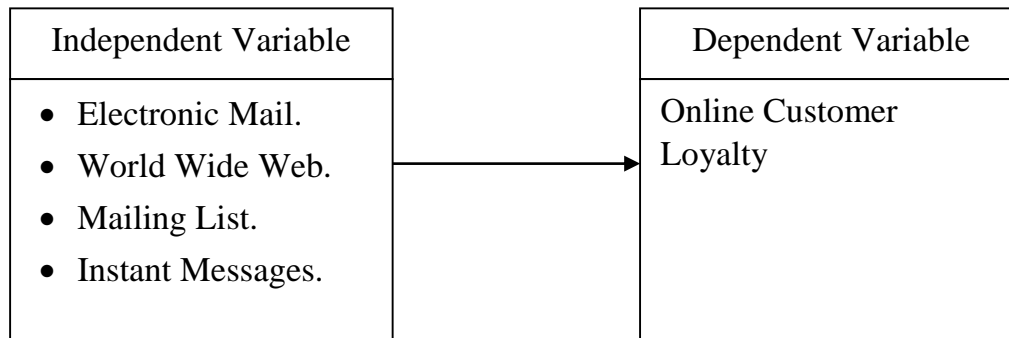Companies should include their websites in Ads that attract more customers.

Through customers segmentation in terms of customer profitability, companies should focus on suing email to sustainable communicate with these customers to ensure their loyalty.

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The study model

Independent Variable	Dependent Variable
• Electronic Mail. • World Wide Web. • Mailing List. • Instant Messages.	Online Customer Loyalty

Comparative study on Technical Efficiency of Humanities and Social Sciences Faculties in Sri Lankan Universities

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Abstract

This paper explores and measures technical efficiency of Humanities and Social Sciences Faculties in Sri Lankan Universities during the period from 2000 to 2016. In Sri Lanka, out of total 15 universities, there are 11 universities conduct degree programmes in Arts stream through faculties either Humanities or Social Sciences at different geographical locations. These faculties serve a large number of undergraduates, deal with a large amount of funds, human resources and other resources and have substantial contributions to Arts stream education since 1960s. The prime objective of the study is to measure technical efficiency of Humanities and Social Sciences faculties in Sri Lankan universities. Subsequent objective is to compare and contrast technical efficiency of individual faculties among 11 universities while measure over all technical efficiency of all management faculties. Data Envelopment Analysis (DEA) is used for measuring technical efficiency in this study. DEA methodology has been used by over 700 researchers to measure technical efficiency of many universities and service sector organizations as well. This study used secondary data published by University Grants Commission for measuring technical efficiency of Humanities and Social Sciences faculties. As far as mean scores concern, Humanities and Social Sciences faculties in Sri Lankan universities maintain only slight upward trend in efficiency during the study period. These results suggest that even though slight upward with respect to technical efficiency, many faculties do not maximize the usage of their assets and their performance in this area is stagnated. The findings of this study provide guidance for the management Humanities and Social Sciences of 11 universities to formulate proper governance mechanism to enhance the efficiency of their institutions. Further, researchers, they could continue further studies widening the data set or expanding inputs and outputs.

Key words: Technical, Efficiency, DEA, University, Humanities, Social Sciences, Faculty

Lenovate

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Abstract

Education has become a business around the world and after higher education getting jobs has become a mammoth task for graduates. Most of the employers are looking for skill-based students and most of the students lack in competency. My research question who is responsible for developing competency? Students by themselves or curriculum or educational institutions?

Career based Education (CBE) is the fastest growing model in higher education today. When a competency program is developed correctly, it creates the opportunity for the student to be assessed on the skills and knowledge he or she already has while also concentrating on the skills that he or she needs to develop. Lenovate ia program which dictates to road map to develop carrer based education from the school level to higher education.