

ISBN: 9780989515047

**PROCEEDINGS
OF
ARC 2015
III INTERNATIONAL
CONFERENCE ON APPLIED RESEARCH IN
BUSINESS, MANAGEMENT, ECONOMICS AND
FINANCE**

August 14, 15th – 2015

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**PROCEEDINGS
OF
ARC2015
III INTERNATIONAL CONFERENCE ON APPLIED
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August 14th, 15th – 2015

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Kevin Smith
Educational Consultant
USA

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ARC 2015
WELCOME TO THE
III INTERNATIONAL CONFERENCE ON
APPLIED RESEARCH IN BUSINESS,
MANAGEMENT, ECONOMICS AND FINANCE

CHIEF GUEST

Professor Sunanda Madduma Bandara



Prof. Sunanda Madduma Bandara, the **Vice-Chancellor** of the **University of Kelaniya** is a Senior Professor in the Department of Economics at the University of Kelaniya. He was the Director General, Development and Communication of the Ministry of Economic Development for the last several years. He was a former head of the Department of Economics and held the position of Dean of the Faculty of Social Sciences from 2002 to 2010 at the University of Kelaniya. He has also served as the Director of the Department of Information.

As a scholar and an Economics expert, Prof Sunanda has a long record of winning great respect from his peers and colleagues. As Dean of the Faculty of Social Sciences, he was instrumental in bringing about a remarkable increase in student enrollment, staff development, curriculum development and other academic areas in the University. He has a distinguished record serving as a member of the Presidential Task Force on Media, Convener of the Press Institute of Sri Lanka, Chief Counsellor of the Youth Rehabilitation of the Ministry of Youth Affairs, Director of the National Film Corporation, and Director of the National Human Resources development Council. He has been a consultant to the World Bank City development Program and also a Consultant to the Ministry of Policy Planning and Implementation.

KEY NOTE SPEAKER



M.J.S. Wijeyaratne PhD
Senior Profesor and Chair
Department of Zoology and
Environmental Management
&
Chair of the Research Council
University of Kelaniya, Kelaniya, Sri Lanka

It is with great pleasure that I write this Foreword on the occasion of the III International Conference 2015 on Applied Research in Business, Management, Economics and Finance jointly organized by the Faculty of Graduate studies, University of Kelaniya and Academic Research Conferences.

The four main areas addressed by the Conference, viz., Business, Management, Economics and Finance are of utmost importance not only at individual country level but also at the global level. Achieving sustainable economic development which fulfils the needs of every human in the world is essential. Although the number of people living in extreme poverty in the world has significantly decreased during the past two decades it is necessary to reduce this further as everybody living on earth has the right to have basic needs of living, such as food, water, clothing, shelter, sanitary facilities, education and proper healthcare. In this regard, more research on food security, environment as well as management, business, economics and finances are needed.

Not only conducting research but disseminating the knowledge gained through research is also very important to reap the benefits of research. The III International Conference 2015 on Applied Research in Business, Management, Economics and Finance will undoubtedly help to disseminate the new knowledge gained through research in these fields.

I wish this Conference every success.

INAUGURAL ADDRESS



Dr. Ravichandran Krishnamurthy

Associate professor and Director of Experiential Learning,
New York Institute of technology, Abudhabi Campus, UAE

An astute & result oriented professional with over 22 years of extensive experience in operations, business development, academics and institution building. Currently employed as Associate Professor and Director of Experiential Learning, New York Institute of technology, Abudhabi 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.

FOREWARD



Prof. Kulasena Vidanagamage,
Dean
Faculty of Graduate Studies
University of Kelaniya

It gives me immense pleasure to issue this congratulatory message to the ARC 2015-III International Conference on Applied Research in Business, Management, Economics and Finance which will be held in Colombo, organized by Academic Research Publishers.

I understand that Academic Research Publishers is organizing this International research Conference for the third consecutive year with the intention of providing forum for researchers in Business Management and Economics. Faculty of Graduate Studies, University of Kelaniya, is extremely privileged to take part as academic partner of this international conference and I have no doubt that this conference would be a great opportunity to academics to present their research findings as well as transferring new knowledge at an international forum.

As Dean of the Faculty of Graduate Studies, University of Kelaniya I congratulate the presenters of this research conference and wish the ARC 2015 International Conference on Applied Research in Business, Management, Economics and Finance all the success for their work in the future.

Prof. Kulasena Vidanagamage

FOREWARD



Dr. RaedElzenaty, DDS, MBA
Director of Institutional Research & Assessment
New York Institute of Technology
Abu Dhabi Campus, UAE

It is a great pleasure to be invited to the ARC 2015- III International Conference on Applied Research in Business, Management, Economics and Finance, and a privilege to write this forward.

It is a wonderful thing to encourage and broaden the realm of academic research to today's world, and an even better thing to bring academics and researchers together in the common bond of academic research and development. The exchange of ideas and discussion of viewpoints is not only precious but a necessary rung in the ladder to achieving global education initiatives.

It is my hope that the two days of the ARC 2015 International Conference on Applied Research in Business, Management, Economics and Finance will encourage us all and enable us to bring home the motivation to spread among our peers and students.

Sincerely,

Dr. RaedElzenaty, DDS, MBA

FOREWORD



**Dr.K.PrakashVel,
Associate Professor,
University of Wollongong in Dubai.**

It gives me immense pleasure in writing a foreword to the 'Academic Research Conference 2015 in Business, Management, Economics and Finance, being organized by Academic Research Publishers at Colombo, Sri Lanka, during August 14^h , 15th - 2015.

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 two days'International Conference would be beneficial to the participants. I extend my sincere wishes for a successful conference.

Dr. K. PrakashVel

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 International Conference scheduled to be held on August 14,15th - 2015, 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.

FOREWORD



Gantasala V. Prabhakar, Ph.D
Assistant Dean, School of Management
& Associate Professor
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 The III International Conference on Applied Research in Business, Management Economics and Finance-2015. 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

ARC 2015

III International Conference on Applied Research in Business,
Management, Economics and Finance

Conference Schedule

LIST OF CHAIRS & COMMITTEES

CONFERENCE CHAIRS AND ADVISORS:

Dr. K. RAVICHANDRAN

Associate Professor

School of Management, NYIT, Abu Dhabi Campus. UAE

PROF. V.G.KULASENA ,

Dean

Faculty of Graduate studies, University of Kelaniya, Sri Lanka.

PROF. ARIYARATHNA JAYAMAHA

Department of Accountancy, University of Kelaniya, Sri Lanka.

Mr. KEVIN SMITH

Editor, International Academic research Journal of Business and Management and
Educational
Consultant, USA.

Contact Chair

Mr. C. JEY YOGANAND

Director, Indian Operations

ACRPUB, UAE

Email: jey@acrpublish.com



University of Kelaniya



Contact us

<http://www.arconferences.com>

Email: arc2015@acrpublish.com

ARC 2015

III International Conference on Applied Research in Business Management, Economics and Finance

DATE: August 14th, 15th - 2015.

LOCATION : **SALON ORCHID HALL, THE GALADARI HOTEL,
COLOMBO, SRI LANKA**

TIME	AGENDA	PLACE
08:00 - 08:30	REGISTRATION	Salon Orchid Hall
8.30-9.00	CONFERENCE INNAGURATION <u>Inaugural & Welcome address:</u> Dr. Ravichandran Krishnmurthy Associate Professor, School of Management, New York Institute of Technology, Abu Dhabi, UAE	The Galadari Hotel Salon Orchid Hall
9.15-10.00	<u>Presidential Address:</u> Prof. Sunanda Madduma Bandara, Vice-Chancellor , University of Kelaniya, Sri Lanka	
10.00- 11.00	<u>Key Note Address:</u> Dr. M.J. S. Wijeyaratne Senior Professor and Chair Department of Zoology and Environmental Management & Chair of the Research Council University of Kelaniya, Kelaniya, Sri Lanka	
11.00-11.30	Tea Time and Academic Exchange	Conference Lounge
11.30-1.00	Paper Presentation Hall (1)	Salon Orchid Hall
1:30 - 2:15	LUNCH BREAK	Conference Lounge
2:15 - 5:15	Paper Presentation Hall (1)	Salon Orchid Hall
5:30 - 6:00	Certificate Distribution	Salon Orchid Hall

DAY 1

Conference Schedule The Galadari Hotel Salon Orchid Hall

14-08-2015, Friday

REF. No.		TIME
1	Case Study on Standing of Letter of Credit and its Operations at Himalayan Bank Limited, Nepal Authors: Dr. J. K. Raju & Mr. B.R. Manjunath	11.30-11.45
2	Internet of Things (IoT) Technology for Enhanced Efficiency and Responsiveness in Garment Supply Chains Authors: Prof. Om Prakash. C & Dr. Thangavel. N	11.45-12.00
3	State of Sustainability Reporting in Gujarat Chemical Industry – An Empirical Analysis Author: Prof. Pradip Kumar Mitra	12.00-12.15
4	Relationship between Dividend and Earnings: A study of Selected Indian Companies Author: Dr. Pinki Insan	12.15-12.30
5	Pre-Sale Process Optimization for Improved Efficiency Using Six Sigma Tools Author: Lenin Karthikeyan	12.30-12.45
6	A Study on the Problems Encountered by the Women Expatriates in the IT Industry Authors: Pawline. M & Selvadurgadevi Kandavel	12.45-1.00
7	Impact and Challenges of Merger and Acquisition : A Case Study of NIC Asia Bank, Nepal Authors: DR. J.K. Raju & Miss. Shruthi Prakash	1.00-1.15
8	Impact of an Enterprise Resource Planning System (ERPS) on the Accounting Process of a Public Sector Organization in Sri Lanka Authors: W.A.D.S.A. Wickramaarachchi & N.K. Jayasiri	1.15-1.30
LUNCH BREAK 1.30 – 2.15 PM		
9	A Study on Automobile Recalls and its Impact on Supply Chains Author: Dr. C. Sengottuvelu	2.15- 2.30
10	Role of Information Technology in Commerce and Management Author: Dr. Monica Bansal	2.30-2.45
11	Gamifying Recruitment Process: A Qualitative Study Aimed at Bridging the Skills Gap in UAE Jobs Market Authors: Hanan Abdullah Mohammed Saeed, Sobia Younis Younis & Dr. Chowdhury Golam Hossan	2.45 -3.00
12	The Analytic Hierarchy Process (AHP) based Solution Strategy in the Faculty Selection Problem. A Theoretical and Applied Investigation Authors: S.S. Appadoo, N.A.R.V.M. Hemarathne, C.R. Bector & A. Thavaneswaran	3.00-3.15
13	Impact of Facebook on the Students Authors: R. Anjana & K. Krishna	3.15-3.30
14	Delusion of a Fine-Arts PhD among Young Bengali Artists and Art Scholars Author: Dr. Ritwij Bhowmik	3.30 – 3.45
15	A Study on Portrayal of Women in Advertisements and its Effect on Cultural Values Authors: Dr. A. Krishnan, Selvadurgadevi Kandavel & Pawline. M	3.45 -4.00
TEA BREAK 4.00 – 4.15 PM		

16	Growth and Performance: The Case of the Luxury Industry Author: Ashok SOM	4.15 – 4.30
17	An Application of the Multi Level Analytic Hierarchy Process in the Managers Performance Evaluation Process Authors: N.A.R.V.M. Hemarathne & S.S. Appadoo	4.30 – 4.45
18	Workplace Politics: Ways to Succeed in An Unreliable World Author: Niyati Chaudhary	4.45 – 5.00
19	Gender Differences in buying Behavior and Brand Preferences towards Backpack Authors: Dr. Arul Rajan , Mr. Sachin Menon. A, Mr. Yuvaraaj Mahendran	5.00 –5.15
20	The Business of Dental Practice- What the Dentists should know Author: Dr. S. Venkateswaran	5-15 – 5.30
21	Financial Analysis and Cash Flow Estimation of American National Insurance Company Authors : Dr.K.Ravichandran & Kamal Oberoi	5.30 - 5.45

DAY 1 - Day 7

TOUR PROGRAM ITENARY

Day 1: 13 Aug: Thursday Origin /Colombo/srilanka

- Arrival at Bandaranaike international airport (Make your scheduled arrival between 12-2 Noon)
- Check in at The Hotel Galadari
- Evening: Free for Activities

Day 02: 14 Aug :Friday , Colombo

- Breakfast at Hotel Galadari
- Full day conference, with 02 tea/coffee breaks + Lunch,
- Overnight in **Hotel Galadari**

Day 03 : 15 Aug Saturday: Colombo / Pinnawala / Kandy

- Early Breakfast at Hotel, (Depart at 7 AM)
- Elephant Orphanage at Pinnawela
- Visit of University of Peradeniya , Kandy (under process)
- Kandy - *City Tour & Shopping, Temple of the Tooth Relic, cultural dance show*
- Overnight in **Hilltop Hotel** in Kandy

Day 04: 16 Aug Sunday: Kandy / Peradeniya /Nuwara Eliya

- Breakfast at the Hotel
- Check out Hotel
- Visit to ROYAL BOTANICAL GARDENS, Peradeniya
- Tea Factory & Tea Plantation, Nuwara Eliya
- Check in to **Galway Forest Lodge** in Nuwara Eliya.
- Overnight in Nuwara Eliya

Day 05: 17 Aug Monday : Nuwara Eliya / Kitulgala / Bentota

- Breakfast at the Hotel
- Check out Hotel
- Reach KITULGALA - option for water sports
- Reach BENTOTA
- Overnight in **Taprospa Footprint Hotel** in Bentota

Day 06: 18 Aug Tuesday : Bentota (River Expeditions) / Kosgoda / Bentota

- Breakfast at Hotel
- boat trip on Bentota river (Optional)
- Visit to TURTLE HATCHERY
- Overnight in **Taprospa Footprint Hotel** in Bentota

Day 07: 19 Aug wednesday : Bentota / Airport (Departure)

- Breakfast at Hotel
- Proceed to Airport to connect your flight to your Origin ✈

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**ARC 2015 III International Conference on Applied Research in Business,
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Case Study on Standing of Letter of Credit and its Operations at Himalayan Bank Limited, Nepal

Dr. J K Raju B.E., M.B.A., PhD.
Associate Professor,
Institute of Management Studies,
Davangere University, Davangere
drjavaliraju@hotmail.com
Contact Number: +91-94482 33388

Mr. Manjunath B R M.B.A., M.Com, M.F.A., EPAF (IIMC)
Research Scholar & Faculty,
MBA Programme,
Bapuji B-Schools, Davangere
manjubr.biet@gmail.com
Contact Number: +91-97399 77751

ABSTRACT

In today's world country like Nepal is into the extensive use of financial products which are introduced and in use in most of the developed countries. Financial institution do also offers a standard and commercial letter of credit, a document issued primarily in trade finance which provides an unchangeable payment activity. Letters of credit are used in international trade transactions of significant value for deals between a supplier in one country and a customer in another. The Letter of Credit (L/C) is a payment guarantee by the issuing bank to the seller on behalf of the importer. The letter of credit gives importer the most extensively used and conventional international trade payment means and finance instrument. It promises payment, provided the seller complies with the terms and conditions inside the Letter of Credit. The bank plays most important role as a mediator in Letter of Credit. This study focuses on the operation procedures of Import and the various procedures involved in Letter of Credit and also the report shows how the clients (importers) perceive the Letter of Credit services of the bank since clients (importers) satisfaction is the key in the Letter of Credit department.

Keywords: Letter of Credit (L/C), Importer, Customer Satisfaction

INTRODUCTION: BANKING IN NEPAL

Banks are institution which collect deposits, provide loans, issue credit and handle various kinds of transaction in money and monetary instrument. Banking sector is the major institutional system in Nepal which carries out the financial flow within the economy. It can also be understood with the emergence of e-banking in the recent years. Banking sector is the lead economic of country. In the developing country most of people are under the poverty line. The banks should provide good and trustable facility. In context of Nepal, the job to these financial institutions becomes much difficult because majority of people are poor and illiterate. These people are exploited by landlords and they get loans at very high interest rates whereas deposits with people remain passive. So, the financial institutions have started collecting deposits and provide

loans to others who need it at easy and affordable interest. Financial institutions can be considered as the catalyst to the economic growth of a country. The development process of a country involves the mobilization and development of resource and a financial institution can play the role of financial intermediary. In the present economic context, the financial institutions have become much more significant than ever. Himalayan Bank was established in 1993 in joint venture with Habib Bank Limited of Pakistan. Despite the cut-throat competition in the Nepalese Banking sector, Himalayan Bank has been able to maintain a lead in the primary banking activities- Loans and Deposits.

HBL ranks among the top commercial banks of the country but it also faces tough competition from other established banks like Standard Chartered Bank, Nepal Investment Bank, Nabil Bank

etc. HBL is one of the pioneer commercial banks in the Nepalese banking industry with it being one of the initial private commercial banks in Nepal. HBL is known for its expertise in project financing and having a reputed and "A" rated business. Especially with its BOD containing reputed business houses like the Khetan Group, this bank has a good business in hand. HBL is well known for its friendly work culture with educated and professional employees motivated to work for long working hours. Hence, HBL was chosen so as to experience the professional working culture and acquire the best possible knowledge of HBL's expertise i.e. project financing and other credit related functions and products.

Corporate Social Responsibility (CSR) holds one of the very important aspects of HBL. Being one of the corporate citizens of the country, HBL has always promoted social activities. Many activities that do a common good to the society have been undertaken by HBL in the past and this happens as HBL on an ongoing basis. Significant portion of the sponsorship budget of the Bank is committed towards activities that assist the society at large.

INTRODUCTION OF LETTER OF CREDIT

A standard, commercial letter of credit is a document issued mostly by a financial institution, used primarily in trade finance, which usually provides an irrevocable payment undertaking. Letters of credit are used primarily in international trade transactions of significant value, for deals between a supplier in one country and a customer in another. Letter of Credit (L/C) is a payment guarantee to the seller by the issuing bank on behalf of the importer. In other words, it is a letter of the Issuing Bank to the beneficiary undertaking to effect payment under some agreed conditions. L/C is called documentary Letter of Credit,

because the undertaking of the Issuing Bank is subject to presentation of some specified documents. Through the L/C Buyers & Sellers enter into a contract for buying and selling goods/ services and the buyer instructs his bank to issue L/C in favor of the seller. Here bank assumes fiduciary function between the buyer and seller.

As per the definition of International Chamber of Commerce (ICC) "documentary credit is any arrangement however named or described whereby a bank, (the issuing bank) acting at the request and in accordance with the instructions of a customer (the applicant), is to make payment to or to the order of a third party (the beneficiary) or is to pay, accept or negotiate bill of exchange (drafts) drawn by the beneficiary, or authorize such payments to be made or such drafts to be paid, accepted or negotiated by a other bank against stipulated documents in compliance with stipulated terms and conditions."

OBJECTIVES OF THE STUDY

The objectives are as follows:

To explore the operation procedures of Import.

To study the various procedures involved in Letter of Credit.

To know how well the Himalayan Bank is giving LC services to its customers.

To find out competitiveness of Letter of Credit service of the Himalayan Bank compared to other banks.

LITERATURE REVIEW

According to **Weber**, letters of credit are the most important instrument in international trade. It is the preferred form of payment because it protects both seller and buyer while they are engaged in the import and export business. In this transaction, the bank acts as a middleman to enforce the rules of the Uniform

Customs and Practice 500 to both the exporter and the importer. Both must operate their business according to the 49 articles of the Uniform Customs and Practice (Weber, 1989, p. 129). Neipert suggested that the letter of credit is popular because international trade transactions are complicated by the seller's trepidations regarding the difficulty of collecting funds from a foreign buyer (Neipert, 2000, p. 79).

Hill indicated two basic features of a letter of credit. It is the choice of the importer (buyer) to select option(s) and ask the issuing bank to proceed in the appropriate manner to meet an objective of the firm (Hill, 2005, p. 544). Nelson presented the typical format of letter of credit (Nelson, 2000, p. 94). Although many scholars in international trade suggest a sight-draft letter of credit or a time-draft letter of credit, each type lacks the capacity to protect both buyer and seller (Weiss, 2002, p. 106).

Daniels explored the problem of exporting in terms of documentary discrepancy. It was indicated that exporters often become discouraged or frustrated with the exporting process because they encounter problems, delays, and pitfalls (Daniels, 2007, p.4 58). Based on the Uniform Customs and Practice 400, Ruggiero mentioned discrepancies in bills of exchange (draft), commercial invoices, insurance documents, and transport documents that caused problems in collection of payments for exporters (Ruggiero, 1991, p. 52). Practically, the exporter must present the documents required by the terms and conditions of the letter of credit without any discrepancies, otherwise the exporter will not get paid.

Auboin (2009) reports that spreads on 90-days letters of credit issued by emerging or developing countries rose from 10-16 bp to 250-500 bp during 2008. These facts suggest the need to explore the theoretical

transmission channels from trade finance shocks to trade in greater detail.

METHODOLOGY OF THE STUDY

Sources of data: This study is descriptive in nature where the facts and findings are presented in a systematic manner. The methods of data collection used for this article are as follows.

Primary Sources:

Personal observation of work environment during internship period

Tasks performed as assigned by the supervisors and their instructions briefings with questionnaires.

Secondary Sources: The information is collected for the study includes Annual report of HBL, Publications of HBL, Website of NRB, Website of HBL and Websites related to Commercial Banks.

LIMITATION OF THE STUDY

Quantitative information are not made available from the bank to maintain its secrecy, thus the analysis is based on the clients survey regarding how they perceived the LC services of the bank.

Requirement for Issuance of Import L/C:

There are some prerequisites to be fulfilled for issuing L/C. Usually, Bank issues import L/C for both the regular and for new importers. For new importers, they send a request for approval to open L/C. After the approval, bank will open L/C with negotiable percent margin. What will be the margin is decided by the Head Office.

Followings are the important documents to be obtained by the issuing bank before opening an import L/C:

Approval of Relationship Manager, Customer Relation Head, Deputy Branch Manager, Branch Manager and/or Management Credit Committee.

Performa Invoice/ Indent duly accepted by the Importer and signature verified thereof.

L/C application form duly filled in an applicant's signature verified thereof.

Guarantors' signature in the L/C application form, if required.

Insurance Cover Note with Monet receipt along with the proof of payment of Insurance Premium.

Insurance checked for value (insured amount must be Indent/ PI value plus 10%), validity, goods, mode of transport, shipment from and to etc.

Membership Certificate from Chamber of Commerce/ Business Association

VAT Registration Certificate.

Up to date Income Tax Certificate.

Check the goods that are not banned/ restricted items as per Import Policy/ Public Notice of Nepal Rastra Bank.

Check country of origin and no import to make from banned countries.

Updated Supplier's / Beneficiary's Credit Report.

The process has been described below:

The starting point of the letter of credit process is the agreement upon the sales terms between the exporter and the importer. Then they sign a sales contract. Therefore, it should be kept in mind that a good sales contract protects the party, which behaves in goodwill against various kinds of risks.

After the sales contract has been signed, the importer (applicant) applies for its bank to issue a letter of credit. The letter of credit application must be in accordance with the terms of the sales agreement.

If the importer and its bank reach an agreement together on the working conditions the importer's bank (issuing bank) issues its letter of credit. In case the issuing bank and the exporter (beneficiary)

are located at different countries, the issuing bank may use another bank's services (advising bank) to advise the credit to the beneficiary.

The advising bank advises the letter of credit to the beneficiary without any undertaking to honor or negotiate. Advising bank's first responsibility is satisfy itself as to the apparent authenticity of the credit and its second responsibility is to make sure that the advice accurately reflects the terms and conditions of the credit received.

The beneficiary should check the conditions of the credit as soon as it is received from the advising bank. If some disparities have been detected beneficiary should inform the applicant about these points and demand an amendment. If letter of credit conditions seem reasonable to the beneficiary then beneficiary starts producing the goods in order to make the shipment on or before the latest shipment date stated in the L/C. The beneficiary ships the order according to the terms and conditions stated in the credit.

When the goods are loaded, the exporter collects the documents, which are requested by the credit and forwards them to the advising bank.

The advising bank posts the documents to the issuing bank on behalf of the beneficiary.

The issuing bank checks the documents according to the terms and conditions of the credit.

If the documents are found complying after the examination the issuing bank honors the payment claim.

The documents transmit to the applicant. The applicant uses these documents to clear the goods from the customs.

DATA ANALYSIS AND INTERPRETATION

From the study, researcher has distributed the questionnaires only to the Letter of Credit clients and all the clients were able to respond for it. Indeed, the response found to be 100% on preference of option to import goods from foreign countries.

Reasons to choose Letter of Credit as an Option: It is clear that 20 percent of the respondents said that the reason for choosing LC to import goods is that LC is Easy Process. 28 percent of the respondents said importing goods through LC is Trustworthy. Again, 20 percent of them felt that LC procedure is Convenience. 32 percent of them chose LC because LC is safer than other means of importing in the sense that payment through bank to bank involve no risk at all.

Degree of Rating of LC Services of HBL: The study shows the rating given by the LC clients to the LC services of the Himalayan Bank. 12 percent said the LC service of the bank is satisfactory. 48 percent said that it is good. 36 percent said the service is very good. And the remaining 4 percent said it is excellent. Those who said the service is good said that still the bank can improve the service.

Satisfaction of Clients: From the study it is observed that the percentage of LC clients satisfied with the bank LC services. 72 percent expressed that they are satisfied. But 28 percent expressed they are not satisfied indicating still the bank has to improve.

Area of Dissatisfaction of Clients: The study reveals that in which area the clients are not satisfied. 40 percent said that the process of LC is not good. Only 4 percent said that they are not happy with the responsiveness of the employees. 56 percent of the clients are not satisfied with the LC Limit given by the bank to its clients.

Clients having LC Transactions with other Banks: It is observed that the percentage of the clients having LC transactions with other banks. 88 percent of the clients said that they have LC transaction with other banks. And 12 percent said that they do LC transactions only with HBL.

LC Services of HBL compared to other Banks: The study reveals that whether clients feel the LC service of others bank is better than that of HBL. 60 percent said that the LC service of HBL is better than other banks. Only 40 percent said that other bank is better than HBL in terms of LC services.

Area in which other banks are better than HBL: The study indicates the area in which other banks are better than HBL. 84 percent said that other banks have good process than HBL. Only 16 percent said that the responsiveness of the employees of other bank is better than HBL.

FINDINGS

The HBL is providing good LC services to its clients even if the clients expressed process as major area of dissatisfaction. Here the process means the first step of opening LC that is the approval from Relationship Manager, the Head of the Customer Relation Department, Deputy Branch Manager and then Branch Manager and the Management Credit Committee (MCC) (if the LC amount is huge) which usually takes 3 days (2 more days if approval has to be done by MCC). The approval from all of them is required to open LC. These 3 days is what clients wanted to be reduced.

Also the major area of dissatisfaction is that the LC limit given by the bank to the clients is not enough to import more and more goods. If the clients get LC Limit more, there is some chance than they try to do more and more LC transactions with the HBL only.

Still there is plenty room for the bank to improve the services gradually so that the 40 percent clients who said that other banks are better than HBL will reverse their opinion.

SUGGESTIONS

Quick Circulation of Approval Sheet

From the above analysis, it is clear that clients want the process of the LC improved. Here the process refers to the circulation of approval sheet. When clients apply to open LC, a sheet, which shows the different kinds of facilities given by the bank to its clients, is prepared. The reason for preparing sheet is to see whether amount of LC, applied by the clients, is within the LC Limit given by the bank. This sheet has to be approved by the Relationship Manager, the Head of the Customer Relation Department, Deputy Branch Manager and then Branch Manager. If the amount of LC is huge, then the sheet has to be approved by the Management Credit Committee, which is the team of CEO, Senior General Manager and other top level managers. This whole process requires maximum 3 days and in the case of large LC, it takes 2 days more. What the clients want is to reduce this process by one and half day so that further LC process begins. Till the approval is made, LC process cannot be taken further. And researcher recommends the same to reduce the approval process by 1 and half day.

Increasing LC Limit

LC Limit is one facility, same as other loan facilities but without collateral security, given by the bank to the clients. Within the limit only the clients can import the goods. Till limit is not cleared, the clients cannot open another LC. Another area of dissatisfaction of clients is that they are not getting the enough limits to import goods. So researcher recommend increasing the limit based on the clients

that is enough limit should be given to those clients, who are doing sound business with good credit history. The bank can take the collateral as a security against LC limit.

Full Fledged Software

The bank is currently using software called Synergy for LC operations. This software is used only to transfer documents from one branch to another. The need for even better operation of LC is full-fledged software customized to the need of LC only. This software should be capable of keeping records of whole LC files for future references. This will eliminate the need to keep the LC files for so many years. Also paper work can be reduced to some extent with the use of software.

CONCLUSION

Himalayan Bank as a pioneer in introducing many innovative products and marketing concepts in the domestic sector represents a milestone in Nepalese banking sector as it started an era of modern banking with customer satisfaction measured as a focal objective while doing business.

Trade Operation Centre is very important for bank as it generates significant amount of profit to the organization. Trade Operation Centre deals with Letter of Credit. Letter of Credit facilitates customers to import as well as export the goods. Letter of credit is an instrument issued by a bank at request of its customer (applicant) whereby it undertakes to pay value, provided all terms and conditions stipulated in LC have been complied with. LC has been very important for the country like Nepal where there is significant volume of import than export.

The HBL should always keep on improving its LC services so that no customer left the bank because of bad LC

services. Also it should always try to be ahead of other banks at least in terms of LC services. Since the clients' satisfaction is main objective of any company, the bank should ensure the clients satisfaction without affecting its revenue.

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Information gathered through questionnaire

Reasons to choose Letter of Credit as an Option

Particulars	Frequency	Percent (%)
Easy Process	5	20
Trustworthy	7	28
Convenience	5	20
Safety	8	32
Total	25	100

Degree of Rating of LC Services of HBL

Particulars	Frequency	Percent (%)
Satisfactory	3	12
Good	12	48
Very Good	9	36
Excellent	1	4
Total	25	100

Satisfaction of Clients

Particulars	Frequency	Percent (%)
Yes	18	72
No	7	28
Total	25	100

Area of Dissatisfaction of Clients

Particulars	Frequency	Percent (%)
Process	10	40
Responsiveness of the Employees	1	4
LC Limit	14	56
Total	25	100

Clients having LC Transactions with other Banks

Particulars	Frequency	Percent (%)
Yes	22	88
No	3	12
Total	25	100

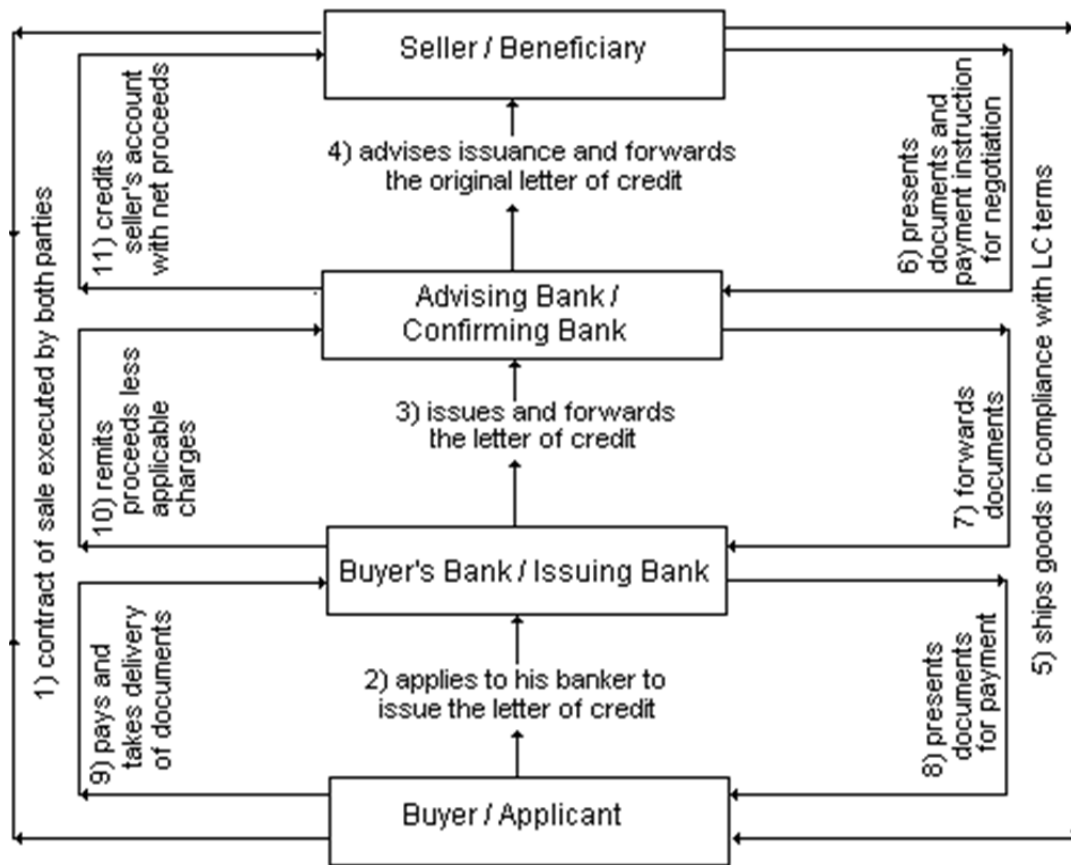
LC Services of HBL compared to other Banks

Particulars	Frequency	Percent (%)
Yes	9	40
No	13	60
Total	22	100

Area in which other banks are better than HBL

Particulars	Frequency	Percent (%)
Process	8	84
Responsiveness of the Employees	1	16
Total	9	100

Working of Letter of Credit



Internet of Things (IoT) Technology for enhanced Efficiency and Responsiveness in Garment Supply chains

Prof. Om Prakash. C

Ph.D Scholar, Bharatiyar University
CMR Institute of Management Studies (Autonomous)
Bangalore, India
bangaloreom@gmail.com

Dr. Thangavel .N

Principal, Department of Management Studies,
Jeppiaar Engineering College (MBA),
Chennai, India
thangavelraj@gmail.com

Abstract

IoT (Internet of Things) technology is connecting all things, devices and sensors to the internet. Intelligent sensors capturing data on every aspect of the supply chain can unlock new insights, exceed customer expectations and gain competitive edge. Advances in mobile technology and small, affordable, lightweight sensors are making it possible to capture every aspect of supply chain, bringing the Physical and digital world closer together. Garment Supply chain can benefit from sensor-sourced data that follows the movement of goods through the entire value chain bringing in visibility, efficiency and responsiveness. The key technological drivers, potential applications in garment supply chain, challenges and future research areas is presented in this paper.

Keywords: IoT (Internet of Things), Supply chain technology, Internet, mobile applications, Garment Supply chain.

INTRODUCTION

The Internet of Things, or the IoT is a vision for a ubiquitous society wherein people and “Things” are connected in an immersive networked computing environment, with the connected “Things” providing utility to people/enterprises and their digital shadows, through intelligent social and commercial services.

Garment and fast fashion need to reduce their cycle time by moving right products fast through the supply chain and IoT will ensure companies can get instantaneous customer insights and maneuver to get the right products faster to the customer.

Game-changing potential

The inability to predict and quickly respond to market challenges may result in customer dissatisfaction—stalling revenue

growth while adversely affecting speed-to-market and innovation. As infrastructure, maintenance and development costs rise and capacity challenges grow, organizations struggle to meet new user expectations. In today’s dynamic business environment, Supply chain companies must consider advanced cloud capabilities and business process innovation to achieve true value and gain competitive advantage.

Supply chain companies need access to a fully integrated and scalable cloud-based service delivery infrastructure that helps to rapidly respond to market changes, drive innovation and differentiate the enterprise while supporting bottom-line growth. Solutions supporting digital convergence across multiple content providers, application providers and device manufacturers in an easier, more seamless

manner is required. Applying advanced analytics can help gain customer insight and optimize the delivery of near real-time services that are tailored to provide new value for customers—while also allowing companies to analyze constantly evolving market demands to help achieve bottom-line growth.

Huge advances in mobile technology and reductions in the size and cost of sensors are making it possible to instrument practically every aspect of life, bringing the physical and digital worlds ever closer together. For companies that can cope with the huge influx of data, the emerging Internet of Things (IoT) creates opportunities for growth and new revenue streams across a huge range of industries including logistics, manufacturing, energy, transportation, security, retail, healthcare, and more.

Businesses that create, distribute, transport, re-sell or service physical products can benefit from sensor-sourced data that follows the movement of goods through the entire value chain, from manufacture to usage. For service industries, the opportunity is to blend environmental data with customer data to create innovative offerings.

Organizations must find a way to harness all of the data collected, there is a huge range of exciting possibilities to make business and everyday life more efficient, productive and pleasant. For example, generating detailed insight into how consumers use energy can help them use resources wisely and reduce costs, as well as lower demand on the electrical grid.

The higher the velocity of data you can handle, the more opportunity you have to manage outcomes. For example, energy customers who receive monthly bills have limited opportunities to understand and change their behavior to lower costs. By contrast, details of daily or hourly

consumption provide much greater insight and many more opportunities to change energy-usage patterns. Of course, the more readings you capture per unit of time, the greater the challenge from the technology perspective.

Retail insight through IoT

Unique scalable solutions allow retailers to analyze spaces and stores from a micro to a macro level. IoT solutions enable retailers and those who manage retail spaces to better understand their energy and systems usage, reducing energy bills and lowering environmental impact.

Supply Chain companies can save on energy bills, reduce Environmental Impact and manage their Office or Store the smart way with IoT solutions. Smart Technology is a reality today, connecting and controlling building automation systems, household appliances and mobile environments.

For IoT to be successful innovative, small core products and system on a chip, brings intelligence to the edge and provides instant scalability to the complete IoT portfolio. With its security and manageability features, low-power, cost-effective intelligent connected devices are a reality today.

Hildebrand—a software company, has recently launched a retail “footfall” tracking solution that uses anonymized data from mobile devices to measure the approximate location of shoppers over time. Across 25 UK shopping malls, the solution is collecting 250 million data points a day, delivering unprecedented insight to the mall operators.

Each shopper’s location is captured every second, and typically track 300,000 unique visitors daily. Using the information delivered through an intuitive, graphical web portal, mall operators can see the

average time spent in the center, the number of unique visitors, and heat-maps by location and by time. The collected shopper traffic information can be used by the mall operators to demonstrate to their clients – the owners of the retail stores within each center – that they are bringing in the right number and type of visitors. Data points on average dwell time and frequency of return visits are also computed.

By correlating heat-maps on shopper visits with the physical layout of each mall, operators and retailers can better understand the optimal mix of stores and their optimal location within the mall. Opportunities are growing to enrich the information with demographic details, potentially allowing retailers to change their offers in real time depending on the types of shoppers known to be in the mall. Looking ahead, brands might want to track purchases from the store to their point of usage in the consumer's home to provide insight into product design enhancements and to identify opportunities for cross-selling.

Robust Database System for IoT

With the emergence of Internet of Things and the proliferation of connected devices, businesses need the performance of an intelligent, enterprise-class database to provide real-time analytics and actionable insights for devices on the edge and in the cloud. This means they must have instant access to information and are challenged to deliver new services in record time to outpace the competition.

Harnessing data from billions of connected devices lies in the ability to store, access, query, and analyze multiple data types seamlessly, locally and in the cloud. The result is speed-of-thought insight across all data for fast business decisions and rapid development of web and mobile applications

With the emergence of the Internet of Things (IoT) and the proliferation of connected devices, businesses have instant access to information from numerous sources. They are challenged to use that information to deliver new services in record time to outpace the competition. The huge influx of data creates opportunities for growth and new revenue streams for businesses across all industries. Today's businesses need the performance of an intelligent, enterprise-class database to provide real-time analytics and actionable insights for devices on the edge and in the cloud. Many organizations are already developing plans and experimenting with IoT solutions to hone their competitive edge.

An intelligent database for IoT harnessing data from billions of connected devices depends on the ability to store, access and query all data together, seamlessly, for speed-of-thought insight and local decision making.

Database software must have the ability to seamlessly integrate SQL data and NoSQL/JavaScript Object Notation (JSON) data. Database has to be embeddable, enterprise-class database, and allow us to combine unstructured and structured data, as well as other data types such as spatial and time series. It must bridge the gap between relational data and the new computing technologies designed for big data, cloud and mobile computing. Embedding at the gateway level enables us to perform database operations and analytics close to the data sources. A "hybrid" database system with a rich set of APIs that enhance development simplicity, flexibility and time to market is required, which results in optimized business decisions and rapid development of web and mobile applications.

Reliability, availability and performance requirements of Database:

Accelerated query boost with no change to business applications

Fast, always-on transactions

Horizontal scaling and Data sharding for cloud environments

Online transaction processing (OLTP) and analytical workload support for consolidated queries on a single database platform

Automatically senses and responds to changes without intervention

Self-maintaining capabilities include automated storage, memory management and an automated task scheduler

CONCLUSION

With intelligent sensors capturing data on every aspect of garment supply chain, IoT will help companies to understand all this data to unlock new insights, exceed customer expectations, and gain competitive edge. Smart platforms with unique machine learning extensions that captures, processes and analyzes big data in real time for actionable insights are needed. Insight at the speed-of-thought across all data sources unlocks the potential to transform every aspect of garment supply chain, and supports fast development of innovative designs and products.

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State of Sustainability Reporting in Gujarat Chemical Industry – An Empirical Analysis

Prof. Pradip Kumar Mitra.

Assistant Professor.

Vivekanand Education Society Inst. of Mngt. and Research.
Mumbai, India.

Abstract

Reporting the sustainable performance is considered to be an effective tool for showcasing the three major performances by an organization on environmental social and economic front. Though several frameworks are practiced in the different countries of the world, in India adoption is a bit slow and not mandatory for the organization. The research paper tries to gauge the perception and awareness about sustainability reporting across the chemical industry in India with specific reference to Gujarat, the highest producing state of chemicals and dyes and pigments in India. An empirical analysis has been carried out to understand the different aspect of reporting and how the industry participants are reacting to the same. The paper also focuses on the formation of the consensus how the reporting should be and what factors should drive it. Survey was conducted among the industry participants of the Gujarat who were mainly the decision makers of reporting of the organizations' sustainable initiatives. The views were collected from 520 respondents and a model was developed through confirmatory factor analysis. The research exhibits that as a concept sustainability is welcome by the industry but the process of reporting somehow failed to garner the acceptance widely due to its complications.

INTRODUCTION

Chemical industry is a significant component of Indian economy. The industry has seen a sea of changes and moved with dynamism. It is a highly regulated industry on the front of the environment. Although a major producer of basic chemicals but the industry slowly shifted towards speciality and knowledge chemical. Before WTO regime it was a protected economy and serving the domestic needs only. The rapid pace of globalization in the international front the economic liberalization and the economic reforms made in the country has actually led the chemical industry development in a wrong direction. Be it in the field of intermediates or dyestuffs or pesticides many companies both in the organized and unorganized sector have ventured for manufacturing and exporting some chemicals in bulk quantity which are

banned elsewhere. The industry is with us for the last two hundred years but its ecological impact has been profound far surpassing all that preceded this revolution. After the establishment of 'Golden Corridor' there was immense development held at infrastructural level. Railway lines, National highway and many rivers and communities are under tremendous pressure for this unplanned and uncontrolled growth of the industry especially in Gujarat and Maharashtra. It is noted that the management of this multi fold problems related to environmental pollution are beyond the capacity and capability of the administration. Transfer of obsolete technology from North to south is also a major cause for the growth of Chemical industry in India. As a part of the Global strategies, TNCs may relocate production from the North to south, either that part of a production process which no longer

require advanced technology and a high degree of technical knowledge, or the manufacture of products of which demand is declining (**Leonard 1988**). So the products which are declining their consumption in the North are sent to South for stretching the profitable life of both the process and products. One reason for this is that sub sectoral industrial growth in countries in the South results mainly from growing domestic demand (**UNIDO 1988**). When engaging in foreign investment, TNCs will, in fear of competition, be reluctant to expose the latest and most advanced technology (**UNCTC 1992**), and so they will prefer to transfer obsolete technologies to their partners in the South. Obsolete technologies are often more pollution intensive compared to new technology (**Bergsto and Endersen, 1992**). In this way a process of selective modernization can happen also due to competition. So to cut down the costs the new technology can be avoided to provide a lower level of pollution. Examples of such components are warning installations for exceeding emission limits, protection equipment for the employees and filters for emission to water and air.

LITERATURE REVIEW

Along with Maharashtra, Gujarat is the fastest growing industrial states in India and has its predominance on chemical industry. The chemical industry is also referred as a "Milking Cow" for the industrial development of the state (**Bombay Political Observer 1990**). Since 1950 when state started massive industrialization program it built megaprojects on oil and natural gas, refineries, petrochemicals and fertilizers. Since 1991, after the liberalization of the industrial and economic policies the gates were opened to global companies to come to India and Gujarat made a conscious effort to garner the investment from NRIs and MNCs. The investment so far in the chemicals, pharmaceuticals and

petrochemicals have crossed over Rs.500 billions which is almost double the investment of all other sectors put together....a clear indication of the guiding force behind Gujarat's industrialization program. Gujarat has a strong base of diversified chemical industry, with approximately 700 large and medium scale units and 31,000 small scale and other factory sector units. Over 1,300 projects of the chemical and allied sectors have been commissioned. (Source:-**KPMG Report on Gujarat Chemical Industry 2012**)

Across India the effects of chemical pollution have been witnessed remarkably. The presence of major diseases like nervous, circulatory, respiratory, digestive and endocrine system is very high in the industrialised areas as compared to the areas which are unindustrialized. The problems of congenital deformity and abnormalities in chromosomes were found also. Apart from these different diseases like cancer, skin disorder was also found in large numbers. (**WHO, 1990**)

To cite an example of the level of damage it can create Vapi in Valsad District in South Gujarat a major chemical hub having 1402 chemical units can be made as a point of reference. Vapi is a region overwhelmed by industrial pollution. More than 50 industries poison the local soil and groundwater with pesticides, PCBs (carcinogenic chemicals), chlorine, chromium, mercury, cadmium, dyes, and lead. The affected area is the 400 km industrial belt. It is fifth on this year's (2011) list of the ten most polluted places in the world, according to a new report by the Blacksmith Institute, a U.S. environmental watchdog. The study ranked these places based on the seriousness of the industrial pollution and the number of people at risk. The area affected includes more than 71,000 people. A belt of 1,402 chemical industries, Vapi's water and soil are being inundated with chemicals, dyes, pharmaceuticals, paints, and plastics.

Engineering, glass, and paper industries also dump industrial pollution into rivers, streams, and ground water. As per the report the level of mercury in the ground water of Vapi in Gujarat is remarkably high and alarming also. It is 96 times higher than the actual standard set by World Health Organization. Damanganga River and Kolak River are getting polluted by direct draining of chemical effluents from the nearby chemical industry which has made them vulnerable to support the existence of biological life.

The Gujarat Industrial Development Corporation (GIDC) areas of Gujarat are cesspools of degraded effluents and environmental health hazards. Still the government is promoting this industry. As per the State Government out of the 90,000 industrial units scattered here 8000 units are polluting at large. Vadodara Petrochemical Complex, Nandesari, Ankleswar, Vapi, Vatva and Hazira near Surat are major polluted areas. Small scale industries were encouraged to flourish in these GIDC areas for promoting chemical business through financial incentives. Although the number of these industrial units is very significant priority on environment was kept at a very low level by the Government which has ultimately created major environmental problems in Gujarat.

(Source:-www.rainwaterharvest.org)

If past is considered most of developments were applauded without much of questioning on ecological and socioeconomic impact. As discussed till now a concern must have been raised about natural resources depletion and environmental degradation. For the last decades the mankind and their community has started challenging the unregulated development and led some environment movements. "Sustainability" has become accepted as the mediating term designed to bridge the gulf between development

proponents and environmentalists (O'Riordan, 1988). The concept of sustainable development has gained a considerable support from different community.

A series of international summits and conferences took place on this issue. In 1972 a World Conference was held at Stockhome represented by all Heads of different countries of the world to discuss on a global environment movement. The fruit was the birth of UN agency UNEP (United Nations Environment Program) in the eighties followed by creation of WCED (World Commission on Environment and Development). This was headed by the Norway's Prime Minister Mrs. Gro Harlem Bruntland. The commission published a report called "Our Common Future" in 1987 with the proposed concept of "Sustainable Development" "Sustainable development is a development that meets the needs of the present without compromising the ability of future generations to meet their own needs (WCED, 1987:43).

So far as sustainable development is concerned it includes lot of things in its own considerations. But specifically for chemical industry it would possibly include control over degradation of soil water and air, maintenance of biological diversity, eco system and wild life habitat, avoiding the exceeding the capacity of the environment to absorb waste products, reducing social risk and maintaining community health. But question is how to report the sustainability? While the field is still evolving sustainability reporting matures and moved towards a sophisticated stage like interactivity and stakeholder dialogue (UNEP, 1999) For doing a successful business, reporting on non-financial issues is crucial to draw the stakeholders' attention and creating a competitive advantage in number of industries (Schaltegger, 2003). Companies always use this report to disclose

sustainability issues which often describes vision and strategy, governance, policy and stakeholder relationship along with environmental and social performance indicator (GRI, 2002).

In India sustainability reporting is at a very nascent stages and nurtured only in blue chip companies where as maximum number of chemical companies are actually SMEs scattered in the state and they are unorganised also. Although the research suggested that many of the industry participants are well informed about the concepts but actually not following the sustainability reporting practices.

So the objective of the research was to understand the perception and acceptance of sustainability reporting among the industry participants so that an analysis can be carried out to identify the major problems and how effective ness can be brought into the situation through creating a common framework through a consensus approach.

RESEARCH METHODOLOGY

The survey was carried out in the State of Gujarat as the state is the major contributor of total chemical production of the country. The sample size was 520 mostly the participants from the industry who are the major decision makers of their firm. Convenience sampling method was used and the response from the participants were divided into two categories of riskiness as provided by the Gujarat Pollution Control Board. The two categories were "Red Category" the vulnerable ones and "Orange Category" the moderate risk category. No participants were found for low risk category (Green Category) chemical manufacturing company. The questionnaire was prepared from the literature review and subsequently revised with the help of the experts from the field. The reliability test was carried out and chronbach alpha value was more than 0.7 suggesting the questionnaire is free

from bias. Test of normality was carried out and it was found the variables are not normally distributed. So all non-parametric tests are applied to test the hypothesis like chi square test and mann whitney test.

The cross tabulation shows the observed and expected frequencies of different categories of Riskiness and Knowledge about Sustainability Reporting. From the table, The Pearson Chi-Square calculated value at 1 degree of freedom is 0.757 and its associated significant (2 sided) value is 0384. So at 5 per cent level of significance the null hypothesis is failed to reject. Hence it can be concluded that **Knowledge about Sustainability**

The cross tabulation shows the observed and expected frequencies of different categories of Riskiness and Belief about Sustainability Reporting. From the table, The Pearson Chi-Square calculated value at 1 degree of freedom is 8.739 and its associated significant (2 sided) value is 0.003. So at 5 per cent level of significance the null hypothesis is rejected. Hence it can be concluded that **Belief about Sustainability Reporting aspects and Riskiness of an Organization are not independent of each other**. The value of **Cramer's V** is 0.130& it indicates that there is a weak association between different categories of Riskiness and Belief about Sustainability Reporting.

The cross tabulation shows the observed and expected frequencies of Perception about Sustainability Reporting as a part of framework of Corporate Governance process and Riskiness of an Organization. From the table, The Pearson Chi-Square calculated value at 1 degree of freedom is 7.140 and its associated significant (2 sided) value is 0.008 so at 5 per cent level of significance the null hypothesis is rejected. Hence it can be concluded that **Perception about Sustainability Reporting as a part of framework of Corporate Governance**

process and Riskiness of an Organization are not independent of each other. The Phi and Cramer's V are used to identify the strength of association of two non-metric variables. The value of 0.117 indicates that there is a weak association between Perception about Sustainability Reporting as a part of framework of Corporate Governance process and Riskiness of an Organization. The cross tabulation shows the observed and expected frequencies of Perception about Sustainability Reporting as a part of framework of Corporate Governance process and Riskiness of an Organization. From the table, The Pearson Chi-Square calculated value at 1 degree of freedom is 0.704 and its associated significant (2 sided) value is 0.786. So at 5 per cent level of significance the null hypothesis is fail to be rejected. Hence it can be concluded that **Agreement with the proposition that a Sustainable Report should disclose both favorable and unfavorable results and Riskiness of an Organization are independent of each other.**

The cross tabulation shows the observed and expected frequencies of Perception about issues relating to Sustainable Development and Reporting are relevant in the Indian context and Riskiness of an Organization. From the table, The Pearson Chi-Square calculated value at 1 degree of freedom is 12.103 and its associated significant (2 sided) value is 0.001. So at 5 per cent level of significance the null hypothesis is rejected. Hence it can be concluded that **Perception about issues relating to Sustainable Development and Reporting are relevant in the Indian context and Riskiness of an Organization are not independent of each other.** The Phi and Cramer's V are used to identify the strength of association of two non-metric variables. The value of 0.153 indicates that there is a weak

association between Perception about Sustainability Reporting as a part of framework of Corporate Governance process and Riskiness of an Organization.

Degree of awareness at different levels of organization and Turnover of an organization: The table below shows the cross tabulations of Riskiness of the organization and degree of awareness at different levels of organization. The majority of the cases have expected counts less than 5. This is violating the assumption of chi-square analysis. Hence results obtained by chi-square test can be misleading. Hence it would be appropriate not to generalize these results. Hence only Cross tabulations are presented.

The above table shows the mean rank of different categories of Riskiness. From the table, the calculated Chi-Square, degree of freedom, and significant value is given. Human Aspect, Social Aspect, Natural Aspect, Economic Aspect and Financial Aspect are not found significant at 5 % level of significance. Hence it can be concluded that for all Human Aspect, Social Aspect, Natural Aspect, Economic Aspect and Financial Aspect there is no significant difference in playing a predominant role in Sustainability Reporting at different categories of Riskiness.

The factors to be reported were broadly divided into 5 aspects of reporting and 26 sub-factors were distributed in the same. The five major aspects of reporting was identified as Human Aspect, Social Aspect, Natural Aspect, Economic Aspect and Financial Aspect. The distribution of the factors within those aspects is depicted in the below mentioned chart. A confirmatory factor analysis was carried out to validate the construct with the help structural equation modelling and the model fit summary was prepared.

All variables have factor loading of greater than 0.7 and Average Variance greater than 0.5 (except Human factor) indicating good evidence of construct validity. From the fit measures, it can be concluded that the Model fits the data extremely well in parsimonious Fit Measures. From Absolute Fit measures, the model fits the criteria of RMSEA. The Model is moderately fitted with data in relative fit measures.

CONCLUSION

So far as knowledge is concerned 78.8% of the respondents were not aware of sustainability reporting. But when they were asked whether they believe in sustainability reporting (91%) reported in affirmative. So it was clear that reporting sustainability issues as a practice is not denied but how to report was a concern. Though GRI framework has provided sustainability reporting guidelines for SMEs also but it could not appeal the industry participants at large. Most of the respondents also accepted sustainability reporting to get included as part of corporate governance process in India (74%) and they also vouched that both favourable and unfavourable results must be disclosed in true spirit (92%). When asked about complication that may arise due to its implementation majority of the participants was not in favour of the fact and they also agreed to include sustainability reporting in their mission statement also. These facts summed together shows some encouraging response to the practitioners but implementation should be taken in right directions and right spirit through a consensus based approach.

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Data Analysis:

Table 1: Chi-Square Test–Riskiness – Knowledge about Sustainability Reporting aspects

<i>Riskiness * Does your company? Know About? Sustainability Reporting Aspects? Cross tabulation</i>					
			<i>Does your company? Know About? Sustainability Reporting Aspects?</i>		
			<i>Yes</i>	<i>No</i>	<i>Total</i>
Riskiness	High	Count	96	344	440
		Expected Count	93.1	346.9	440.0
		% within Riskiness	21.8%	78.2%	100.0%
	Intermediate	Count	14	66	80
		Expected Count	16.9	63.1	80.0
		% within Riskiness	17.5%	82.5%	100.0%
Total		Count	110	410	520
		Expected Count	110.0	410.0	520.0
		% within Riskiness	21.2%	78.8%	100.0%

Reporting aspects and Riskiness of an Organization are independent of each other.

	<i>Value</i>	<i>df</i>	<i>Asymp. Sig. (2-sided)</i>
<i>Pearson Chi-Square</i>	<i>.757^a</i>	<i>1</i>	<i>.384</i>

H₀: Belief about Sustainability Reporting aspects and Riskiness of an Organization are independent of each other.

<i>Table2: Riskiness wise belief about sustainability reporting. Cross tabulation</i>					
			<i>Does your company believe on sustainability reporting?</i>		
			<i>Yes</i>	<i>No</i>	<i>Total</i>
Riskiness	High	Count	396	44	440
		Expected Count	402.8	37.2	440.0
		% within Riskiness	90.0%	10.0%	100.0%
	Intermediate	Count	80	0	80
		Expected Count	73.2	6.8	80.0
		% within Riskiness	100.0%	.0%	100.0%
Total		Count	476	44	520
		Expected Count	476.0	44.0	520.0
		% within Riskiness	91.5%	8.5%	100.0%

Table 3: *Chi-Square Tests and Symmetric measures*¹⁰

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.739 ^a	1	0.003

Symmetric Measures

	Value	Approx. Sig.
Cramer's V	0.130	0.003

H₀: Perception about Sustainability Reporting as a part of framework of Corporate Governance process and Riskiness of an Organization are independent of each other.

Table 4: Riskiness wise perception about Sustainability Reporting as a part of framework of Corporate Governance process.

Riskiness * Should Sustainability Reporting be a part of framework of Corporate Governance process? Crosstabulation					
		Should Sustainability Reporting be a part of framework of Corporate Governance process?			Total
		Yes	No		
Riskiness	High	Count	317	123	440
		Expected Count	326.6	113.4	440.0
		% within Riskiness	72.0%	28.0%	100.0%
	Intermediate	Count	69	11	80
		Expected Count	59.4	20.6	80.0
		% within Riskiness	86.2%	13.8%	100.0%
Total		Count	386	134	520
		Expected Count	386.0	134.0	520.0
		% within Riskiness	74.2%	25.8%	100.0%

Table 5: *Chi-Square Tests and Symmetric measures*¹¹

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.140 ^a	1	.008

Symmetric Measures

	Value	Approx. Sig.
Cramer's V	.117	.008

H_0 : Agreement with the proposition that a Sustainable Report should disclose both favorable and unfavorable results and Riskiness of an Organization are independent of each other.

Table 6: Riskiness wise perception that a Sustainable Report should disclose both favorable and unfavorable results. Cross-tabulation

				Do you agree with the proposition that a Sustainable Report should disclose both favorable and unfavorable results?		
				Yes	No	Total
Riskiness	High	Count		403	37	440
		Expected Count		403.6	36.4	440.0
		% within Riskiness		91.6%	8.4%	100.0%
	Intermediate	Count		74	6	80
		Expected Count		73.4	6.6	80.0
		% within Riskiness		92.5%	7.5%	100.0%
Total		Count		477	43	520
		Expected Count		477.0	43.0	520.0
		% within Riskiness		91.7%	8.3%	100.0%

Table 7: Chi square tests.

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.074 ^a	1	.786

H_0 : Perception about issues relating to Sustainable Development and Reporting are relevant in the Indian context and Riskiness of an Organization are independent of each other.

Table 8: Riskiness wise considerations with issues relating to Sustainable Development and Reporting are relevant in the Indian context Cross tabulation

				Do you consider issues relating to Sustainable Development and Reporting are relevant in the Indian context?		
				Yes	No	Total
Riskiness	High	Count		371	69	440
		Expected Count		380.8	59.2	440.0
		% within Riskiness		84.3%	15.7%	100.0%
	Intermediate	Count		79	1	80
		Expected Count		69.2	10.8	80.0
		% within Riskiness		98.8%	1.2%	100.0%
Total		Count		450	70	520
		Expected Count		450.0	70.0	520.0

Table 8: Riskiness wise considerations with issues relating to Sustainable Development and Reporting are relevant in the Indian context Cross tabulation

			Do you consider issues relating to Sustainable Development and Reporting are relevant in the Indian context?		Total
			Yes	No	
Riskiness	High	Count	371	69	440
		Expected Count	380.8	59.2	440.0
		% within Riskiness	84.3%	15.7%	100.0%
	Intermediate	Count	79	1	80
		Expected Count	69.2	10.8	80.0
		% within Riskiness	98.8%	1.2%	100.0%
Total		Count	450	70	520
		Expected Count	450.0	70.0	520.0
		% within Riskiness	86.5%	13.5%	100.0%

Table 9: Chi Square test and Symmetric measures 12

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.103 ^a	1	.001
Symmetric Measures			
		Value	Approx. Sig.
Nominal by Nominal	Phi	.153	.001
	Cramer's V	.153	.001
N of Valid Cases		520	

Table 10: Riskiness wise degree of awareness at Board level. Cross tabulation

			Board					Total
			High Awareness	Awareness	Undecided	Low awareness	No awareness	
Riskiness	High	Count	110	298	11	11	10	440
		Expected Count	115.9	296.2	9.3	10.2	8.5	440.0
		% within Riskiness	25.0%	67.7%	2.5%	2.5%	2.3%	100.0%
	Intermediate	Count	27	52	0	1	0	80
		Expected Count	21.1	53.8	1.7	1.8	1.5	80.0
		% within Riskiness	33.8%	65.0%	.0%	1.2%	.0%	100.0%
Total		Count	137	350	11	12	10	520
		Expected Count	137.0	350.0	11.0	12.0	10.0	520.0

			Board					Total
			High Awareness	Awareness	Undecided	Low awareness	No awareness	
Riskiness	High	Count	110	298	11	11	10	440
		Expected Count	115.9	296.2	9.3	10.2	8.5	440.0
		% within Riskiness	25.0%	67.7%	2.5%	2.5%	2.3%	100.0%
	Intermediate	Count	27	52	0	1	0	80
		Expected Count	21.1	53.8	1.7	1.8	1.5	80.0
		% within Riskiness	33.8%	65.0%	.0%	1.2%	.0%	100.0%
Total		Count	137	350	11	12	10	520
		Expected Count	137.0	350.0	11.0	12.0	10.0	520.0
		% within Riskiness	26.3%	67.3%	2.1%	2.3%	1.9%	100.0%

Table 11 Chi-Square Tests 9

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.318 ^a	4	0.177
Likelihood Ratio	9.462	4	0.051
Linear-by-Linear Association	5.384	1	0.020
N of Valid Cases	520		

a. 3 cells (30.0%) have expected count less than 5. The minimum expected count is 1.54.

			Top Management					Total
			High Awareness	Awareness	Undecided	Low awareness	No awareness	
Riskiness	High	Count	80	325	9	13	13	440
		Expected Count	84.6	325.8	7.6	11.0	11.0	440.0
		% within Riskiness	18.2%	73.9%	2.0%	3.0%	3.0%	100.0%
	Intermediate	Count	20	60	0	0	0	80
		Expected Count	15.4	59.2	1.4	2.0	2.0	80.0
		% within Riskiness	25.0%	75.0%	.0%	.0%	.0%	100.0%
Total		Count	100	385	9	13	13	520
		Expected Count	100.0	385.0	9.0	13.0	13.0	520.0
		% within Riskiness	19.2%	74.0%	1.7%	2.5%	2.5%	100.0%

Table 13: Chi-Square Tests 10

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.012 ^a	4	0.091
Likelihood Ratio	13.226	4	0.010
Linear-by-Linear Association	7.093	1	0.008
N of Valid Cases	520		

a. 3 cells (30.0%) have expected count less than 5. The minimum expected count is 1.38.

Table 14: Riskiness wise degree of awareness at Middle Management level. Cross tabulation

		Middle Management						
			High Awareness	Awareness	Undecided	Low awareness	No awareness	Total
Riskiness	High	Count	28	349	25	22	16	440
		Expected Count	26.2	357.1	22.8	20.3	13.5	440.0
		% within Riskiness	6.4%	79.3%	5.7%	5.0%	3.6%	100.0%
	Intermediate	Count	3	73	2	2	0	80
		Expected Count	4.8	64.9	4.2	3.7	2.5	80.0
		% within Riskiness	3.8%	91.2%	2.5%	2.5%	.0%	100.0%
Total		Count	31	422	27	24	16	520
		Expected Count	31.0	422.0	27.0	24.0	16.0	520.0
		% within Riskiness	6.0%	81.2%	5.2%	4.6%	3.1%	100.0%

Table 15: Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.109 ^a	4	0.130
Likelihood Ratio	10.020	4	0.040
Linear-by-Linear Association	3.386	1	0.066
N of Valid Cases	520		

a. 4 cells (40.0%) have expected count less than 5. The minimum expected count is 2.46.

			Operational level					Total
			High Awareness	Awareness	Undecided	Low awareness	No awareness	
Riskiness	High	Count	13	336	33	35	23	440
		Expected Count	13.5	341.8	33.8	30.5	20.3	440.0
		% within Riskiness	3.0%	76.4%	7.5%	8.0%	5.2%	100.0%
	Intermediate	Count	3	68	7	1	1	80
		Expected Count	2.5	62.2	6.2	5.5	3.7	80.0
		% within Riskiness	3.8%	85.0%	8.8%	1.2%	1.2%	100.0%
Total		Count	16	404	40	36	24	520
		Expected Count	16.0	404.0	40.0	36.0	24.0	520.0
		% within Riskiness	3.1%	77.7%	7.7%	6.9%	4.6%	100.0%

Table 17: Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.642 ^a	4	0.106
Likelihood Ratio	10.311	4	0.036
Linear-by-Linear Association	6.015	1	0.014
N of Valid Cases	520		

a. 2 cells (20.0%) have expected count less than 5. The minimum expected count is 2.46.

Ho: There is no significant difference in playing a predominant role by major factors in Sustainability Reporting at different categories of Riskiness.

The non-parametric test- Mann-Whitney test has been performed and the result is shown below.

Table 18 Mann-Whitney Test

<i>Ranks</i>				
	<i>Riskiness</i>	<i>N</i>	<i>Mean Rank</i>	<i>Sum of Ranks</i>
<i>Human Aspect</i>	<i>High</i>	378	214.28	80999.50
	<i>Intermediate</i>	41	170.50	6990.50
	<i>Total</i>	419		
<i>Social Aspect</i>	<i>High</i>	378	211.21	79835.50
	<i>Intermediate</i>	41	198.89	8154.50
	<i>Total</i>	419		
<i>Natural Aspect</i>	<i>High</i>	378	213.13	80564.50
	<i>Intermediate</i>	41	181.11	7425.50
	<i>Total</i>	419		
<i>Economic Aspect</i>	<i>High</i>	378	210.87	79710.50
	<i>Intermediate</i>	41	201.94	8279.50
	<i>Total</i>	419		
<i>Financial Aspect</i>	<i>High</i>	378	208.39	78772.50
	<i>Intermediate</i>	41	224.82	9217.50
	<i>Total</i>	419		

Table 19 : Test Statistics^a

	<i>Human Aspect</i>	<i>Social Aspect</i>	<i>Natural Aspect</i>	<i>Economic Aspect</i>	<i>Financial Aspect</i>
<i>Mann-Whitney U</i>	6129.500	7293.500	6564.500	7418.500	7141.500
<i>Wilcoxon W</i>	6990.500	8154.500	7425.500	8279.500	78772.500
<i>Z</i>	-2.200	-.619	-1.609	-.449	-.825
<i>Asymp. Sig. (2-tailed)</i>	.028	.536	.108	.653	.409
<i>a. Grouping Variable: Riskiness</i>					

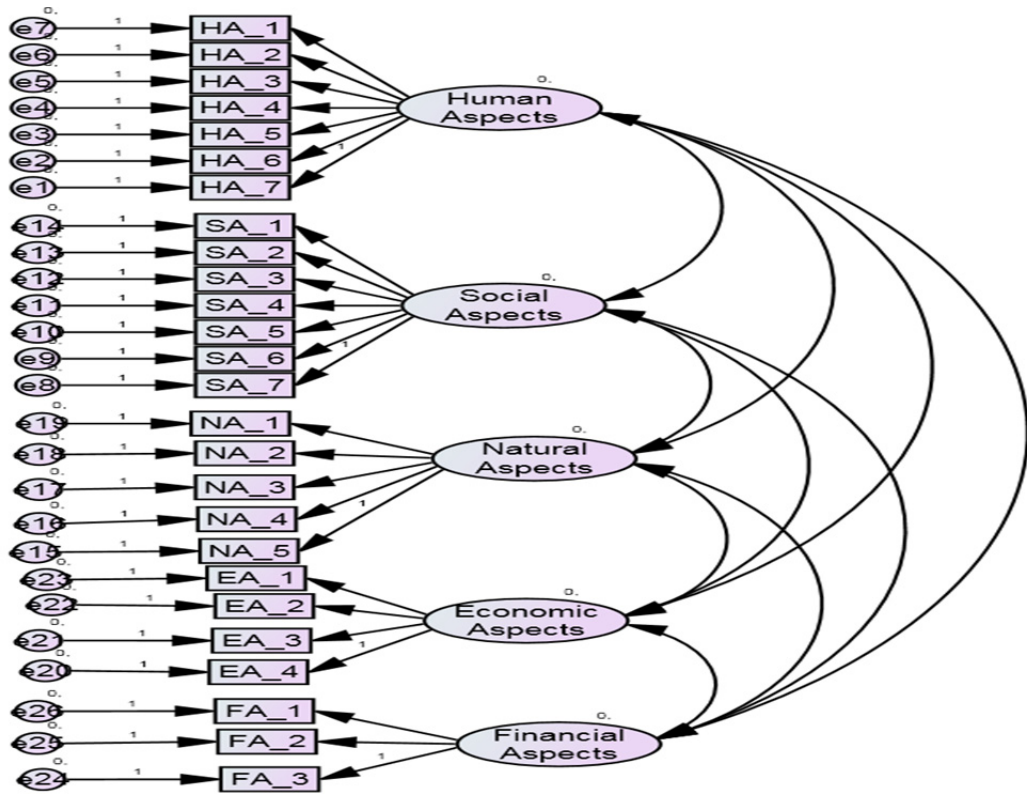
Chart 1: Common Factors for SRF Identified				
HA1 to HA7	SA1 to SA7	NA1 to NA5	EA1 to EA4	FA1 to FA3
Human Aspect	Social Aspect	Natural Aspect	Economic Aspect	Financial Aspect
Development of Employee	Stakeholder Engagement	Biodiversity Restoration	Improve Employability	Income Enhancement
Healthy People	Enhancing Capacity	Greening supply chain	Regional Development	Enhancing Shareholder Value
Educated Population	Building Community	Management of Scarce Resources	Price Stabilization	Livelihood Generation
Active Volunteering	Creating Educational Institution	Environmental Conservation	Employment Generation	
Youth and Leadership	Forming Networks	Wildlife Protection		
Artisan & Entrepreneurship Development	Improving Health Care & Sanitation			
Stakeholder Accountability	Supply Chain as base of Pyramid			

Table 20: Factor Model Fit Summary Chart

Absolute Fit Measures		
Test	Recommended Value	Sustainability Reporting Model
χ^2	$p > 0.5$	$p = 0.000$
CMIN/DF	< 5	5
RMSEA	< 0.10	0.088

Relative Fit Measures		
Test	Recommended Value	Sustainability Reporting Model
CFI	> 0.95	0.882
NFI	> 0.90	0.857
RFI	> 0.90	0.827
IFI	> 0.90	0.883

Parsimonious Fit Measures		
Test	Recommended Value	Sustainability Reporting Model
PCFI	> 0.50	0.726
PNFI	> 0.50	0.706



Relationship Between Dividend and Earnings: A Study of Selected Indian Companies

Dr. Pinki Insan
Assistant Professor,
Dept. of Commerce,
Indira Gandhi University,
Meerpur, Rewari, Haryana, India.
E-mail: pinkiinsan@yahoo.com.

Abstract

Dividend Decisions are the most prominent decisions in the field of corporate finance. Dividend Behaviour is multifaceted in nature. Several researchers tried to shed light on the dividend behaviour of various companies applying different models but the picture is not yet clear. The present study is an endeavor in this direction. 100 Indian companies for a period of eight years have been selected for examining their dividend behaviour. For this purpose Lintners' model has been applied. The analysis reflected that Lintner's model provides a best fit in case of Indian Companies

Keywords: Dividend, DPS, EPS, DPR, Lintner model.

INTRODUCTION

Corporate dividend payments to shareholders has been started more than 300 years back and have sustained as an adequate and required activity of corporate managers, regardless of the apparent opposing economic nature of these payments. It would emerge that the corporation progressed from original liquidating dividend, to distribution of all profits (retaining some capital), to a token dividend payment, the size and rate of recurrence of which are left to the discretion of management. As well, different schemes of distribution (such as repurchase of stock etc.) and quasi-distribution (such as stock dividends and splits) have been devised and accepted. Undoubtedly, this evolution could not have occurred in vacuum. It has been paralleled, if not participated, by systematic segregation of the owners from management, i.e., the separation of control from ownership.

Earning per share (EPS) and dividend per share (DPS) are the vital components of earning distribution

practices of corporate sector. The study of relationship between earning per share and dividend per share may be useful for decision making for both investors as well as manager. The EPS is considered as a bench mark of the performance of the companies by the investors. Similarly DPS also contain various information content for the investors. From the shareholders' point of view the wealth created by company through its actions is reflected is reflected in the market value of companies share. The dividend DPS per share may have significant impact on the market value of the firm' share prices. Similarly if the company adopts maximization of EPS as the financial objective of the firm, this will also not ensure the maximization of owner's economic welfare because it ignores timing and risk of expected benefits. These two components are considered related with each other. Thus in the present paper an attempt has been made to an empirical analysis of this relationship.

A dividend policy of a company is affected by many variables, both external

and internal. The external variables include regulations in capital market, tax policy, state of economy and other governmental regulations. The internal variables are mainly shareholders' preferences, nature of business, growth rate of economy, its liquidity position etc. A dividend policy is based on a total framework of these variables and different patterns emerge in practice.

REVIEW OF RELEVANT LITERATURE

Lintner (1956) explored for the very first time the dividend payment behavior of US firms. The results reflected that a preset target payout ratio is followed by the firms. According to the findings present year's dividend payment decision has been connected with present year's earnings and previous year's dividend. The rate of dividends has also been adjusted along with the increase in the level of earnings. **Khurana (1985)** conducted a study to find out the dividend policy followed by 68 companies. By taking a sample consisting of chemical (12), Electrical (12), General Engineering (14), Sugar (15) and Cotton Textile (15) industries he found that only half of the companies under survey were following a stable dividend policy. The survey result of **Britain (1966)** over a period of 1919-1960 showed that the ability of a firm to pay dividends has been better explained in terms of cash flow as a variable (profits after taxes plus depreciation). **Gupta, Sharma (1991)** explored dividend behavior of firms in Indian tea industry for a period of 1982-1988 by applying statistical models i.e. Lintner, Brittan, Darling and Dobrovolsky. The result of the study disclosed the application of Lintner's model and Dobrovolsky's model on both type of firm's i.e. firms having collaboration with foreign firm and firms having no collaboration with foreign companies, whereas Brittain's model is not entirely applied on both type of firms. **Mahapatra and Sahu(1993)**,

revealed the determinants of dividend policy by means of the models developed by Lintner (1956), Darling (1957) and Brittain (1966). Taking a sample of 90 companies for the period 1977-78 – 1988-89, he found that the key determinant of dividend is cash flows followed by Net Earnings. He also discovered that between the past earnings and past dividend, it is the past dividend that affects the dividend decision of a company. **Mishra and Narender (1996)** studied the dividend behaviour of state owned enterprises in India. The findings disclosed that previous year dividend per share has been found significant in number of cases than previous year earnings per share. It was also explored that a current year earnings per share has been important determinant in finalizing the dividend rate. **Lalitha Mani & Priya (2010)** discovered dividend behaviour of five Indian steel companies. The study was conducted applying the statistical tools such as ANOVA, Trend Analysis, Coefficient Variation, Mean, and Standard Deviation. The study unearthed that Tata steel has premier earnings per share with high dividend amount declaration. SAIL which has the extraordinary growth rate during the study.

RESEARCH METHODOLOGY

Objectives

The present study had been undertaken to examine whether the selected companies follow stable dividend policy.

Sampling Design

The universe of the study consists of selected five NSE listed 100 Indian companies paying regular dividend. The sample companies are grouped into 15 industries (sectors): Automobiles(11), Cement (5), Engineering (7), Petrochemical (10), Services (6), Media and Entertainment (5), Pharmaceutical (6), Telecommunication (3), Manufacturing

(44), Consumer Goods (6), Textiles (4), Infrastructure (4), FMCG (11), Information technology (7) and Miscellaneous (11). The period of the study was limited to eight years ranging from 2001-2008. Data was analysed by using SPSS and MS- Excel Software.

The Model

To analyse the dividend behaviour of selected companies under study we used the Lintner's prominent model to test the stability in the dividend policy of listed Indian companies at NSE.

$$DPS_{i,t} = \alpha_i + \beta_1 EPS_{i,t} + \beta_2 DPS_{i,t-1} + \epsilon_{i,t}$$

where $DPS_{i,t}$ is dividend per share (i) in time period (year) t, $EPS_{i,t}$ is earning per share (i) in time period t, $DPS_{i,t-1}$ is dividend per share (i) in time period t-1 and $\epsilon_{i,t}$ is the error term. Based on the time period (2001-2008), selected NSE listed companies are considered for inclusion in our sample.

Hypothesis

H0: Firms tend to follow smoothing dividend policy.

H1: Firms do not tend to follow smoothing dividend policy.

ANALYSIS

It is evident from table 1 that the R square value, the P value and associated P value provide the enough evidence that the Lintner's model can be legitimately applied in case of Indian Industries for analyzing the dividend decision. The value of R square in 3 out of 8 cases is more than 0.75. The F- value indicates that the model is significant for all the years at 1 percent significance level. The beta value indicates that the model is significant for all the year at 1 percent significant level. The beta value indicates that last year dividend has contributed significantly in shaping the current year's dividend than the current year' profit. The beta value of last year's

dividend is positive for all the years. The P value associated with the last year's dividend is significant at 1 percent level for all the years. The beta value of current year's profit is less than one in most of the cases indicating that current year's profit has no significant role to play in determining the current year's dividend. The associated P value of current year's profit is also significant at 1 percent in most of the case. In 50 percent cases the value of Durbin Waston is 2 or more than 2.

FINDINGS AND CONCLUSIONS

On the basis of the analysis it can be interpreted the Lintner's model can be justifiably applied in Indian Industries as far as the payout policy is concerned. The inference from R square and the F- value indicates that the model is significant for all the years under study . Moreover it is also concluded that the last year dividend has contributed significantly in shaping the current year's dividend than the current year' profit as stated in Lintner's model. On the whole it is concluded that Indian Companies under study tend to follow smoothing dividend policy.

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Table 1
Lintner's Model Estimates (Year-Wise)
($DPS_{i,t} = \alpha_1 + \beta_1 EPS_{i,t} + \beta_2 DPS_{i,t-1} + \varepsilon_{i,t}$)

Sr. No.	Years		Constant (□)	EPS _t (□1)	DPS _{t-1} (□2)	R ²	DW@	F
1.	2001	Co-efficient	-0.25 (2.022)	0.028* (4.017)	0.741* (13.87)	.797	1.929	72.17*
2.	2002	Co-efficient	1.185 (2.022)	0.028* (4.017)	0.0741* (13.87)	0.797	1.929	187.995*
3.	2003	Co-efficient	3.230 (4.010)	0.042* (5.986)	0.275* (4.298)	0.433	2.060	36.977*
4.	2004	Co-efficient	4.370 (3.440)	0.070* (3.459)	0.349* (2.947)	0.249	2.00	5.942*
5.	2005	Co-efficient	2.173 (2.555)	0.059* (4.431)	0.504* (7.977)	0.574	1.669	65.221*
6.	2006	Co-efficient	-0.788 (-0.956)	0.114* (6.726)	0.694* (8.619)	0.763	2.368	156.134*
7.	2007	Co-efficient	3.031 (3.455)	0.076* (6.014)	0.286* (5.019)	0.475	2.177	43.795*
8.	2008	Co-efficient	1.033 (1.409)	0.033* (2.619)	0.709* (9.274)	0.678	1.975	101.958*

*significant at 1% level of significance, **significance at 5% level of significance, ***significant at 10% level of significance. Figures in parentheses represent t statistics

Pre-Sale Process Optimization for Improved Efficiency Using Six Sigma Tools

Lenin Karthikeyan
Assistant Professor
Manipal University
Dubai

Abstract

Six Sigma is a set of business practices to systematically improve processes by eliminating defects. It drives customer satisfaction and bottom-line results by reducing variation and wasteful activities which in turn improves a firm's competitive standing.

The process or a set of activities normally carried out before a customer is acquired should be effective and efficient to generate new enquires and develop a strong cliental. This process is often referred to as Pre-Sales. The Pre-Sales team acts as an initial bridge for communication between the customer and the organization. It is an effective pre sales team and their capability to meet the requirements that would reflect the organizations service level. With increase feedback about poor response time, it was important that the organization had to dig down the root cause and try eliminating waste looking for alternative ways for a speedy process.

The major objective of the study was to understand this process and to determine the causes for the delay in response time. With the help of both client evaluation and Pre Sales Team evaluation questionnaires; we were able to understand the problems and the internal procedure that currently exists. For more detailed and descriptive overviews, interviews with the Division managers and team Heads were conducted. With the analysis undertaken it was evident that improvement was required in the current process .Findings and recommendations were given to reduce the gap in the existing system and to fasten the quotation cycle time. However these have not yet been implemented as it is requires time and strategic decisions to be made with the involvement of the management.

Keywords : Six sigma, Presales

INTRODUCTION

In a business climate where organizations are experiencing increased competitive pressure presale process optimization has become the main slogan for them as they are striving to succeed in an environment characterized by globalization and knowledgeable customers. Mentioning optimization or continuous improvement leads us to the well known concept of "Six Sigma". As a business strategy Six sigma is recognized as one of the most powerful management tool for operations and business excellence. Six Sigma is a multi-dimensional structured approach which uses quality tools to remove variation and to reduce defects from product, process & service. The main target of this approach is to attain the level of quality and reliability

that will satisfy and consistently meeting the demands and expectations of today's challenging customer. Six Sigma certainly an innovative industry in its own right starts with a vision of delivering products and services with high performance as measured by critical to quality metrics (Benbow and Kubiak, 2005).

Six sigma changes the way a company thinks by teaching fact-based decisions making at all levels. In the current dynamically changing markets, quality alone is not the winning criteria; consistent supply of quality goods and timeliness of service delivery as per the schedule can achieve a higher customer satisfaction. Six Sigma methodology addresses the major root causes and guarantees the targeted results both in terms of improvements desired and time

span fixed (Deepak et al, 2014, p-158). Six sigma has a profound impact on both people and organizational excellence and is not limited to bottom-line improvement.

SIX SIGMA – AN OVERVIEW

Six Sigma is one of the most widely used 'generic' terms, and this brand name is actually a registered trademark of Motorola Inc., in the USA, who first pioneered Six Sigma methods in the 1980's and later it was popularized by "General Electric". Though the definition of Six sigma varies considerably, but the concept is the same. Anbari (2002) stated the Six Sigma approach was first applied in manufacturing operations and rapidly expanded to different functional areas such as marketing, engineering, purchasing, servicing, and administrative support, once organizations realized the benefits. According to Hahn et al (2000) "Six sigma is a disciplined and highly quantitative approach to improving product or process quality". Schroeder et al (2008) argues "Six sigma is an organized, parallel-meso structure to reduce variation in organizational processes by using improvement specialists, a structured method, and performance metrics with the aim of achieving strategic objectives".

Antony et al (2002) stated that Six Sigma provides business leaders and executives with the strategy, methods, tools and techniques to change their organizations. As per them, there are four aspects of the Six Sigma that are not emphasized in other business improvement methodologies and it scores much higher over other quality improvement techniques such as total quality management (TQM). First of all, Six Sigma places a clear focus on bottom-line savings. Second, Six Sigma has been very successful in integrating both human aspects (culture change, training, customer focus etc.) and process aspects (process

stability, variation reduction, capability etc.) of continuous improvement. Third, Six Sigma methodology (DMAIC) links the tools and techniques in a sequential manner. Finally, Six Sigma creates a powerful infrastructure for training of champions, master black belts, black belts, green belts, and yellow belts. The goal of Six Sigma is to *eliminate waste and inefficiency* while *delivering* value to the customers. It is a highly disciplined process that helps us focus on developing and delivering near-perfect products and services.

In business terms, Antony and Banuelas (2002) defined Six Sigma as "*a business improvement strategy used to improve business profitability, to drive out waste, to reduce costs of poor quality and to improve the effectiveness and efficiency of all operations so as to meet or even exceed customer's needs and expectations*".

Six Sigma is a widely used approach for multi-dimensional performance which is as follows:

- Improving Processes
- Lowering Defects
- Reducing process variability
- Reducing costs
- Increasing customer satisfaction
- Increased profits

The Benefits of Six Sigma

Following are major benefits of Six Sigma that attract companies. They are

- Greater productivity
- Greater throughput
- Improved quality
- Reduced cycle times
- Less fire fighting
- Smoother operation
- Reduced operating costs

NEED FOR THE STUDY

The application of Six Sigma in pre-sale process optimization is relatively new topic and there is very little research has been performed in this area. The key purpose of the pre-sale phase is to structure a business roadmap understandable and to eliminate the risk factors that block the potential aspect of the sales process for investors. In fact pre-sale service is essential to boost the business value and sales revenue, to shorten the sales period cycle and to have a service that addresses the possible contingencies that may evolve, through organized and transparent mechanisms. The Pre-Sales team acts as an initial bridge for communication between the customer and the organization. It is an effective pre sales team and their capability to meet the requirements that would reflect the organizations service level.

The GCC region is witnessing a fast track growth in the Audio- Visual Industry and Dubai is now the undisputed trade and noteworthy distribution hub for renowned brands in the entire region. Moreover Dubai's Expo bid win will enable innovation in technology as well as foster cultural and economic growth. Being the hosts for the EXPO 2020, there has been an enormous increase in the number of new projects that is lined up to transform the desert to an oasis paradise. With this massive expansion in infrastructure there is bound to be a rising need of AV solutions.

Complex AV systems have become essential to the operation of government; institutions and corporations, resulting in a growing need not only for equipment but for installation, integration and managed services contracts (Das,2015,p-5). With the integration of Audiovisual and IT technology, AV solutions are now very flexible and could be customizable to fit the unique

characteristics of any complex environments. The AV industry is strong, despite a challenging global business environment, because society relies on AV technology to facilitate essential communications. Corporations, educational institutions and government agencies and Healthcare are the three largest consumers of audiovisual products and services in Dubai. The increased need for communication and collaboration in these environments is fuelling a reliance on AV (ibid)

OBJECTIVE

Here the author has taken V.V & Sons Company which is one of the oldest and the leading distributors in UAE for Audio/Visual products. With the globalized economy and new market entrants the *level of competition* has *never* been higher than it is *today*. Acquiring new clients and to retain their existing clients have become the highest challenge for the company. With every player in the market *striving* to find an identity that highlights its *unique selling* proposition it was important that V.V & Sons to maintain their market share. This could be achievable only by trying to meet the customer expectations efficiently and effectively. In this study the author made an attempt to have clear understanding of what the exact competitive strategies the VV & Sons are pursuing and how these strategies can help to maintain competitive advantages. In addition evaluation was done on the pre-sales team in order to analyze the process and verify the causes for the delay in response time. With the investigation undertaken it was evident that improvement was required in the current procedure. This thesis gives the author a new insight into company success aspects and suggestions for dealing with the major issues which company may encounter. Findings and recommendations were given

to reduce the gap in the existing system and to fasten the quotation cycle time.

METHODOLOGY

In this research the qualitative method conducted through a series of interviews and meetings. Then survey questionnaire and emails were developed for the quantitative approach. The sample size mainly included the people working in the pre-sales department who were well experienced. Secondary data is collected from the organization history, company's annual reports and other published records. As a part of our analysis Pareto and Fish Bone analysis were done (see Fig. 1 and 2)

Pareto Analysis:

As from the client evaluation survey, it is important to understand what causes the delay in quotation cycle time, i.e the delay in reply to enquiries. To obtain a detailed analysis, the author had used the Pareto Chart to analyze these causes.

FINDINGS

The major share of enquiries comes from the commercial market: This is where the involvement of the Pre Sales team is the highest, as it involves customization of products and services depending on various project requirements. Hence quotation cycle time is a major factor as this defines the efficiency of the team to meet timely requirements.

There is currently no criterion to rank the incoming enquiries: This establishes that there is no enquiry logging in the system. It is important to segregate potential enquiries and prioritize them, which does not happen with the current system. Due to the lack of such a system, it is currently not possible to calculate an average quotation cycle time. Furthermore there is no clear procedure to transfer the enquiries to the presales team.

Manual Quote Preparation: The presales team generates quotation manually with the help of MS Excel. This is the main reason for increase/delay in quote preparation. Each team member has to type a quotation by entering the model no, price and details manually.

The team does not have complete access to the inventory levels: The system stock levels does not always match the actual physical levels .This creates discrepancy in the information passed on to the client .Lack of bar-coding of products is the major reason for such a mismatch.

Lack of Design Software's and upgraded system: According to the Presales team they don't have an access to Software's like AutoCAD or Ease draw .Their current laptops haven't been upgraded for a very long time and are inefficient.

Client Duplication: There is no system currently available to monitor Client duplication.

RECOMMENDATIONS

An enquiry logging-in mechanism.

Every enquiry coming in through any channel should be recorded prior to having sending them to the Presales team for further action. This would help the team to prioritize and respond to enquiries accordingly. It will also help in tracking the enquiry in and out time and hence the quotation cycle time.

Upgradation of Orion /Implementation of an ERP

Quotations can be generated with the help of such a system and these can be further linked to the orders received. It would not only determine the success rate, but also would help in processing a Sales order and thus creating an Invoice, all from the same database. It would also help in enabling a bar-coding system .From the

logistical point of view this would ease the delivery process and also reduce the stock mismatch due to wrong deliveries.

Access to Design Software's

Software's like Autocad and Easedraw should be available to all the team members. This would not only save time, but also would increase accuracy and efficiency for the services they provide. Showroom Customers to be handled by Sales Team

This would help the Pre Sales team to save time and to concentrate on their regular activities without being distracted by clients that come to the showroom directly.

CONCLUSION

Based on the analysis of the process and procedures at V.V & Sons it is understood that the company should change from a traditional process centric approach to a technology-leveraged approach. Implementing Six Sigma in each and every department will ensure continuous improvement and subsequently helps in attaining maximum customer satisfaction. By adopting this systematic approach will definitely have an impact in cutting costs and improved quality.

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Time Consumption	Ranking	Contribution (%)
Quotation Preparation	48	40.00%
Design Approvals	31	65.83%
Inventory Information	21	83.33%
Price from Suppliers	20	100.00%

Pareto Analysis on Time Consumption of Pre Sales Team

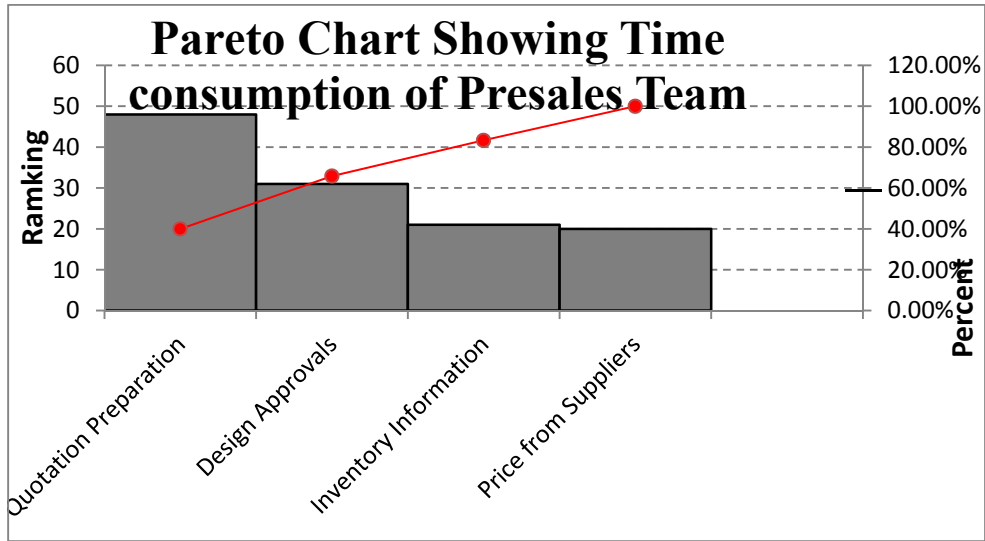


Fig. 1 Pareto analysis

Fishbone Diagram:

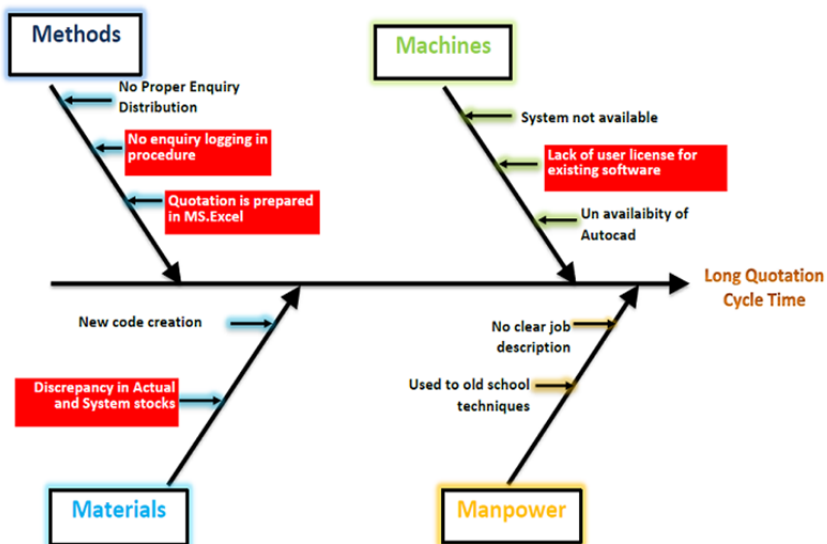


Fig. 2 shows the cause and effect diagram

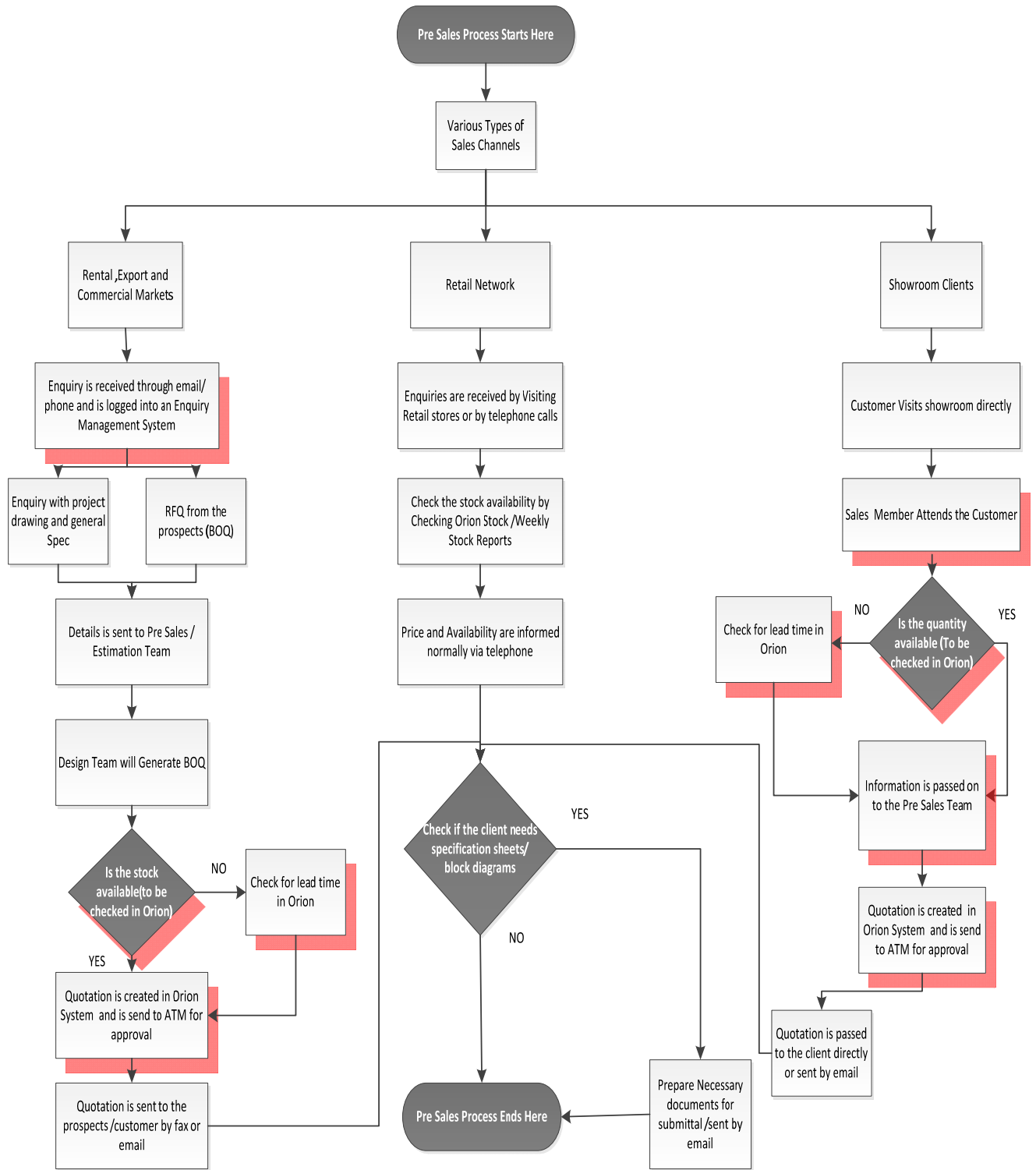


Fig. 3 Pre- sales process mapping (TO BE)

A Study On The Problems Encountered By The Women Expatriates In The It Industry

Pawline.M,
PhD Research Scholar,
Mother Teresa Women's University,
Kodaikanal, India

Selvadurgadevi Kandavel,
PhD Research Scholar,
Barathiyar University,
Coimbatore, India.

Abstract

Today's world has started talking much about the problems faced by women. Especially women working in foreign countries from their home countries known as expatriates are facing a lot of problems due to various reasons. Though there is an increasing trend of women going abroad, the reluctance in sending a number of female expatriates abroad is relatively lower than men. No working environment is pressure-free and jobs in IT are no exception. Once an expatriate assignment is offered or accepted to work for an IT Industry, a surfeit of obstacles falls on the female executives, and their family and their newest balancing act begins. This is when the female expatriate must work hard to avoid the true work- family conflict, as well as financially balancing the household (had they formerly been dependant on dual incomes). In our gender stereotypical world as our Indian environment can sometimes be, having a male trailing spouse, especially a stay –at home father, could prove to be difficult in many cultures. Local support for stay at home males in many countries, may be next to non -existent, adding to the male trailing spouse's ultimate frustration with the international assignment, and he may ultimately wish for things to be the way they used to be. Although vastly improving, there are still many obstacles which female executives must overcome in order to ultimately reach a position which would enable them to go on international assignment. This paper reports the various problems that the women expatriates have been facing till the present trend.

Keywords: IT Industry, Women Expatriates, Problems Faced by Women.

INTRODUCTION

Starting at the end of 20th century, globalization created global market for skilled professionals when the Inter Continental travel became low. Employers did not find skilled labour in local market and this led to the Global recruitment. An expatriate relocating to another country for an international assignment often faces a variety of difficulties. These difficulties may compromise the international assignment especially if the expatriate feels isolated and alone in the host country (Hayes, 1996; Melles, 2002; Moss, 2000; Selmer, 2001). Adjustments to a new country can be difficult especially when familiar things the expatriate have come to know his/her life are no longer the same in the host country. Culture is one of the most important contributing factors to adjustment

and the expatriate's feelings of isolation (Hayes, 1996; Thompson, 1992). Women expatriates face the extra challenge of overcoming the host culture's perception of female roles on top of the differences in culture (Cook, 2000; Grove & Hallowell, 1997). It can be quite difficult for a woman expatriate to compete in a position in which have been historically dominated by men.

From the above chart it is well evident that the highest percentage of expatriates outside the country is the United States. According to the UN statistics, more than 232 million people, that is 3.2% of the world population, live outside of their home country in 2013. In terms of influx of expatriates, among the most popular expatriate destinations are for several years Germany, Belgium, France, Spain and Russia in Europe, Canada and

the USA in North America, the UAE, Qatar and Saudi Arabia, Singapore and Hong Kong in Asia, Australia and New Zealand, as well as South Africa which is the most popular expat destination in Africa and among the top five countries for raising children. In Dubai the population is predominantly expatriates, from countries such as India, Pakistan, Bangladesh and the Philippines, with only 20% of the population made up of citizens. Singapore as well has a large number of expatriates and almost 40% of the inhabitants of the metropolitan city are foreign-born workers or students. Statistically speaking, today's average expat woman still finds herself in the role of the "trailing spouse" (or, to put it in less old-fashioned terms, "traveling partner"), following her husband abroad and taking care of the children while he is at work. Only some of them keep on working during their time abroad, due to visa issues or the additional work load of their husbands. Even though many expat women have had a successful career before their move, their general responsibilities have not always changed that much.

WOMEN'S ROLE IN DIFFERENT COUNTRIES

Basically it is difficult for Corporations to understand and accept women employees' in business. Women recently started playing a vital role in international business. However, the role of women is not equal to that of men even today. The role of women in economic activities varies from country-to-country. For example, In Saudi Arabia restrictions on women's freedom to move around make it difficult for women to work. Women are not permitted to work with men in Saudi Arabia. For example, women are not permitted to drive, to travel on an airplane alone, or to stay in a hotel without a male family member. Traditionally women in Japan worked in lower paid and lower level positions. University toppers are also appointed for clerical jobs. Japanese Government in 1986 passed Anti-discrimination legislation prohibiting discrimination based on sex. Now the position is improved and women are treated equally with men in government

and public sector organizations. However, the traditional role of woman looking after the family after marriage is still accepted. In Japan women seldom work after marriage; consequently, women are unlikely to progress far within organizations. In the US, women have attained a degree of equality in business, but they are seldom found in top management positions. Japanese Culture motivates the employees to work in a team and carry along with the group which results in synergy. This in turn enhances the employee productivity. On the other hand, the culture of the USA and European countries makes the employees to work individually and as such deprives the benefits of synergy. Hence, the productivity in Western industries had been less than that of Japanese. In Ireland, the constitution has been interpreted to mean that a woman should only join the workforce if her husband is not able to look after the family economically. In St. Vincent, a West Indies inland country, the minimum wage for women is lower than for men, regardless of the work performed. In Canada, the great majority of nurses and secretaries are women while the majority fire fighters, construction workers, and foresters are men. In the People's Republic of China women hold many of the same positions as men, but they are required to retire at an earlier age. Ramachandran (1992) gives the example of the role of women in parts of India: in Rajasthan, when a social work organization wanted to establish a hospital for women, there was a great deal of hostility and resistance. The village men could not understand why so much fuss should be made over women; they insisted that what they really needed was a hospital for their farm animals.

In Bahrain women are educated and are given equal opportunity. But they are discouraged from seeking employment. Steps are taken to encourage women employment in Oman. In Hong Kong women are found in all organizational levels. They are effective business people. Mostly women are in secretarial positions. In Malaysia, though equal opportunity is given to women, they normally do not enter business. In Singapore women employment is quite common. 80% of the

women workforce is in the age group of 10 to 24 years. Professional women are in government service. However, they play subordinate role to men. In South Korea women rarely enter business. The prospects for their advancement are slim. Mostly they are employed until the age of 30 or till they marry. In Thailand women are seen as "the hind legs of the elephant"-powerful but following-and are in subordinate positions. However, some women hold top positions in government and private business. In People's Republic of China almost all women work. The Government provides extensive educational facilities for women. Women in China work in scientific profession and governmental organizations also. In European Union the situation varies from country-to – country. Women in Denmark get 32 weeks of maternity leave while women in Greece get 15 weeks and in Spain 16 weeks. Most of the European countries, at least, are attempting to promote equal opportunities for women. USA and Canada: Situation in the USA and Canada is better compared to women employment in almost all the other countries in the world. Discrimination based on sex is prohibited in both the countries. In Africa, women mostly confine to domestics activities. It is necessary for the international business managers to understand the role of women in economic activities and in business in various countries they operate. Various issues in employing women need to be considered. Apparently, women in some places, even do not see the men directly when they transact with them. Absences of women at the top level is due to Past discrimination, On-going discrimination, Lack of interest on the part of some women, Shortage of women with required educational qualifications and training.

OBJECTIVES

To explore the problems faced by the women expatriates in the IT sector.

NEED FOR THE STUDY

Among expats sent on foreign assignments, international women are still "the odd man out". In many surveys, women tend to be associated with personal

skills which are considered conventionally "feminine". Among the various skills, the following are usually perceived as useful for cross-cultural competency: flexibility, sensitivity, and empathy. However, despite those much-vaunted skills attributed to international women in expat careers, the actual number of women deployed by their companies has slightly decreased. Global companies after selecting the candidates, place them in various countries, mostly in foreign countries. Thus the employees of the global companies (MNCs) mostly work and live in foreign countries with or without their family members. Though the expatriates are treated as the assets of a company after the 20th century, studies have proved the sustainability of women in the international assignments or even obtaining a foreign assignment due to various problems (*Adler, 1984*), specially in the IT sector. This has paved way for the need of the study. The study will make an attempt to encounter the problems faced by the women expatriates in the IT Industry.

THE INDIAN IT SECTOR

The Information Technology Industry of India dates back to 1967 when the Tata Group in collaboration with Burroughs set up the first software zone, SEEPZ in Mumbai. Since then, the IT sector of India has grown by leaps and bounds and has acquired India a brand name in the IT and ITES (Information Technology Enabled Services) sector in the global scenario. Information Technology (IT) is the application of computers and telecommunications equipment to store, retrieve, transmit and manipulate data often in the context of a business or other enterprise. The Indian IT market currently focuses on providing low cost solution in the services business of global IT. Presence of Indian companies in the product development business of global IT is very meager, however, this number is slowly on the raise. US giants that outsource work to India, do not allocate the high end SDLC (Software Development Life Cycle) processes like requirement analysis, high level design and architectural design, although some Indian IT players have enough competency to take up and

successfully complete these high level software jobs.

The major hubs for the IT export sector are Bangalore, Chennai, Hyderabad, Delhi, Mumbai and Kolkata. Bangalore has earned the sobriquet, 'The Silicon Valley of India' owing to the maximum IT export (generating 77% of the net IT export revenue of India). The IT- ITES sector can be broadly classified into two categories (i) Business Process Outsourcing (BPO) and (ii) Domestic and IT export. The growth in the BPO sector under the supervision of the IT-ITES sector has been phenomenal. According to NASSCOM, "The IT-BPO sector in India aggregated revenue of US\$ 100 billion in FY 2012, where export and domestic revenue stood at US\$ 69.1 billion and US \$31.7 billion respectively". The industry is also an employment intensive sector.

According to a report prepared by Gartner, the top five outsourcing companies of India are TCS, Cognizant, Infosys, Wipro and HCL Technologies. The other prominent trend is, IT jobs, that were earlier confined to Bangalore, are slowly starting to experience a geographical diffuse into other cities like Chennai, Hyderabad and Pune. The growth is not fast paced, this, can be largely attributed to the lethargic attitude of the government in providing proper telecommunication infrastructure. The information technology in India is looking towards a bleak future in general in the current year. However, small sparks of encouragement are there. Andhra Pradesh, ranking as the fourth largest IT exporter of the country is being severely affected by power supply shortage which is naturally slowing down the development of the state's IT sector. It is to be mentioned here that Andhra Pradesh accounts for 12% of the total IT export of India and the turnover for 2012 was RS53, 246 crore. Hyderabad is in a little better position as it has been proactive in changing its infrastructure to keep pace with the changing face of the global IT export scenario. The Recession period, the free fall of rupees against dollar compounded with other factors has resulted in a severe decline in the hiring process of the IT sector. The employment

generation capacity of this sector has shrunk considerably. IT professionals including ex- IT sector employees are now seeking employment in financial services, telecommunications and manufacturing industries which have recently witnessed a phenomenal growth.

REVIEW OF LITERATURE

Women in today's organizations are key players; still there is a great need for a fundamental change. Many women still face barriers when seeking to advance in the organizations especially in the IT sectors caused by a combination of factors like gender bias, lack of buy-in, work life balance pressures, lack of opportunities and the lack of networking.

It may be the negative perceptions of managers at corporate headquarters that discourage them from selecting women for expatriate assignments. (*Pail and Vance, 2002*). A Competent Woman may not have her capabilities recognized or rewarded to the same degree as a man with the same talents. (*Caligiuri and Cascio, 1998*). Male colleagues, Superiors and subordinates might outwardly *derail a woman's drive for success*. When the more powerful positions in organizations are filled almost exclusively by men, firms' standards for success are likely to reflect characteristics stereotypic of men. (*Roper, 1996*)

Reluctance to select Women was based on : Traditional Male Chauvinism, greater risk involved in sending women with no overseas track record, and the paucity of women with sufficient technical training and domestic managerial experience to qualify for high level line management positions overseas. (*Adler, 1984*)

The list of key dimensions of culture includes performance orientation, assertiveness, future orientation, time orientation, humane orientation, in group-collectivism, gender egalitarianism, power distance, uncertainty avoidance, and work orientation. (*Hofstede, 1984*) Women are not treated on an equal footing with men in key assignments, including international responsibilities, negotiation roles,

managing multiple functions, and key business units. (Ohlott et al., 1994)

Unsuccessful expatriate adjustment, personally, by the family, or in terms of inadequate performance, Leading to early repatriation, have been commonly reported in US studies in particular. (Black and Stephens, 1989; Mendenhall and Oddou, 1985).

(Adler, 1984b) reported that in the early 1980s, women filled only 3% of the open expatriate positions. According to (Westwood and leung, 1994), women were viewed as the minority in corporations for two reasons, their gender, and being a foreigner.

Changing demographics are contributing to the increased need for expats worldwide. To sustain projected growth, the U.S. alone needs twenty-five million more workers by 2030, Europe will need twenty-four million more workers," and by 2020, China will need to double its talent base to sustain projected growth, according to the World Economic Forum.

According to Price water house Coopers, the number of international assignments will increase by 50 percent by 2020. Women comprise over 40 percent of the employable global workforce, yet only 22 percent of all expatriate roles are held by women (Sapna Welsh and Caroline Kersten, 2014). In spite of the rapid increase of global activity and expatriate assignments, existing researches have still identified the slow growth of the female expatriate population due to several problems faced by them, especially, once they are placed into the foreign countries.

THE PROBLEMS EXPATRIATES ENCOUNTER IN FOREIGN COUNTRIES

There are many reasons why women expats face a different set of challenges than men do. While expat situations for women vary greatly, there are some common issues with which all can identify. Being aware of these known issues is a source of power for women, because in the end, it is up to each individual to discover the inner strength to find ways to create a positive and satisfying life abroad.

CULTURAL SHOCK

Culture shock is a phenomenon that involves an emotional disorientation that a person suffers when he/she moves to a foreign land where he/she is unfamiliar with the new environment (Caudron, 1992; Hayes, 1996). Culture shock involves the abrupt loss of the familiar, resulting in a lost of identity and feelings of isolation When an individual enters a strange culture, most or all of the familiar cues he/she has lived with all his/her lives are removed (Gordon, 2003; Kitsuse, 1992; *Living with and Avoiding Culture Shock*, 2003; Phillips, 1993). The lost of these cues make the individual feel like a 'fish out of water'.

Often when a person moves to a foreign country there is a period of excitement when everything seems new and challenging. In the beginning similarities between cultures are more apparent than differences (Hayes, 1996; Selmer, 2001). Everyone seems to have the same routine and lifestyle (Kitsuse, 1992). It is not until this welcoming period ends that the newcomer begins to realize that there are endless subtle differences that leave him/her with problems. For example, in China subtle differences exist that may frustrate the expatriate because it is not common practice or even frowned upon in his/her culture (Atkins, 1996; Tan 2002). (Bapat, 2000) notes that in certain countries like China, fair skin is a sign of beauty and dark skin is looked down upon.

(Gordon, 2003) notes that victims of culture shock may behave in many extremes. He/she may give up his/her own identity and try to imitate all customs and attitudes of the host culture, or solve the problem by regressing into a shell and refusing to learn the local language and befriend people of the local culture. The latter individuals may only seek and befriend other expatriates, or individuals with similar cultures to themselves. They will usually seek out other expatriates to provide them with supportive network while at the same time complaining about some of the strange behaviours locals partake in without any real effort to understand (Crookes & Thomas 1998; Hayes 1996). This may result in friction between the

expatriate and the locals, and ultimately lead to the failure of the international assignment.

LANGUAGE

For expatriates, language differences can become a problem during business transactions, where it is important to have clear communication (*Dolainski, 1997*). Business relationships are built upon trust, the expatriate who cannot speak the local language will find it very difficult to demonstrate his/her credibility to local colleagues and/or clients. If the expatriate's credibility cannot be demonstrated, the locals may never let him/her to become part of the group. It reinforces the 'us and them' concept, which can compromise a joint venture that depends on trust and good faith (*Mead, 1990*). Language also becomes important outside of the business relationships. Expatriates have to deal with other people apart from business associates.

Learning a language may help expatriates to see things from a foreign lens (*Webb, 2003*). (*Odenwald 1993*) argues that language training should be included in the HRM and development and training from the initial stages. Language training is necessary on top of cross cultural training. Support for language is needed both before and during the assignment (*Phillips, 1993*). It can provide insights into the country's culture

SAFETY

This is an issue for all women everywhere, but of course it plays a more prominent role in the lives of single women, and more so for single women in a foreign country. The challenge is to find a balance between exuding self-confidence and taking sensible precautions. One major factor that leaves a person vulnerable in any situation is unfamiliarity, so being as perceptive to one's surroundings as well as to the general cultural atmosphere as possible is one of the best precautions that a woman can take. Learning such details as which streets and which neighborhoods are safest is one aspect of safety, while taking a wider view of a place's history, culture, and current social issues is

important for putting things into proper perspective. Learning the language is another very important key to knowing what is going on around oneself. And networking with other expats as well as locals in the community – especially with women – will be invaluable to feeling safe and secure in a foreign country, as this is the best way to get a grasp of what the crime situation is really like on the ground and find out how best to avoid being victimized.

EL MACHISMO

Women should prepare themselves for being perceived and treated differently than they may be used to when they enter into other cultures. Cultural attitudes are complex and often contradictory creatures, and it is difficult to overemphasize the importance of realizing how different these cultural attitudes are. Do not assume, for example, that the fact that Argentina's president is a woman means that women in general have achieved equality or are given the same kind of respect that men are given. The objectification of women's bodies is productive in that country, from the bountiful images of topless women at every magazine stand to the way women appear on television to the constant barrage of perfect, youthful bodies in advertising. Many men see a woman who is unaccompanied by a man as fair game for catcalls and sexual advances, and the notion of chivalry is alive and well, at least in their minds. Learning to ignore the unwanted attention as well as asserting strength and capability would be among the coping skills that women new to this kind of machismo culture might need to attain. Again, networking with other women can be an invaluable aid in this regard. It should be stressed that understanding the unspoken rules of dress and conduct is the responsibility of the woman in these kinds of societies, and failing to learn the boundaries and follow the rules could be dangerous for any woman, particularly a foreigner. Pushing the boundaries or trying to make a point about how wrong it is that women are held responsible for the urges and actions of men should be left to people who come from within these societies, not attempted by foreigners unless they have become immersed in the society. Such

cultural attitudes have persisted for a thousand years and will have to evolve from within.

STRESS

With considerations such as the above, it is no wonder that women find expatriation to be more stressful than men do. Several other factors also play into this reality, having to do with the woman's fundamental role in the family. Women are the nurturers, whose concern is the health and well-being of her family. Therefore, much of the stress and difficulty that the children in the family go through when they are moved abroad falls into the lap of the mother, who must help them adjust to their new surroundings (especially if her spouse is busy at the job assignment that was the reason for the expatriation – a situation that will be covered in more detail in the next installment of this two-part series). Meanwhile, of course, she is going through the adjustment process, herself. According to reporting from the US-based Interchange Institute, it is mothers with teenagers who have the most difficult time adjusting, which, considering the nature of teenagers, is not surprising. What is more interesting is that mothers of younger and adult children reported doing better than women with no children at all. This punctuates what many parents have discovered for themselves, the fact that children, as long as they are not in the throes of all the crazy hormonal changes that drive teenage angst, often serve as an engaging factor, forcing their parents to interact with the community through school and other social activities that children need in their lives.

CONNECTION

Women generally not only need connection with their own families, but they also tend to be more in need of feeling that they are connected with a community. Therefore, overcoming all of the urges that might cause someone to perpetuate their isolation – fear of the unknown and insecurities about being different and not fitting in – can be a major challenge for many expat women. This is yet another reason why language learning is such a big help to women in particular, and this fact is born out in the report. One of the most

common pieces of advice given by participants was to study the local language. This, of course, will facilitate engagement in the community, make taking care of tasks less frustrating, and help to alleviate those feelings of isolation. A great tool for expats to find connection, in several different respects, is blogging. This is for anyone who wants to share their experiences, photos, recipes, etc, but the more I explore the internet in search of expat blogs, which are an excellent way for potential expats to gain some valuable insight into the expat experience, the more I find that the expat women bloggers outnumber the men by quite a bit. Many bloggers say that they began their expat blogs in order to continue sharing their lives with friends and loved ones back home, letting them know how they are doing and showing off what this foreign country is like – staying connected. A secondary effect that often results is becoming connected with others – expat bloggers, expats, potential expats, people who are interested in this interesting lifestyle choice, and many other pleasant surprises. Another kind of connection will occur via the act of recording one's experiences, impressions, and thoughts about a place. Keeping alert for things that will be of interest to write about or take photos of; learning about the history and culture of a place; exploring – all of these are ways of heightening one's awareness, which in turn, leads to feeling more comfortable in surroundings that are more closely examined. Blogging, keeping a diary, or writing about one's experiences in any way is always connective and can also be therapeutic, helping one to sort out their feelings and find their way through the fog of the unfamiliar.

RECOMMENDATIONS FOR WOMEN EXPATRIATES

There are a few recommendations companies can do to alleviate the quoted difficulties in the study. First, do not assume that foreigners will treat female expatriates the same way they treat their women (*Grove & Hallowell, 1997*). A culture might seem very different from that of the home country but these are not safe indicators of a woman expatriate's success there (*Adler 1995*). Include competent

women in the short lists for expatriate assignments everywhere in the world; some indeed may possess a competitive edge (Grove & Hallowell 1997).

Women must be given every opportunity to succeed. Accord her full status at the outset – not which is of a temporary or experimental expatriate, with the appropriate title to communicate the home office's commitment to her (Hodge, 1999). Sending women abroad is new and is perceived as risky, it is still poorly understood. Foreign managers and companies are operating on the basis of untested assumptions, many are faulty but they may not be on the basis of prejudice (Meckman 2002).

Women who move abroad sometimes face safety concerns they did not necessarily have to deal with at home. Going for a walk alone or wearing usual attire may suddenly become problematic. Inter Nations provides you with safety tips, as well as advice on dealing with risky situations. Embassies and foreign offices often list a number of safety tips for women who are traveling or living alone abroad. The most common of these tips are as follows:

Imitate local women's dress codes. If you are unsure about what kind of clothing to wear, dress conservatively.

Don't walk alone at night.

Don't hitchhike, and don't use unlicensed taxis.

Know where you are going (carry a map, a business card of your hotel with directions, etc.).

Refuse unwanted advances politely but firmly. Repeated references to your husband or fiancé might help – even if he's fictional.

Wearing a wedding ring might be a good idea, too – including a fake one. Avoid ostentatious and expensive jewelry, though.

Don't use recreational drugs.

When you go out, don't leave your drink unattended.

Try to avoid leaving a venue with a stranger you have only just met.

Don't give out personal details, e.g. your address or the number of your hotel room.

Be aware of local gender roles and different "dating rules" abroad. No matter where you come from and where you go, foreign women are often perceived as "exotic" or "easy", regardless of your actual appearance and behavior.

Remember that women have certain advantages over their male colleagues. Foreign executives are often curious about the professional woman, and one can turn this visibility factor to one's advantage. Women are also better at building interpersonal relationships compared to their male colleagues that may greatly benefit them in the business venture (Grove & Hallowell, 1997).

CONCLUSIONS AND DISCUSSIONS

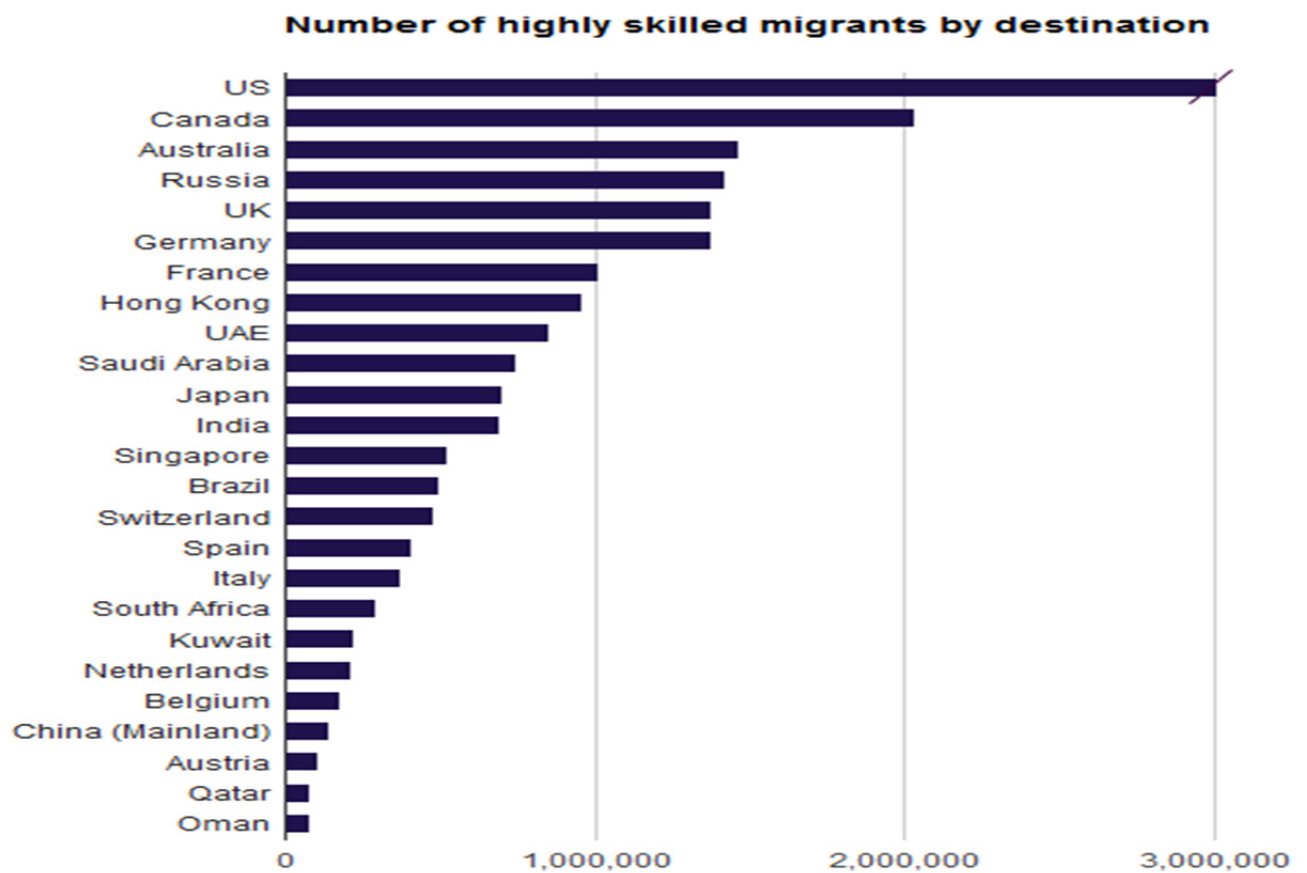
There are a variety of considerations for the female expatriates going to various foreign countries. The study reveals that women have been having their own defensive strategy according to the culture of the host country. Cultural indifferences and work life balances has been explored as the basic influencing variable towards the main study. The study also has quoted that women have been facing various problems abroad especially in the IT industry, which include corporate attitude, sexual harassments, women positioning in the corporate, gender stereo typing, cultural shock, Stress etc. The limitations of the study include the non compliance of the primary questionnaire from the women expatriates spread all around the world. Being victims of the dominated society in the host country has brought women into the scenario of economic drives towards their home country. In conclusion, this topic has paved way to explore some of the problems that we ourselves may encounter when we become expatriates on an international assignment in other countries.

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Source : www.justianded.com, OECD: International Migration Outlook 2011

Impact and Challenges of Merger and Acquisition: A Case Study on NIC Asia Bank, Nepal

Dr. J K Raju, B.E., M.B.A., PhD.
Associate Professor,
Institute of Management Studies,
Davangere University, Davangere
drjavaliraju@hotmail.com
Contact Number: +91-94482 33388

Miss. Shruthi Prakash
Faculty & Research Scholar,
Institute of Management Studies,
Davangere University, Davangere
Email ID: shruakki4528@gmail.com

ABSTRACT

After the Nepal Rastra Bank implemented the Merger Bylaws Policy in 2011, Nepalese Market was able to observe increasing trend in Merger and Acquisition in Banking and Financial Institutions (BFIs) of Nepal. Therefore, this paper presents the reasons for opting merger activities among BFIs and also focuses on the post-merger impact to the employees, customers and shareholders of the merged bank. The research method used in this paper was descriptive research which implies the results based on the survey and the analysis. The impact on employees and customers were analysed through questionnaires whereas the impact on shareholders were observed through analysis of financial data of merged bank in 2 years of pre and post-merger phase. The results showed that employees were satisfied with work, wages, working conditions etc. but they were intensely impacted in the HR issues like cultural clash, positions issues, socialization, favouritism etc. The customers felt the changes in value, product and service in post-merger phase but required more innovative service. The overall financial data showed that bank had improved a lot in post-merger phase hence increasing the shareholder's wealth. The challenges were observed in swap ratio, formation of BOD, structure of management team, HR issues, IT issues etc. Therefore, M&A was a must in Nepalese market for changing the poor performing BFIs into strong and credible institutions. The BFIs should consider the socio-cultural factors along with procedural and physical factors for merger. They should also involve with expert or investment banks for full-fledged merger advisory service to avoid the delay and cumbersome process of merger observed in Nepal.

Key words: M&A challenges, employees, customers, shareholders

INTRODUCTION

The history of Merger and Acquisitions began long before early 1900s. This period of time covers six main waves of M&A for the past 100 years and these are those of the early 1900's, 1920's, 1960's, 1980's, 1990's, and 2000's. In the past decades, M&A activities have increased rapidly and come to a light since 2000 when Asian market started following the trend of U.S and Europe to cope with the downturn of economic and financial markets that began in 2000. Emerging countries such as India, China, South

Korea and some ASEAN (Association of Southeast Asian Nations) nations entered into the M&A activity as new major players in global market. Besides, cross-border M&A became an instrument to pursue a business growth in global markets.

According to Shrestha (2012), the concept of M&A was an entirely new thing to the Banking and Financial Institutions (BFIs) of Nepal when the Nepal Rastra Bank, supervisory and regulatory body of all the BFIs has issued merger by-laws in May 2011. However, many had doubts that the BFIs would go for merger immediately

as there were no separate acts and verdict for a merger implementation. The objective of the merger by-laws is to strengthen the BFIs position and performance by reducing the number of institutions. The merger bylaws have a provision that can pressurize all BFIs to go for an immediate merger in the form of consolidation.

The Nepalese financial sector has witnessed a tremendous growth in the number of financial institutions after the 1980's by adopting an economic liberalization regulation with a mixed economic model. However, the unnatural increment of the BFIs has brought several financial challenges and complexities. The financial indicator had indicated that the Nepalese financial sector was weak, vulnerable and, at the verge of a collapse. "Merger is a golden opportunity for BFIs. This facility is floated to reduce the number of BFIs to strengthen them".

In the beginning, the merger bylaws had failed to create immediate impression in the banking fraternity and the merger bylaws in the form of consolidation have gained acceleration over the last two years in 2011 and 2013 when the Himchuli Finance and Birgunj Finance first sparked the merger trend and consolidated to become the H&B Development Bank. The merger bylaws policy introduced by the Nepal Central Bank in the year 2011 has been successful as almost one fourth of the financial institutions have opted mergers. (Singh 2013.)

A lot of speculations have been going on in the financial sector whether the merger policy will be fruitful to strengthen the Nepalese bank and financial institutions. Some positive signals have been visible in the financial institutions as 60 financial institutions including commercial banks, development banks and finance companies have merged forming 27 financial institutions as of July 2014 and

a few BFIs are in pipelines and some have got the letter of intent. This depicts that merger and consolidation has gradually taken place in the banking industry. The goal of this research is to find out the effect and impact of the merger policy adopted by the Nepal Rastra Bank. The research is carried out by analyzing the financial statements of the BFIs involved in the merger activity. A comparison is made between pre-merger performance and post-merger performance of the BFIs. In addition to it, a survey research is conducted by using a list of questionnaires to explore the impact of the merger policy on the employees and customers.

Merger and Acquisition

Mergers and Acquisitions is an important financial tool that enables companies to grow faster and provide returns to owners and investors. According to Ross–Westerfield–Jordan (2003), "A merger is the complete absorption of one firm by another, wherein the acquiring firm retains the identity and the acquired firm ceases to exist as a separate entity". A merger is a corporate strategy usually done between two or more than two companies where acquiring firm and acquired firm stand on a merger agreement. The terms merger and consolidation have been used synonymously. However, the two have different legal identities after the merger deal. In a consolidation, two firms come together to create an entirely new firm. Both the acquiring firm and the acquired firm dissolve their previous names and identity (Ross et.al 2003a, 843). In practice, a merger between company A + company B = company A, where company B merged with company A. In a consolidation, company A + company B = company C, where company C is an entirely new company (Gaughan 2011, 7). "An acquisition is a transaction in which an individual or company, known as the offeror (or acquirer) gains control of the

management and assets of another company, known as the offeree (or target), either by becoming the owner of these assets or indirectly by obtaining control of the management of the company, or by acquiring the shares". Acquisition can be done either by purchasing the stock and/or assets of the target company. A takeover is another form of acquisition which can be used interchangeably. Typically, a takeover is unfriendly and hostile in nature and without the will of target firms. Acquisitions are friendlier where both corporations mutually agree to become a part of one to another.

The Bank and Financial Institutions Act (BAFIA) 2006 broadly guides the classification of the Nepalese financial system. BAFIA categories the financial sector of Nepal into a formal sector and informal sector. Currently, the overall financial system of Nepal constitutes the Central Bank, commercial banks, development banks, finance companies, microfinance development banks, co-operatives, financial intermediaries NGOs and contractual saving FIs. The contractual saving financial institutions are of three types. They are insurance companies, Employee's Provident Fund and the Citizen Investment Trust. Among them, EPF and CIT are owned and managed by the government whereas the insurance companies are regulated and supervised by the Insurance Board.

LITERATURE REVIEW

The motives behind M&A, its impact and increasing trend of M&A in Nepalese Banking and Financial Institution is the main concern for my study. Researcher has collected some article related to those topics.

Bertrand and Zuniga (2006) analyse the impact of mergers on innovation in OECD countries for the period 1990-1999. In contrast to the above

contributions they use data on the industry level. They look at the R&D intensity (spending divided by production level) of an industry. One explanatory variable is the number of M&A in a given industry. Other control variables are included. On the aggregated level they find no significant impact of mergers on innovation. However they distinguish low-, medium-, and high-technology industries. Moreover they distinguish between domestic and cross-border M&A and analyse the impact on R&D for inward and outward mergers. They find that M&A had a positive impact in low technology intensive industries and that this is concentrated on domestic mergers. In medium and high-technology industries domestic mergers reduced R&D investments, while cross border mergers have the opposite effect. Finally it is the target firms which profit from cross border mergers and not the acquiring firms in terms of R&D investments.

Banal-Estanol (2007) provides a paper where merger incentives are influenced by private information about cost or demand parameters in a quantity competition framework. He finds that there always higher incentives to merge in such an uncertain environment and that the 18 welfare consequences are usually less objectionable than in a corresponding deterministic case from an social surplus point of view. Davidson and Mukherjee (2007) present a model where entry and exit is free. In such a context the distinction between quantity versus price competition is not very relevant and usually firms considering a merger will find it profitable and more so than remaining alone.

Mergers and Acquisitions in Nepalese Banking Sector

Bishal Kafle, Wednesday, February 27, 2013

Presently, the Nepalese Banking Sector is facing a huge problem and is in critical

junction. So, in order to cope with this problem Nepal Rasta Bank (NRB) has directed the Banking Institutions to go in the process of mergers and acquisitions. NRB has provided several benefits to the merging institutions. Responding to the benefits presented by NRB, the banks and the financial institutions of the country are opting in the process of merger. In the present Scenario, there are mainly three reasons that forced the Nepalese Banking Sector to go into the process of M&A, liquidity crunch, capital requirement, and open market.

Analysis of Mergers and Acquisition in Banking Sector of Pakistan

Qureshi, Abdul Hafeez; Sharif, Umbreen; Butt, Babar Zaheer; Bilal, Muhammad

Interdisciplinary Journal of Contemporary Research in Business; May 2011, Vol. 3 Issue 1, p1281

This study investigates the effects of mergers and acquisition on the financial performance of Banks in Pakistan. The operating performance, capital adequacy and solvency measures were compared for 3-years pre and post-merger from the financial statements of the HMB (Habib Metropolitan bank) and NIB (National Investment Bank). The results of the study showed that ROA and ROE of HMB did not indicate significant improvement but on average it can be concluded that overall performance of the bank improves as a result of M&A activity. Similarly, the results of the acquisition activity of PICIC, PICIC Commercial Bank and National Investment Bank also indicates the same results that ROA and ROE decreased but other financial performance indicators showed significant improvement during post-merger period.

NEED FOR THE STUDY

The main purpose of this paper is to get insight of the Merger and Acquisition trend in Nepalese Banking and Financial Institutions.

This study helps to know the details about motive behind the M&A and its impact on employee, customers and the shareholders.

The need of the study is to analyze the role of investment banks in M&A advisory.

OBJECTIVES OF THE STUDY

To critically evaluate the Nepal Industrial and Commercial Bank Ltd. (NIC) and Bank of Asia Ltd. merger deal.

To identify the impact of M&A on employees, customers, shareholders, and overall financial markets.

RESEARCH METHODOLOGY

This research is descriptive type. Survey method was used to interpret the primary data collected from respondents using open and closed end questionnaire. Data was analysed and presented quantitatively using Statistical Package for Social Science (SPSS) and MS-Excel in which diagrams such as bar and pie charts from the data were generated. Moreover, content and logical analyses were used to qualitatively analyse the data.

TYPES OF DATA

Both Primary and Secondary data have been used for the study.

Primary data: The primary data was collected by means of general observation, questionnaire and direct interview. The data were collected communicating with employees and customers and branch manager of the merged bank. The details about Merger and Acquisition concept in banking sector

of Nepal were discussed with the officials of Nabil Investment Banking Ltd.

Secondary data; The secondary data was collected from a wide array of research papers, capital market, Journals, Magazines, Books, Websites and company's database etc. The financial data were extracted from the annual and quarterly reports of the institutes. Different Journal and Paper were studied to have the strong knowledge about the subject and calculations for the study.

LIMITATIONS OF THE STUDY

The overall study only covers aspect of merger and acquisition of Banking and Financial Sectors.

The analysing part of the study covers only one merged institute.

The financial data of the bank used in the study may not cover the actual figure of the industry.

Post-merger financial data of the bank is limited to just two fiscal year.

The data collected from the employees and customers of one institute may not be applicable to other institute.

DATA ANALYSIS & INTERPRETATION

NIC Asia bank's merger is first merger between two 'A' class commercial bank in history of Nepal. After the completion of the merger of NIC Bank and Bank of Asian Nepal (BOAN), NIC ASIA Bank commenced its operation on June 30, 2013. "Bank of Asia Nepal" was a relatively younger bank established in year 2007, the other partner – NIC Bank was established in year 1998 and has been recognized for many achievements including "Bank of the Year 2007 – Nepal" by The Banker, Financial Times, UK.

With the merger, NIC-Asia Bank turns into one of the largest commercial banks of Nepal in terms of capital base,

balance-sheet size, branch/ATM network, customer base and employees. The Swap ratio in the merger process was 2:1 ie BOAN shareholders will be issued new share certificates equivalent to 1 share of NIC Asia Bank for 2 shares of BOAN. Existing share certificates of NIC Bank shareholders will continue to be valid.

Impact on Employees

The survey was conducted to analyse the impact of merger of the bank on employees. 50 questionnaires were distributed to the employees out of whom only 30 responded. So this analysis includes the survey of 30 respondents.

The respondents include 3 of age between 18 and 25 years, 25 between 26 and 35 years, 2 between 36 and 45 years and none above 46 years. There were 19 male respondents and 11 female respondents. There were 17 respondents of assistant level, 6 officer level, 1 managerial level and 6 of others positions. Among the respondents 20 had experience of less than 5 years, 8 between 6 to 10 years and 2 between 11 to 15 years. All of the respondents were present at the time of merger process between two banks.

Awareness of merger by laws imposed by NRB on BFIs: From the study it is observed that 86.7 percentage of the respondents of the bank are aware of the Merger By law imposed by Nepal Rastra Bank on Bank and Financial Institutions whereas 13.3 percentage of them are still unaware of such policy. This kind of important policy regarding the BFIs should be known to all the employees of the bank.

Fear of losing job: Out of the survey respondent, 10 percent of them mentioned that they fully agree with fear of losing job, 16.7 percentage tend to agree, 23.3 percentage tend to disagree, 46.7 percentage fully disagree and 3.3 percentage do not know about such. Many

banks when merged layoff many of the staffs, but in NIC Asia all the staffs were retained so most of them do not have fear of losing job.

Co-workers are friendly: Out of the surveyed employees 43.3 percentage fully agree that the co-workers are friendly after merger, 53.3 percentages tend to agree about this and 3.3 percentages fully disagree. This shows that the merger process has been positive regarding the relationship among the employees.

Satisfied with work, wages and working conditions: Among the surveyed employees around 66.7 of them agree that after merger they are satisfied with work, wages and working conditions. Around 33.3 disagree about their satisfaction with work, wages, and working conditions. It proves that the management is able to satisfy the need of employees in the bank.

Relationship of education with challenging work: From the study it is observed that with merger there is more challenging and interesting work for those employees who have completed their education. The work may be same repetitive for less educated employees.

Relationship of experience with leaving job: From the study it is observed that those employees that have the experience in this bank of less than 5 years are thinking of joining any new company compared to those with experience of 6 to 10 years. There is less possibility of leaving job to those who have experience of more than 10 years in that bank.

Implementation of changes in the bank: Merger is the process of drastic change. When employees were asked about if the changes have been implemented well in the bank, 13.3 percent fully agree that the changes have been implemented well, 60 percent tend to agree with the statement, 20 percent tend to disagree with the statement and 6.7 percent fully disagree

with the statement. It is seen that most of the employees feel that the merger is a good decision of management and hence shows the success of the merger in the bank.

Post-merger experience of strategies and policies: The employees were mostly positive towards the post-merger strategies and policies. They experience it in positive manner. 10 percent of them say it was very positive, 63.3 say it was positive, 3.4 say it was negative and 23.3 are indifferent towards it.

The other impacts felt by some of the employees in bank are communication, changes in organizational dynamics, cultural amalgamations, exchange of best system, new working culture, work force diversity, better R&D as positive impacts and informal relationship, nepotism, favouritism, corporate cultural clash, too much competition for personal growth and career development, higher responsibilities for career development, more challenges, no promotion, stress, higher level job dissatisfaction, position issues, collusions in managerial level, cultural complexity, lack of value to accommodate interest of all staffs, lack of firing management, groupism among staffs, ambiguity among low level staffs, fear of losing job, low motivation and zeal to serve the bank, HR issues, adjustment problem, pressure to handle heavy rush of merged entity, socialization as negative impacts.

Some of the suggestions provided by the employees toward the bank to improve the impact of merger on them are staff mingling activities to be more frequent, HR counselling and effective system to be implemented, more focus should be towards work, requires initiative to excel, incentives to be provided, new job dimensions and career oriented thoughts, larger hearted management that can accept criticism positively, change of

environment, revision of policies and ambiguity over internal procedure and policies, staffs should be properly educated in this manner, study of all the aspects of M&A is necessary, various training and development and socialization process to improvised HR issues.

The overall survey of the employees shows that they are satisfied with the merger decision of the bank. They are satisfied in terms of wages, working condition, co-workers, strategies and policies, changes etc. But in regard of HR issues the bank is lacking ways behind. Employees find it difficult to adjust in changed situation. Although the bank has been so far seen as successful it really needs a lot of improvement regarding human resource management. Counselling of each employee is needed and their suggestions should be considered.

Impact on Customers

The survey was conducted to analyse the impact of merger of the bank on customers. Out of 50 questionnaires distributed only 26 responded. So this survey includes the interpretation based on 26 respondents.

Demography of customer respondents with percentage: The study shows the overall percentage of the surveyed respondents based on various demographic factors like age, gender, type of bank account, and years of service received from bank. Out of 26 respondents there were 16 of age between 18 to 25 years, 6 between age 26-35 years, 3 between 36 to 45 years and 1 above 46 years. There were 13 male and 13 female respondents. There were 4 respondents having current account, 20 with savings account and 2 with fixed deposit account. There was 1 customer having account since 1 year, 13 having account since 1 to 3 years, 5 between 3 to 5 years and 7 with more than 5 years.

Awareness of the merger in the bank: Among the surveyed customers 73.1 percent know about the fact that the bank is merged one, remaining 26.9 are unaware of this fact. It shows that many customers still do not follow the corporate activities occurred in their bank. Since merger is the major activities customer should know about such fact. Bank also should make their customers aware.

Experienced any changes in value, products, service and reputation of the bank: Among the surveyed customers 61.5 percent experience the changes in value, products, service and reputation of the bank. Remaining 38.5 do not experience any changes. Bank is still not able to cater differentiated services to its customers.

Customer service is fast and caring: The customer felt that post- merger customer service is fast and caring. 19.2 percent fully agree with fast and caring service. 53.8 percent tend to agree with this statement. 3.8 percent fully disagree and 23.1 do not know about this. So bank seems to have better customer service after merger.

Increment in service charge and interest for loan/borrowing: The customers believe that bank has increased service charge and interest for loan/borrowings after merger. 3.8 percent of the customer fully agrees about increment in service charge and interest on loan. 53.8 percent tend to agree, 11.5 percent tend to disagree, 30.8 percent do not know about this. Bank should try not to impact hugely on customers in interest and charges.

Adoption of new technology: The surveyed customers feel that the bank has adopted new technologies in the bank after the merger. 19.2 percent fully agree with it, 53.8 percent tend to agree with it, 7.7 percent tend to disagree with it, and 19.2 percent do not know about this. So the bank seems to have implemented changes well regarding the technology.

Has banking M&A restricted competition and created monopoly: Among the surveyed customers, 26.9 percent believe that banking M&A has restricted competition and created monopoly but 73.1 percent and majority of them do not believe that it has created monopoly rather they see it in positive manner.

Relationship between age and treatment of customers by staff: The surveyed customers feel that the staffs of the bank treat their customers fairly and evenly. Most of them tend to agree about the fair treatment.

When customers were asked to provide any specific changes in the policies and regulations they have noticed after Merger activity, some of them responded in matter like the bank has focused on the customer satisfaction and reputation of the bank, the way to treat to the customer is appreciable, security has been tightened, Merger raises additional funds that leads to huge investment and provides opportunity to shareholders maximize their wealth. Some of the customers also suggest that the bank should offer new services, service charge should reduce and new marketing policy should be adopted by bank.

Impact on shareholders

The impact of merger activity of the bank to the shareholders is analysed based on various financial indicators. These financial indicators are important for shareholders to analyse the bank for investment purpose. The indicators are extracted from the balance sheet, income statement and ratios published by the bank on annual basis. Some of the important indicators are mentioned below.

Paid up Capital

The amount of a company's capital that has been funded by shareholders is known as paid up capital.

The study clearly depicts that the bank has increased its paid up capital in post-merger phase. When two banks get merged combined paid up capital increased. The Swap ratio in the merger process was 2:1 ie BOAN shareholders were issued new share certificates equivalent to 1 share of NIC Asia Bank for 2 shares of BOAN. Existing share certificates of NIC Bank shareholders will continue to be valid.

RESERVE AND SURPLUS

Reserve means certain amount taken from the profit and loss account to meet the sudden losses due natural calamities or to pay the premium to the shareholders when profits are insufficient. The excess of income over expenditure is known as surplus.

The reserve and surplus has increased tremendously after the merger. It shows that company has created more reserves out of the profit which has increased. Reserve may be used to meet any unexpected situation or also sometimes to distribute bonus share. So its increment may be beneficial to the shareholder.

Total Assets

Total Assets is the combination of all the assets of the bank that includes fixed assets, current assets, loan given etc. Total assets of the bank are also the combination of shareholder's fund and debt of the bank.

The study shows the increment in total assets of the bank. This may be because of the increment in physical properties of both the banks, loan provided to customers etc.

Net Profit

Net profit is the difference between the revenue and expenses of the bank. The major revenue for the bank is interest

income and major expenses are interest expenses.

The study revealed that bank has rapidly increased its net profit in post-merger phase. The increase in net profit in the year 2012-13 is 64% from the year 2011-12. This clearly shows the success of the merger for that particular bank. The existing shareholders are satisfied and new shareholders want to be part of the bank.

Earnings Per Share

Earnings Per share is the ratio of Net profit of the company divided by number of outstanding shares. It is the earning a shareholder can have per unit of his shares.

EPS = Net Profit / Number of outstanding shares

The EPS has grown rapidly in year 2012-13, that is immediately after the merger due to increase in the net profit. It has declined in the following year after that.

Market Price per Share

Market price is the privilege price of the shares in the stock market. It is the true value on the share of that particular bank. It is based on the trading price by the shareholders.

The market price of the NIC Asia bank has continuously gone upward. The increment in the price is beneficial to the shareholders.

Price/Earnings Ratio

The price earning ration is the ratio of market price per share by earning per share. It shows how many times the market price is over the earning per share.

The price/earnings ratio has increased to 26.96 in year 2013-14 from 13.76 in the year 2010-11.

Credit to Deposit Ratio

It is the ratio of how much a bank lends out of the deposits it has mobilised. It indicates how much of a bank's core funds are being used for lending, the main banking activity. A higher ratio indicates more reliance on deposits for lending and vice-versa.

The CD Ratio in case of NIC Asia bank can be seen fluctuating. The central bank requires financial institutions to maintain a CD Ratio of 80 per cent, which means that banks can only lend 80 per cent of the total deposit collection. But particularly this bank seems to be lending more than what is required.

Capital Adequacy Ratio

Capital Adequacy Ratio (CAR) is the ratio of a bank's capital to its risk. It is a measure of a bank's capital. This ratio is used to protect depositors and promote the stability and efficiency of financial systems around the world.

$$\text{CAR} = \frac{\text{Tier One Capital} + \text{Tier Two Capital}}{\text{Risk Weighted Assets}}$$

In case of Nepal, for the 'A' class commercial banks, the core capital should be 6% and capital fund or CAR that is the combination of core capital and supplementary capital should be 10%. The bank seems to maintain its requirement and also has increased its CAR in post-merger phase.

Non-Performing Loan to Total Loan

In case of NIC Asia Bank, it is observed that the non-performing loan to loan has increased in post-merger phase. It may be bad indicator for the company. The increase in non-performing loan is due to the reason that when two companies are merged they have to share the assets as well as liabilities. The BOAN which had more non-performing loan was also shared

in the post-merger phase. The bank should try to reduce its non-performing loan to present itself better in eyes of shareholders.

Returns on Assets

Return on Assets is the ratio of net profit to total assets. It is the ratio to determine how much of total assets contributed to the net profit. Post-merger, return on assets has maintained at 1.61% during 2013-14. It has been held at a considerable rate.

Returns on Equity

Return on Equity is the ratio of net profit to shareholders equity fund. It is the ratio to determine how much of shareholder's equity fund contributed to the net profit. Post-merger, returns on equity has been found as 17.07% during 2013-14. However, it was 24.81% during pre-merger 2010-11.

Book Value per Share

The book value per share is the value of the share based on the shareholders equity fund. The book value per share has increased continuously in four years. It is due to the increment in the paid up capital and reserve fund.

Comparison of MPS and Book Value Per share

The book value per share shows the value of share based on the actual value of the shareholders fund whereas the market price per share shows the value of share based on the demand and supply of the share in stock market.

The table depicts that the market price of share of NIC Asia bank is quiet higher than the book value of the share. This is a positive indicator of the NIC Asia bank in the mind of shareholders.

The overall impact on shareholders on NIC Asia Bank in post-merger phase is

positive. The bank seems to have progressed a lot after merger. It has given a positive message to the banking and financial institutions which want to get merged in near future.

FINDINGS

The main findings of this paper are on the impact and challenges M&A activities on Nepalese BFIs can be listed below:

The M&A activities are increasing in Nepalese Banking and Financial Institutions. It is basically due to the Merger bylaws 2011 imposed by NRB on Nepalese BFIs.

Initially the NRB had to apply force merger for the BFIs which were not performing good in the market. Later BFIs themselves opted for merger activities. The basic reasons were liquidity crunch, capital requirement and open market.

The M&A activities of particular banks certainly impacts on their employees, customers and shareholders.

The results obtained provide the evidence that M& A activities have a significant impact on the employees of particular organization. The employees are less feared of losing job, they are satisfied with the work and working condition and find job challenging and interesting, they feel that changes have been implemented well and future of company seems bright, the strategies and policies are positive. Still there is high chance that they will go for other organizations. The main negative impact seen among employees is regarding HR issues like cultural complexity, favouritism, senior management clash in positions, problem in socialization etc.

The results obtained provide the evidence that M& A activities have a significant impact on the customers of particular organization. Most of the customers were aware about ongoing merger. 61.5% of

customers have experienced of changes in value, products, service and reputation of the bank. 73% of them agree that customer service is fast and caring as well as adoption of new technologies. Maximum of customers agree with fair treatment of customer by staffs. 57.6% of them agree with increment of service charge after merger. Customers suggest the bank to offer new service, reduce service charge and adopt new marketing policy.

The results obtained provide the evidence that M& A activities have a significant impact on the shareholders of particular organization. Some of the important financial indicators were analysed which were in increasing trend being beneficial to the shareholders. Indicators like paid up capital, reserve and surplus, total assets, net profit, market price per share, price/earnings ratio, capital adequacy ratio, book value per share etc. rose up in post-merger phase which is beneficial for shareholders. Some of the indicators like earnings per share, returns on equity has decreased and non-performing loan to total loan has increased which is not beneficial for the shareholder. Overall the financial performance is better in post-merger phase.

The main challenges faced during the merger process are related to the human resources. The organization is not successful to implement the policies well in regard to the human resource aspect like cultural clash, position issues, socialization, etc.

The merger of one particular bank also impacts the whole financial system as well. The number of poor performing financial institutions has decreased, the stock market has inclined, and more trades are happening in stock market, the competition has increased hence forcing banks to come up with new services.

CONCLUSION

This research was conducted to analyze the impact of Merger and Acquisition activities in Nepalese Banking and Financial Institutions. The impact was considered to be on employees, customers and shareholders. The sample bank was NIC Asia Bank Ltd which was formed in 2012 with merger of NIC Bank and Bank of Asia Nepal.

The Nepal Rastra Bank seems to have successfully implemented the merger bylaws policy in Nepali BFIs in correct timing and transformed the weak and unstable financial institutions into strong, stable and credible financial institutions. Although the initial merger was forceful, it took certain time for BFIs to self-implement this policy and has taken a great shape tremendously. The impacts of M&A activities still remain debatable topic. It is difficult to analyze whether the impact is positive or negative. It is different for different employees, customers, shareholders and a different bank as well. However the M&A activities has been seen as beneficial in context of Nepal. The poor performing banks have been merged and banks have become more competitive and standard.

In context of Nepal, the merger seems to be more of procedural and physical type rather than socio cultural. The merged banks seem to perform well than before considering quantitative value basically the financial figures. But the qualitative factors like services provided by banks are difficult to analyze. The main difficulties faced by the banks in terms of the merger are swap ratio, composition of BOD, management team structure, the socio-cultural factors like cultural complexity, informal relationship, nepotism, favoritism, corporate cultural clash, position issues, collusions in managerial level, fear

of losing job, adjustment problem, socialization etc. In developed countries, M&A is facilitated by an Investment Banker who carries out a successful M&A by coordinating various phases of the process viz. Pre-merger, merger and post-merger. In Nepal M&A is carried by merging banks themselves leading to delay and cumbersome process. Hiring of consultants is taken as additional cost burden. A planned and strategized communication with the staff, assessment of their anxiety before the merger and grievance redress post-merger is imperatival activities. The success of one merger activities can take whole capital market in positive direction.

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Demography of respondents with percentage

Age	Percent	Gender	Percent	Position	Percent	Experience	Percent
18-25	10	Male	63.3	Assistant Level	56.7	0-5 years	66.7
26-35	83.3	Female	36.7	Officer Level	20	6-10 years	26.7
36-45	6.7			Managerial Level	3.3	11-15 years	6.7
				Others	20		
Total	100		100		100		100

Source: Survey

Are you aware of merger bylaws imposed by NRB on BFIs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	26	86.7	86.7	86.7
	No	4	13.3	13.3	100.0
	Total	30	100.0	100.0	

Source: Survey

Fear of losing job

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fully agree	3	10.0	10.0	10.0
	Tend to agree	5	16.7	16.7	26.7
	Tend to disagree	7	23.3	23.3	50.0
	Fully disagree	14	46.7	46.7	96.7
	Don't know	1	3.3	3.3	100.0
	Total	30	100.0	100.0	

Source: Survey

Co-workers are friendly

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fully agree	13	43.3	43.3	43.3
	Tend to agree	16	53.3	53.3	96.7
	Fully disagree	1	3.3	3.3	100.0
	Total	30	100.0	100.0	

Source: Survey

Satisfied with work wages and working condition

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fully agree	3	10.0	10.0	10.0
	Tend to agree	17	56.7	56.7	66.7
	Tend to disagree	7	23.3	23.3	90.0
	Fully disagree	3	10.0	10.0	100.0
	Total	30	100.0	100.0	

*Source: Survey***Relationship of education with challenging work**

Education	Work is more challenging and interesting					Total
	Fully agree	Tend to agree	Tend to disagree	Fully disagree	Don't know	
10+2 or equivalent	0	1	1	0	0	2
Graduations	4	3	0	1	0	8
Masters	6	10	3	0	1	20
Total	10	14	4	1	1	30

*Source: Survey***Relationship of experience with leaving job**

Experience	Recently thought for working with other company					Total
	Fully agree	Tend to agree	Tend to disagree	Fully disagree	Don't know	
0-5 years	3	10	4	1	2	20
6-10 years	2	1	1	1	3	8
11-15 years	0	0	0	1	1	2
Total	5	11	5	3	6	30

*Source: Survey***The changes in our company has been implemented well**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fully agree	4	13.3	13.3	13.3
	Tend to agree	18	60.0	60.0	73.3
	Tend to disagree	6	20.0	20.0	93.3
	Fully disagree	2	6.7	6.7	100.0
	Total	30	100.0	100.0	

Source: Survey

Experience the post-merger in strategies and policies

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very positive	3	10.0	10.0	10.0
	Positive	19	63.3	63.3	73.3
	Negative	1	3.3	3.3	76.7
	Indifferent	7	23.3	23.3	100.0
	Total	30	100.0	100.0	

*Source: Survey***Demography of customer respondents with percentage**

Age	Percent	Gender	Percent	Type of bank account	Percent	Customer in bank	Percent
18-25 years	61.5	Male	50.0	Current	15.4	0-1 year	3.8
26-35 years	23.1	Female	50.0	Savings	76.9	1-3 years	50.0
36-45 years	11.5			Fixed deposit	7.7	3-5 years	19.2
46 and above	3.8					5 years and above	26.9
Total	100.0	Total	100.0	Total	100.0	Total	100.0

*Source: Survey***Are you aware of merger occurred in this bank**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	19	73.1	73.1	73.1
	No	7	26.9	26.9	100.0
	Total	26	100.0	100.0	

*Source: Survey***Experienced any changes in value, products, service and reputation of the bank**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	16	61.5	61.5	61.5
	No	10	38.5	38.5	100.0
	Total	26	100.0	100.0	

*Source: Survey***Customer service is fast and caring**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fully agree	5	19.2	19.2	19.2
	Tend to agree	14	53.8	53.8	73.1
	Fully disagree	1	3.8	3.8	76.9
	Don't Know	6	23.1	23.1	100.0
	Total	26	100.0	100.0	

Source: Survey

Increment in service charge and interest for loan/borrowing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fully agree	1	3.8	3.8	3.8
	Tend to agree	14	53.8	53.8	57.7
	Tend to disagree	3	11.5	11.5	69.2
	Dont know	8	30.8	30.8	100.0
	Total	26	100.0	100.0	

*Source: Survey***Adoption of new technologies**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fully agree	5	19.2	19.2	19.2
	Tend to agree	14	53.8	53.8	73.1
	Tend to disagree	2	7.7	7.7	80.8
	Don't know	5	19.2	19.2	100.0
	Total	26	100.0	100.0	

*Source: Survey***Do you think banking M&A has restricted competition and created monopoly**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	7	26.9	26.9	26.9
	No	19	73.1	73.1	100.0
	Total	26	100.0	100.0	

*Source: Survey***Relationship between age and treatment of customers by staff**

Age	Staff treat its customers fairly and evenly				Total
	Fully agree	Tend to agree	Tend to disagree	Dont know	
18-25 years	2	7	3	4	16
26-35 years	0	5	0	1	6
36-45 years	0	3	0	0	3
46 and above	0	0	0	1	1
Total	2	15	3	6	26

Source: Survey

Paid Up Capital

Indicators	Pre-Merger		Post-Merger	
	2010-11	2011-12	2012-13	2013-14
Paid Up Capital	1311552000	1311552000	2311552000	2658284800

Source: Annual Reports

Reserve and Surplus

Indicators	Pre-Merger		Post-Merger	
	2010-11	2011-12	2012-13	2013-14
Reserve and Surplus	686793444	750684725	2076623925	2214747197

Source: Annual Reports

Total Assets

Indicators	Pre-Merger		Post-Merger	
	2010-11	2011-12	2012-13	2013-14
Total Assets	22090376318	25579528966	45822344089	51500485800

Source: Annual Reports

Net Profit

Indicators	Pre-Merger		Post-Merger	
	2010-11	2011-12	2012-13	2013-14
Net Profit	495703676	391779281	642136406	831588872

Source: Annual Reports

Earnings Per Share

Indicators	Pre-Merger		Post-Merger	
	2010-11	2011-12	2012-13	2013-14
EPS	37.8	29.87	47.41	35.98

Source: Annual Reports

Market Price per Share

Indicators	Pre-Merger		Post-Merger	
	2010-11	2011-12	2012-13	2013-14
MPS	520	468	554	970

Source: Annual Reports

Price/Earnings Ratio

Indicators	Pre-Merger		Post-Merger	
	2010-11	2011-12	2012-13	2013-14
PE ratio	13.76	15.67	11.69	26.96

Source: Annual Reports

Credit to Deposit Ratio

Indicators	Pre-Merger		Post-Merger	
	2010-11	2011-12	2012-13	2013-14
CD Ratio	82.45	79.25	81.23	82.93

Source: Annual Reports

Capital Adequacy Ratio

Indicators	Pre-Merger		Post-Merger	
	2010-11	2011-12	2012-13	2013-14
Capital Adequacy Ratio	12.89	11.01	13.17	14.05

Source: Annual Reports

Non-Performing Loan to Total Loan

Indicators	Pre-Merger		Post-Merger	
	2010-11	2011-12	2012-13	2013-14
Non-Performing Loan to total loan	0.6	0.73	2.32	2.33

Source: Annual Reports

Returns on Assets

Indicators	Pre-Merger		Post-Merger	
	2010-11	2011-12	2012-13	2013-14
ROA	2.24%	1.53%	1.40%	1.61%

Returns on Equity

Indicators	Pre-Merger		Post-Merger	
	2010-11	2011-12	2012-13	2013-14
ROE	24.81%	19.00%	14.63%	17.07%

Source: Annual Reports

Book Value per Share

Indicators	Pre-Merger		Post-Merger	
	2010-11	2011-12	2012-13	2013-14
Book Value per share	152	157	190	211

Source: Annual Reports

Comparison of MPS and Book Value Per share

Indicators	Pre-Merger		Post-Merger	
	2010-11	2011-12	2012-13	2013-14
MPS	520	468	554	970
Book Value per share	152	157	190	211

Source: Annual Report

Impact of an Enterprise Resource Planning System (ERPS) on the Accounting Process of a Public Sector Organization in Sri Lanka

W.A.D.S.A. Wickramaarachchi,
Department of Accounting,
Faculty of Management and Finance,
University of Colombo, Sri Lanka.
sachini9006@gmail.com

N.K.Jayasiri,
Department of Accounting,
Faculty of Management and Finance,
University of Colombo, Sri Lanka.
nuradhikj@dac.cmb.ac.lk

With the development of information technology, the business environment has become more dynamic, globalized and competitive. Hence, the business processes of organizations have become more complex. To survive in such a complex environment businesses often opt for implementing an integrated solution like Enterprise Resource Planning System (ERPS). The integrative nature of the ERPS has substantially aided in resolving complexities and streamlining the business processes. Since ERPS functions with business processes, it requires changes in the way of doing business activities. Thus, present research studies on the changes of the accounting process with the implementation of ERPS in the Sri Lankan public sector. The change in accounting process covers the change in accounting practices, change in accountant's role and benefits and challenges. In the present study, qualitative approach is selected as the research strategy and the study is conducted as a case of a public sector organization. Fifteen informants were selected within the company and semi-structured interviews are used to collect information. The findings of the study suggest that the ERPS does not bring in fundamental changes to the accounting process, but facilitates improvements to the accounting functions and eventually streamline the accounting process. Nevertheless, ERPS relieve the accountants from routine tasks and assign them new roles such as, analysts, consultants and strategic agents. Further, due to common weaknesses such as lack of training at the implementation, lack of knowledge management and rigid governmental procedures applicable to public sector organization reduces some benefits expected at the implementation stage.

Key words: *Enterprise Resource Planning System, Accounting process, Accounting techniques, Accountant*

INTRODUCTION

Recent changes in the business environment have signified the need for companies to search for new ways to survive and succeed. Arguably, information technology (IT) offers the necessary tools for companies to respond effectively and efficiently to these changes. On the other hand, in this highly automated, IT-led business environment, companies are forced to keep up to date with the new technologies to remain competitive (Spathis & Contantinides, 2004). Enterprise resource planning (ERP) is one of the

latest in an evolutionary series of computer tools developed for managing information and organizations (Duplaga & Astani, 2003). An ERPS is a generic term for an integrated enterprise-wide computing system. According to Duplaga and Astani (2003) ERPS integrate processes, information, and people across functions, plants, companies, and geographic locations. Moreover, Galani, Gravas, and Stavropoulos (2010) stated that ERP systems are integrated software packages that enable companies to combine various business units of different areas such as

production, sales, marketing, finance, human resources generating a strongly integrated system with flow of information across the entire business. Implementation of ERPS brings various advantages to companies. ERP is intended to deliver a significant improvement over the non-holistic nature of earlier organizational information systems. An EPRS would automate and integrate business processes, produce real-time data, simplify business processes, share common data across the organization (Bea & Ashcroft, 2004; Spathis & Contantinides, 2004), remove non-value adding work and improve customer services (Nah, Lau, & Kuang, 2001) which would ultimately increase the efficiency, enhance the decision-making and reduce the cost in businesses. Thus, ERPS brings changes in to organizations and provide competitive edge. These facts have become a trigger for the popularity of ERPS in the business world. Even though ERP system has been developed, evolved and implemented around the world for almost two decades, there are still many recently published reports about the difficulties in ERP implementation (Lui & Chan, 2008; Balzli & Morard, 2012). According to Chakraborty and Sharma (2007) ninety percent of all initiated ERPS projects can be considered failures in terms of project management. Thus, a lot of research has been done during the last decade about the success and failure of ERP implementation. Further, those researches and survey findings presented the reasons and nature of ERP failures (Bingi, Sharma, & Godla, 1999; Wickramasinghe & Gunawardena, 2010). Another reason behind the incongruence between organizational expectation and ERP real outcome is the unawareness of practical reality of ERPS. Though businesses are aware that ERPS implementations are closely associated with Business Process Reengineering (BPR), the availability of information about

the practical outcome of the ERP is very less. Thus, the knowledge on practical consequences of such systems is very little and it creates a knowledge gap on the practical consequences of ERPS (Granlund & Malmi, 2002).

Accordingly, based on the research phenomenon that ERP implementation and the real change in business processes, a literature survey was conducted and the researcher came across several research articles, which reveal the impact of ERPS on business processes and subsequent benefits of an ERP implementation. However, these reports are drawn from industrialized country settings. ERP take-up has been much lower in developing countries (DCs), with estimates that these countries make up some 10-15 per cent of global ERP sales (Hung & Palvia, 2001; Rajapaksha & Seddon, 2005). Though, developing countries look set to become the locus for a major expansion of ERP implementations (Molla & Bhalla, 2006) at the same time, reports have emerged of ERP failures in these countries (Al-Mashari, Al-Mudimigh, & Zairi, 2003; Rajapaksha & Seddon, 2005). On the basis of this background the growing investment in, and potential of, ERP systems in developing countries combined with high rates of failure but relatively little literature on ERP experiences in DCs (Molla & Bhalla, 2006; Wickramasinghe & Gunawardena, 2010). Further, these Western researches are hardly applicable to south Asian countries like Sri Lanka due to differences in socio-cultural aspects and the level of technology (Wickramasinghe & Gunawardena, 2010). However, with the development of the technology and globalization in the present context, ERP systems are becoming very popular in Sri Lanka (Personal communication, May, 26, 2014).

Thus, in the recent past many Sri Lankan organizations have initiated ERP

implementation projects aiming to centralize and streamline their organization's processes for better performance. This trend of adaptation of ERP systems could be identified due to the enormous benefits that it brings, which other conventional information systems failed to bring in to the organizations (Spathis & Ananiadis, 2005). Moreover, in response to several factors, such as increasing global competition, lower labor costs in Sri Lanka, the completion of civil war in the country are the avenues of development. Thus, Sri Lankan businesses are increasingly becoming open to globalization and world competition. Therefore, a technology based research such as ERP system is interesting, relevant and timely need of the country. Furthermore, many authors have found that there are significant differences between public and private sector contexts in the case of an ERP implementation and its use (Heintze & Brestschneider, 2005; Blick, Gullidge, & Sommer, 2000; Raymond, Uwizyemungu, & Bergeron, 2005). Kumar, Maheshwari, & Kumar (2002) noted that ERP systems were initially designed for the private sector. Therefore, research on ERP implementation in the private sector most likely cannot be applied effectively to the public sector (Balzli & Morard, 2012). In addition, Wanger and Lederer (2004) found that the public sector has only limited experience with ERP implementation compared to the private sector. Yet, as Raymond et al. (2005) noted that the public sector has shown increased interest in ERP, which again highlights a need for further research. Indeed, Balzli and Morard (2012) argued that there is a risk to public agencies wishing to implement ERP systems because of the lack of sufficient research and case studies from this sector. There has been very little research into implementing them in a government setting. Hence the changes that occur within the finance functions of the public

sector need to be investigated further (Balzli & Morard, 2012).

Accordingly, purpose of the research is to explore the impact of implementing an enterprise resource planning system on accounting process focusing on accounting practices and accountants role of a public sector organization in Sri Lanka. As there is an empirical gap in the existing literature to address this issue, this research was undertaken as a case study with the motive of providing an in depth knowledge on research phenomenon and issue.

LITERATURE REVIEW

What is ERP?

ERP system is a packaged business software system that allows a company to automate and integrate the majority of its business processes, and share common data and practices across the entire enterprise (Seddon, Shang, & Willcocks, 2005). Klaus (2000) mentioned that ERP concept is not only an IT solution, but also a strategic business solution. As an IT solution, ERP system, if implemented fully across an entire enterprise, connects various components of the enterprise through a logical transmission and sharing of data (Balls, Dunleavy, Hartley, Hurley, & Norris, 2000). When customers and suppliers request information that have been fully integrated throughout the value chain or when executives require integrated strategies and tactics in areas such as manufacturing, inventory, procurement and accounting, ERP systems collect the data for analysis and transform the data into useful information that companies can use to support business decision-making. They allow companies to focus on core and truly value-added activities (Fang & Patrecia, 2005). These activities cover accounting and financial management, human resources management, manufacturing and logistics,

sales and marketing, and customer relationship management.

ERP Researches Conducted in Public Sector

It is good to examine previous researches conducted on public sector regarding the ERPS. Public sector covers a variety of government owned and controlled organizations. Since 1970s, public sector organizations throughout the world have been undergoing a series of progressive reforms (Dann, 1996). There are public sector organizations that have implemented ERP systems. These include federal, state, and local governments (Harrison, 2004). According to Harrison (2004) a public-sector ERP system implementation is often more complex than a private-sector one; "Because there is often a Gordian knot of regulations, boards, commissions, and agencies that must be disentangled to complete the project".

Regarding the public sector, there has been little research to date on changes in the finance profession. However, there appears to be a range of opinions and findings in the literature. Some authors have found important general differences between the public and private sectors. For instance in their study Chang, Gable, Smyth, and Timbrell (2000) explained ERP implementation in the public sector, and demonstrated that the issue of "ERP knowledge management" is most problematic in a government context. Cacciagudi-Fahy, Currie, and Fahy (2002) described the difficulties that public sector organizations may face in trying to initiate changes to work. They noted that such changes frequently require approval of union representatives. Gullidge and Sommer (2003) noted that the definitions of incentives and performance measures can differ between the public and private sectors. That study further stated; "There is nothing special about the management of

public organizations that precludes them from implementing modern private sector management practices and integrated information systems" (p. 472).

They also posited that the need for information is comparable between both sectors. Further Balzli and Morard (2012) believe that research on ERP implementation in the private sector most likely cannot be applied effectively to the public sector.

Consistent with the recommendations for private corporations, Harrison (2004) recommended that in selecting ERP software, public sector organizations compare their existing processes to best practices, minimize software modifications, create a request for proposals by modifying another government's proposal, have functional requirements submitted by functional managers, partner with an agency that has public sector implementation experience etc.

ERPS Researches in the Sri Lankan Context

In recent years there has been an increase in using Enterprise Resource Planning (ERP) systems in large companies and government corporations mainly in developed countries. While there is wide adoption of ERP systems in Western economies, developing countries lag far behind (Otieno, 2010). However, due to recent economic growth, developing countries such as Sri Lanka are increasingly becoming major targets of ERP vendors. Although only fewer numbers of companies in Sri Lanka, especially multinational companies have implemented ERP systems to gain a strategic competitive advantage (Fernando, 2004).

Furthermore, Fernando (2004) mentioned in his study, since Sri Lanka is a developing country most of Sri Lankan

organizations do not have strength to go for ERP solutions. Even if a very few companies do so, unlike in foreign countries, the amount they spend for ERP is a significant amount (very high percentage) of their total income. Undoubtedly it is a real waste, if organizations not success after spending quite a lot of amount of money and time.

Over the last decades, there has been a dramatic growth in the attainment of ERP systems.

However, more recently, there has been an increase in reported ERP failures worldwide despite the initial promise (Bingi et al., 1999; Tasi et al., 2010). In Sri Lankan context the situation is the same. The organizations that had implemented ERP systems are not all satisfied with their projects (Fernando, 2004).

Therefore, study of ERP systems implementation in Sri Lanka is a new area, and limited studies have been conducted in the past. Wickramasinghe & Gunawardena (2010) stated that; "...our review of journals that are outlets for information systems related research in popular databases of Business Source Premier, ABI/Inform, Emerald, Science Direct, and Wiley Blackwell has been unable to find any studies conducted on enterprise system (ES) in developing countries, not even in India" (p 467).

Fernando (2004) researched on implementing ERP and its relation to business process reengineering with special reference to Sri Lanka. Researcher has collected data covering a number of organizations in Sri Lanka from different sectors through a questionnaire survey. The survey revealed that finance, manufacturing and distributing were the popular area in ERP system, manufacturing organization were the most interested in implementing ERPS and the use of consultant in change management

and BPR was less. Further, the researcher also pointed out twenty Critical Success Factors (CSF), highlighting that BPR must be done parallel for a successful implementation of an ERP system. De Alwis and Dissanayake (2010) conducted a research on middle managers attitudes on business performance generated through enterprise resource planning. The findings of the study revealed that there is a relationship between ERP features and its impact on business performance. However, the relation was identified as weak positive. In other words, selected companies ERP systems have been influenced to the performances of their business to small degree. Wickramasinghe and Gunawardena (2010) carried out a survey research to examine the critical elements that discriminate between successful and unsuccessful ERP implementations in Sri Lanka. Through that research they have identified that training and education, user involvement, managing user expectations, interdepartmental cooperation, ERP teamwork and team composition, software development, testing and troubleshooting, project management, project champion, BPR and customization, change management program and culture, and effective communication significantly differ between successful and unsuccessful implementations. In addition, Thowfeek and Jayasiri (2012) conducted a case study in a private sector manufacturing company to identify the ERPS impact to the accounting practices. However, an extensive search reveals that the above four are the published research articles that research on ERPS in the Sri Lankan context and it was unable to found a single article regarding the ERPS impact on public sector in the Sri Lankan context. Thus, the lack of research on ERPS in Sri Lanka is vividly situated. But now, due to the magnitude of the ERP phenomenon, the need for such studies has become very

important especially in the Sri Lankan context (Fernando, 2004).

Theoretical Background

There are several research articles which describe the impact of ERPS on an accounting process. Following are some published literature of ERPS impact on accounting processes including role of accountants. Spathis and Contantinides (2004) conducted a study to examine the ERP System's impact on accounting process. This study examined why companies choose to convert from traditional information system (IS) to ERP and changes brought it, particularly in the accounting process. The empirical evidence confirms number of changes in the accounting processes introduced with the adoption of ERP systems. The most frequently quoted ones involve the introduction of an internal audit function, the use of non-financial performance indicators, and profitability analysis at segmental/product level without any change in the organization structure. Therefore, ERPS has limited impact on the accounting process of the organizations. In addition to that, Spathis (2006) conducted a multiple case study in Greece to examine the accounting benefits involved in ERPS implementation. According to that research, researcher indicated that ERPS clearly affect not only accounting practice but also business operations.

Furthermore, he mentioned that the benefits derived from the application of ERPS focus on the four dimensions: organization, operations, management and IT infrastructure. Thus, the impact and changes to accounting information and practices following the adoption of ES were of a "moderate" nature.

However, in contrast to the above Thowfeek and Jayasiri (2012) on their case study conducted in a manufacturing company stated that there are no

fundamental changes in the accounting practices/techniques by the implementation of the ERPS, yet, there were changes in the role of the accountants. Traditional role of accountant has been changed drastically after the implementation of the ERPS. The accountant's role has been enhanced to analysts and consultants. Thus, the role of accountant has substantially changed (Spathis 2006).

Confirming Thowfeek and Jayasiri (2012) and Spathis (2006) views another research conducted on the ERP system impact of ERPS on the accountant role, Chen et al., 2012 found that operations and roles of accountants change significantly after ERP implementation. The workload of traditional data input, data compilation, filing and preparation for financial statements decreases because of ERP implementation. However, the importance of certain operations increases such as understanding internal processes, verifying the accuracy of a new system to make sure when to operate it instead of the old one and providing up-to-date information for decision making (Chen et al., 2012).

Many authors pointed out that accountant in public administrations tend to have a lack of practical knowledge about ERP (Chang et al., 2000; Balzli & Morard, 2012). Timbrell (2008) studied knowledge management of SAP implementation projects in the Queensland government

Australia, and found there was significant doubt that users had the ability to run, maintain, or configure such systems properly. There are several hypotheses about this lack of knowledge: inadequate training, lack of curiosity on the part of users as well as overreliance on the implementation partner.

RESEARCH METHODOLOGY

The broader purpose of the study is to get a deep understanding about the consequences of ERPS on accounting practices and on role of accountants and to identify the benefits and challenges of the ERPS of the case organization.

Case study is an ideal methodology when a holistic, in-depth investigation is needed (Tells, 1997). According to Yin (1994) case study is an; "empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between the phenomenon and the context are not clearly evident" (p.13).

There are some unique characteristics of case study method, which lead to number of advantages. Case study research method is a flexible method, which does not follow a formula or a set of steps like other methods (Yin, 1994). Ryan et al. (n.d.) discussed that case studies are more concerned on explanations, rather than prediction and the researchers must avoid statistical generalization and it leads in understanding of subject area in that context which help the researcher to study the issue in depth. Thus, it is justifiable to adopt the case study research method for this study.

In this research, purposive sampling is used to select the research site as well as decide on the informants within the case study. A single case of a public sector organization is decided and accordingly the research site anonymous as ABC organization. A sample of fifteen informants was selected using the purposive sampling. ABC organization is determined since ABC is one of the main public sector organizations which have implemented one of the best ERP systems in the world that is the Systems Applications Products for data processing (SAP) system. Having a fullfledged ERP system would eradicate

technological limitation of the study. Thus, ABC organization is selected as the case study of the research by being aligned to the purpose of the research. Data collection is a crucial aspect in any research study. In this study, semi-structured interviews and document search are used as the data collection methods. According to Yin (1994) use of more than one data collection method in a case study would assist the researcher in eliminating data validity and reliability issues.

Initially, the research participants are selected and interview questions were developed based on background of the context, existing literature on the phenomenon and the background of the organization. After the development of the questions, the interviewees were contacted and a suitable time and venue was fixed for the interviews. Interviews were based on the semistructured questions (see Annexure B) and before the commencement of the interviews a brief introduction of the study was given to the interviewee. Interviews were conducted in both English language and Sinhala language within 30-45 minutes. All the interviews were audio recorded with the consent of the interviewee and the mean time the researcher took field notes to ensure all the data was recorded.

After the data collection, the researcher prepared the data in a form where it could be analyzed.

All the recorded interviews were transcribed word-to-word and important information were derived from the documents. Further interviews which were conducted in Sinhala language translated to the English language without changing any single meaning. At the first place the collected data were categorized according to the themes developed based on the conceptual frame work.

According to Yin (2012) though, the case study that starts with some theoretical propositions or theory make easier to implement case study avoiding a theory can be highly rewarding. "...at the same time, the opposite tactic of deliberately avoiding any theoretical perspective, though risky, can be highly rewarding because you might then be able to produce a "break-the-mold" case study" (Yin , 2012, p. 10).

Therefore, in this study the researcher has developed a conceptual framework instead of utilizing a theory and framework is based on existing literature. In addition, the "codes" for the pattern matching were developed based on the predetermined patterns, which are shown by the conceptual model of the research. The codes are used to categorize and identify the patterns of the data collected. Finally, the conclusions were drawn after the systematic analysis of data.

Below (figure 3.1) is the conceptual framework of the intended study on "Changes in accounting process with the implementation of an ERPS". To identify the changes in accounting practices, understanding the existing practices and modifications to existing practices after the implementation of ERPS is important. Further of benefits and challengers of ERPS implementation also crucial. Thus, this would help the researcher to identify the incremental changes in the accounting process.

Granlund and Malmi (2002) found only minor changes in budgeting and forecasting after the ERP adoption and hence concluded that ERPS brings small impact on management accounting, where Scapens and Jazayeri (2003) suggested that the budgeting process has taken a forwardlooking emphasis and claimed that ERPS brings incremental changes to the accounting process.

Thus, understanding the improvements in the existing methods would help the researcher to identify the consequence of ERPS.

Reporting is a vital tool to measure the impact of ERPS on accounting process. According to Spathis and Ananiadis (2005), need of real-time information is one of the main reasons to implement an ERPS. As stated in previous researches, ERPS generate quick, accurate information and provide improved quality reports which are vital for the efficiency of the accounting process (Granlund & Malmi, 2002; Spathis & Ananiadis, 2005). Thus, improvements in existing practices and reporting is one of the important aspect to look for, in order to understand the changes in accounting practices.

However, identifying the use of new accounting techniques and practices is also important since such improvements can be considered as fundamental changes in accounting practices.

According to Scapens and Jayazeri (2003) and Thowfeek and Jayasiri (2012) revolutionary change occurs when there is a fundamental disruption of the prevailing routine work. Further, the researchers stated adoption of new method is a fundamental change in routine work. Thus, Scapens and Jayazei (2003) stated that ERPS facilitates evolutionary change rather than a revolutionary change because no adoption of new accounting techniques has been accompanied with the ERPS implementation. Hence, deep scrutiny on above two aspects would provide knowledge on the changes of accounting practices with the implementation of ERPS. Previous researches have also studied changes in management accountants' role as a result from ERP implementations (Granlund & Malmi, 2002; Spathis & Constantinides, 2005; Scapens & Jazayeri, 2003). Anastas (1997) claimed that such

systems will enhance the role of management accountants and financial managers, and they will become advisers or consultants to other managers (as cited by Scapens & Jayazeri, 2003). Further, Granlund and Malmi (2002) proposed that ERP systems would provide controllers more time to prepare sophisticated analysis. Scapens and Jazayeri (2003) suggested that management accountants would become analysts after the ERP implementation since the time needed to conduct routine tasks will reduce and the accountant would be responsible for the system rather than the content of the final report. Therefore, identifying the new role of accountants; time and extend of involvement in accounting task would provide knowledge on changes of accountants role with the implementation of ERPS. Thus, investigation on changes in an accounting practices and the changes in accountant's role would provide a deep understanding on the changes on accounting process with the implementation of ERPS.

Over the past decade, organizations all over the world have adopted Enterprise Resource Planning (ERP) systems. There has been little research at a global scale regarding the benefits and challenges of adopting enterprise systems (Spathis & Kanellou, 2011). The emergence of enterprise resource planning systems has signified the beginning of a new era in the business environment, where companies can integrate business processes or applications and respond to real-time information (Spathis & Contantinides, 2004; Spathis, 2006).

According to the Granlund and Malmi (2002), Scapens & Jazayeri (2003) and Galani et al. (2010) ERPS help to carry out routine activities more effectively, to handle large databases more quickly and to report in a faster and more flexible way.

In addition existing literature discussed challenges of ERP system as lack of knowledge, inadequate training, lack of curiosity, accountant in public administrations tend to have a lack of practical knowledge about ERP (Cacciagudi-Fahy et al., 2002; Timbrell, 2008; Balzli & Morard, 2012).

RESEARCH FINDINGS

Accounting practices

Prior to the implementation of ERPS in the organization, accounting was basically done using spreadsheets. There were no accounting packages or automated systems to do the accounting functions and each section handled the accounting function on their own. However, after the implementation of SAP, accounting was done using the ERP System.

After the SAP implementation in ABC organization, several alterations in the accounting practices occurred. One of such important change is the automation of accounting practices.

Further with the implementation of SAP increased the effectiveness and efficiency of accounting and finance operations, such as aligning the rules and procedures among functions better. In addition, able to obtain more transparency and reliability of financial reporting. Accounting information becomes more structured at each stage of data processing, and reporting become more quickly. The ERP implementation is particularly useful in improving the organization of the finance and accounting activities (personal communication, October 29, 2014).

Even though there is no clear-cut separation between financial and management accounting, for the purpose of data presentation the accounting practices are segregated as management

and financial accounting practices. Hence, the rest of this subsection would discuss how specific accounting practices that have taken place in ABC organization.

Management Accounting

The changes in management accounting after the ERPS implementation are minimal. Prior to the implementation of SAP, basically the management accounting function was done manually or using spreadsheets. Conversely, after the ERPS implementation, financial reporting and account preparation are done through the ERPS and thus, attention of the business moved towards the implications of the figures and values generated through the ERPS. However, even after the implementation of ERPS, still some of the management accounting functions is carried out off the ERP system. Followings are some management accounting practices of the ABC organization.

Costing

In ABC organization, „Singapore Plats“ was used as the main costing method. Even after the ERPS implementation ABC organization uses it, as it is the most suitable method of costing with nature of products that organization produce and distributes.

Further, even after the implementation of SAP, still the costing is done off the SAP on a spreadsheet but with a different format (personal communication, October 29, 2014). Apart from Singapore Plats, ABC uses target costing as well. Target costing has not linked into SAP. Though costing is not done through SAP, the ERPS assists and provides information for accurate costing. However, presently though the costing is done off the ERPS, the company is looking forward to build the target costing in SAP through Profit and Loss statement (P & L).

Budgeting

Prior to the SAP implementation, budgetary process had totally done manually in ABC organization. After the SAP implementation still user involvement available at certain extent. Hence, currently a standard budget is developed in spreadsheet and uploaded to the SAP system. The SAP would indicate the variation (personal communication, November 12, 2014). As senior deputy finance manager-financial reporting and budgeting explained, the availability of up-to-date information from the SAP system, enable each individual departments to forecast better.

Financial Accounting

Implementation of SAP system has created a hassle free financial accounting task in the organization. Under the ERPS environment, all the transactions are real time processed and thus, complicated tasks have become simple. The integration and standardization of processes keeps the chart of accounts updated and therefore, the updated accounts and the final accounts could be viewed as at any time. Thus, preparation of general ledger account and final accounts are not considered as time-consuming tasks anymore.

Internal Auditing

Internal auditing was employed in ABC organization before the implementation of the SAP system. After the implementation of SAP, internal audit was done basically through the SAP. Because of the visibility and control through SAP, internal auditing has become simpler. The senior deputy finance manager-internal audit described; “Because of the visibility of reports, invoices and even every transaction through SAP internal auditing has become simpler” (personal communication, October 29, 2014).

4.1.2.2 Stock Valuation

As mentioned above, stock valuation was a complicated task in ABC organization due to the lack of integration and coordination. However, implementation of ERPS has assisted the company to get rid of the complexity of stock valuation. SAP system has facilitated accurate stock valuation in the organization. The senior deputy finance manager of internal audit explained; "...prior to the SAP implementation stock valuation and controlling has been carried out on a standalone computer system individually at each logistic. In SAP system the valuation need not to be done manually as it is done through the system. However, as verification requirement takes place a physical stock count at the yearend..." (Personal communication, October 29, 2014).

Reporting

Before the implementation of ERPS, reporting was a tedious task in the organizations. Each month, accountants had to prepare number of reports to the management including supporting reports to the main reports. Nonetheless, after the implementation of the SAP system, the number of reports has reduced and the reporting task has become trouble-free while having high quality of reports (personal communication, November 12, 2014).

Role of Accountants

Before the implementation of ERPS in the ABC organization, accountants had traditional role such as recording financial transactions and preparation of final accounts. The financial accountant was engaged in final account preparation and reporting, while management accountants were mainly concerned on costing and providing reports on business performances.

The senior deputy finance manager-revenue described the earlier accountants' role as responsibility to data input, data compilation, filing and preparation for financial statements. And the roles of the accountant transform with the ERPS (personal communication, November 13, 2014).

However, though the traditional workload decrease still the conventional roles of accountants remaining at significant level. On the contrary management functions of the accountants have increased. Thus, the roles of accountants of the organization now have become more complicated.

As explained by the accountant-revenue, with the implementation of SAP, skills of the accountant like interpersonal skills, analytical skills, and problem solving skills have developed in to certain extend.

However, with the implementation of ERPS in the ABC, the job description of the accounts clerk does not appear to have changed even after four years of the ERPS implementation. An accounts clerk in internal audit mentioned that accountants' job descriptions had not changed for a long time.

Benefits and Challenges of ERPS

Benefits of ERPS

The main reason to implement the SAP system within the ABC was to integrate the island wide functions. The SAP consultant-material module explained; "There was no integrated product before the SAP system. Either general software or small software was facilitated which were developed through the internal. Hence we need to integrate island wide distribution through a one system....Most of oil refine companies in the world uses SAP system and it is the suitable system for an oil related company. Therefore ABC starts to

implement the SAP....” (personal communication, November, 12, 2014).

Further, he added; “Due to SAP system ABC’s business, distributions and transactions highly automated...finance module is not a standalone module, but linked to other main modules of the system. For instance, finance module is linked with material management module and sales and distribution module. ... Everything is done in SAP and standardized. (personal communication, November, 12, 2014). The internal audit manager gave his view on the benefits derived in the ERPS environment as follows; “The SAP system brings many benefits to ABC as increase the efficiency of decision making, improves the quality of the data and information, reduce frauds and errors, increase transparency of the transactions, reduce documentary handling, increase effectiveness, increase the accuracy, speed up the transactions, ease the reconciliation procedure...” (personal communication, October, 29, 2014).

Challenges of ERPS

The success of the ERPS was limited by many reasons. In this part present the various challenges of ERPS in the ABC organization. The success of ERPS was limited by the lack of training at the implementation stage of SAP. Many respondents (twelve respondents out of fifteen respondents) view as the main challenge ABC faced with the SAP was using an advanced computer system without prior training. As explained by a manager; “Some of core members were unable to do that responsibility appropriately. It was may be due to reasons like corporation did not allocate proper training period, proper training center or other training facilities. At the same time corporation did not release the core members from their day to day workload. Therefore core members were

unable to give a proper training to the rest of staff....” (personal communication, November, 12, 2014). At the implementation stage, some of the staff members have been faced difficulties due to insufficient training. Notably, minor staff like the storekeepers at the very rural distribution centers who never worked with computers faced difficulties. It is notably shown that many of the accounts division staff especially non managerial level staff with in the head office learned the transaction of SAP through the self-studying after the some guidance of the core members.

Some respondents discussed differences between the public and private sectors. They noted that accountants and accounting managers in the private sector tend to have better educational backgrounds and more experience with ERP projects. As described by the internal audit manager;

“Because of a lack of skills of the public sector the system is not used to the extent that it could be” (personal communication, October, 29, 2014).

In addition, SAP implementation at ABC organization without prior feasibility study also widely criticized. The internal audit manager gave explanation regarding the implementation decision regarding as follows; “Sigma1 (Pvt) Ltd used SAP system before the ABC Organization and ABC got the same image of that. Simply it is a copycat.... Government policy makers persuade to implement the system without any feasibility studies... Even after a four, year ABC fails to implement SAP correctly” (personal communication, October, 29, 2014).

Another challenge associate with the SAP implementation in ABC as mentioned by the SAP consultant-finance module is, unavailability of SAP disaster recovery plan. Further, she mentioned;

“We cannot directly claim that system operates hundred percent correctly as we wish. Because there have not conduct a system audit“ until today” (personal communication, November, 12, 2014).

DISCUSSION

The purpose of this part is to analyze the data, which pertain to the accounting process of the case study and to provide an overview of the study. The previous part presents the data collected based on the themes developed by the researcher and within this part analyzes the data and discusses them in relation to the framework. Accordingly discuss the changes in the accounting practices, changes in the role of accountants, benefits and challenges of ERPS.

Changes in Accounting Practices

The implementation of ERPS has brought in many changes to the accounting practices in ABC organization. The accounting function has been efficient in the organization with the SAP system. Literature confirmed this view, where it is stated that efficiency and effectiveness is gained in the accounting function of the organization after the implementation of ERPS (Scapens & Jayazeri, 2003). Thus, ERPS has been a facilitator of efficiency in accounting practices.

Improvements in Existing Practices

Through this part of the discussion, functional improvements occurred in an existing accounting process has been identified and discussed. Functional changes of the accounting process include methods, practices and techniques that are used in an accounting process of the ABC organization. Sigma1 is used to rename the original name of real company under the functional changes, financial accounting has been significantly influenced by the implementation of the SAP. One of the

major impacts of financial accounting is that automation and centralization of the routine work. Therefore, ERPS has simplified the job of the accounting division employees. Several studies provided evidence in their studies conforming that ERPS offers the necessary tools for companies to respond effectively and efficiently (Booth, Matolcsy, & Wieder, 2000; Spathis & Contantinides, 2004). In addition, SAP system has assisted the ABC organization to overcome complexities like stock valuation. With the visibility and access to up to date information, the organization was able to overcome the problem of stock valuation that ABC faced before the implementation of the ERPS.

Further, Spathis and Ananiadis (2005) confirmed in their survey study conducted on Greek companies and mentioned that ERPS facilitate high quality work in financial accounting. This is also same in the case of the ABC organization. ERP facilitate real-time data processing, access to accurate information made the financial accounting task easy for the finance staff in the ABC organization. When considering the management accounting techniques, though most of the techniques practiced off the SAP system even after the ERPS, the system has substantially influenced the performance of management accounting. As Galani et al. (2010) stated that though ERPS does not influence selection of method of costing, the high access to information through ERPS enable the company to engage in costing with accuracy.

Reporting is one of the important things in the accounting process. Reports are the communication medium, which convey the management critical aspects of the business in snapshot as well as in detail. In ABC organization, after the implementation of SAP, number of reports prepared is reduced without the content

being compromised. In fact, the reports prepared with the use of SAP are higher in quality. Spathis and Contantinides (2004) also specified that ERPS provide improved quality of reports and financial statements. Precisely the implementation of ERPS has improved the existing accounting practices in the organization. Further, it is clear that these changes evolve from the integration of applications, the production of real-time information and particularly information for decision making.

Adoption of New Accounting Methods

Under this part of the discussion adoption of new accounting process has been identified and discussed in the ABC organization. According to the findings of the discussion with the finance managers, accountants, accounts clerks and SAP consultants, of the ABC organization it is notably shown that there were no any significant changes occurred in accounting methods and practices with the pure influence of the SAP system. Though existing literature stated that SAP increased effectiveness, accuracy, timeliness of the accounting functions (Galani et al., 2010; Scapens & Jazayeri, 2003; Spathis & Kanellou, 2011) it not caused to adopt any new accounting methods at ABC organization.

According to the deputy finance manager-internal audit explanation, he expressed; "There was nothing added to the accounting functions due to SAP. But many improvements occurred to the existing system" (personal communication, October 29, 2014). Above findings in the ABC organization has been noted in the literature as well. For example Scapens and Jayazeri (2003), stated that ERPS implementation does not impact in adoption of new techniques but improvement of existing techniques. Granlund and Malmi (2002) also stated

that adoption of new accounting methods did not result from ERPS implementation. Confirming the view if both studies Galani, Gravas, & Stavropoulos, (2010) stated that ERPS implementation does not influence in the adoption of new methods or techniques.

Changes in Accountants' Role

With the implementation of SAP, accountants' role has enlarged in ABC organization. Moreover, in addition to traditional roles more new roles are added with accountants.

Involvement in Traditional Accounting Roles

As mentioned above even after the implementation of SAP in ABC organization, the accountants' traditional role remains same. But with the automation, integration and standardization of SAP, role of accountants has become much easier than previous. However, though the workload of accountant has decreased with the SAP, traditional operations like data entering are still remaining as the main operation of accountants. Previous literature has argued that with the implementation of ERP, the traditional routing accounting work must transfer to the accounts clerk (Kumar et al., 2002; Arnold, 2006). Yet, the researcher found that though the involvement of accountants in routine and traditional accounting work has reduced, some SAP routine work like data entering still is the main job of the accountants.

Kumar et al. (2002) studied the perceived risks of an ERP implementation in ten Canadian government organizations. One of their important findings is also mismatch with the present study's findings. Kumar et al. (2002) found that; "The traditional roles of many employees changed and job definitions had to be

rewritten following an ERP implementation” (p. 169).

New Roles of the Accountants

SAP has facilitated greater extend of new roles for accountants with the automation, integration and standardization in ABC organization. The finance staff claimed that current accountants’ scope is widely focused on business support. Scapens and Jazayeri (2003) in their case study found that roles of accountant became more complex as teamwork, communication, and cooperation increased. The role of an accounting manager transformed into something akin to an “internal consultant” or an “analyst”. Caglio (2003) also described accounting managers as “business consultants” and “custodians” of the whole organization, including its information and its resources.

Further, Scapens and Jazayeri (2003) stated that the move from record-keeper to internal consultant requires management accountants to acquire new skills. With the discussion with deputy finance managers and accountants, it is stated that with the new role, accountants need to develop particular skill like analytical skills, consultancy skills, etc., (personal communication, November 12 and November 13, 2014). Granlund and Malmi (2002) argued that ERP implementation can result in changes in the scope of accountants’ skills. To work within an ERP system, accountants must have a good understanding of business processes, and they must be able to work in teams and to communicate clearly and concisely. This is evident in ABC organization as well.

Changes in Accounting Process

According to the conceptual framework, the changes in the accounting process is sub divided into two as changes in the accounting practices, changes in the role of the accountants. Having discussed

about these two sections, this part of the chapter analyzes the overall impact on accounting process. For ABC organization, SAP has significantly automated and standardized the accounting function of the organization. The integrative nature of SAP has brought in many changes to the existing accounting process. As mentioned by Scapens and Jayazeri (2003), integration is the central feature of ERPS and of SAP particular.

As discussed in the previous section, before the implementation of the SAP system, accounts were done through manual systems and not interconnected among the island wide distribution centers. But, after the implementation of the SAP every distribution centers linked to each other and thus, highly automated processes were developed. Further, accuracy and quality of the accounting information has enhanced hugely because of this integration. The experience of ABC organization has revealed that standardization of accounting functions can accelerate the process and increase the efficiency and effectiveness of accounting process (Granlund & Malmi, 2002; Booth et al., 2000; Spathis & Contantinides, 2004; Galani et al., 2010).

Further, with the implementation of SAP, real time information and ability to drill down to the root of the information also aid the businesses to conduct in a more efficient manner (Granlund & Malmi, 2002; Booth et al., 2000; Spathis & Contantinides, 2004; Galani et al., 2010).

In addition, even after the implementation of SAP in ABC organization, the accountants’ traditional role has not been changed. Yet, the automation, integration and standardization of SAP, has made the accountant’s role much easier. However, though the workload of accountant has decreased with the SAP, the basic operations of

accountants like data input operations still remains as the main operation of accountants (Kumar et al., 2002; Arnold, 2006).

Benefits and Challenges of RPS

Benefits of ERPS

The main advantage an ERPS brings to the ABC organization is improving the business processes and information by integrating all functional areas. Many studies reveal that ERPS would automate and integrate business processes, produce real-time data, simplify business processes, and share common data across the organization (Bea & Ashcroft, 2004; Spathis & Contantinides, 2004; Balls et al., 2000; Galani et al., 2010). Booth, Matolcsy and Wieder (2000) offer evidence showing that ERPS have proved more effective in transaction processing, reporting and decision supporting. Moreover, Nah, Lau, and Kuang (2001) express in their study ERPS ultimately increase the efficiency, enhance the decision-making in businesses. Thus, ERPS brings changes in to organizations and provide competitive edge. These facts actually have become a true at the ABC organization. According to the researcher was able to identify the benefits like reducing the routine workload, increasing working efficiency, increasing the quality of analysis and management of statements and raising competitive pressure (personal communication, October 29, November 12 and November 13, 2014). Moreover, in ABC organization the ERPS implementation has led to increase efficiency of decision making, improve the quality of the data and information, reduce frauds and errors, increase transparency of the transactions, reduce documentary handling, increase the accuracy, speed up the transactions, and ease the reconciliation procedure. Literature has also noted that ERP increases the transparency, accuracy,

efficiency of the organization (Kokouris & Polychronopoulous, 2005).

Challenges of ERPS

As mentioned above, though ABC organization being experienced benefits from the SAP, at the same time faced significant number of challenges. As the major challenge, many respondents in the ABC organization pointed out that SAP was using an advanced computer system without any prior training. Many authors in literature mentioned the above situation in their studies also. Public administrations like ABC organization tend to have a challenge due to lack of training on ERP. Timbrell (2008) studied knowledge management of SAP implementation projects in the Queensland (Australia) government, and found there was significant doubt that users had the ability to run, maintain, or configure such systems properly. There are several hypotheses about this lack of knowledge: inadequate training, lack of curiosity on the part of users (for exploring the system).

In addition to that many authors pointed out that accountant in public administrations tend to have a lack of practical knowledge about ERP (Timbrell, 2008; Balzli & Morard, 2012). In the case of ABC the researcher found that many accountants still do not have a hundred percent awareness about the SAP functions even after four years from the implementation. Cacciagudi Fahy et al. (2002) outlined the difficulties that public sector organizations may face in trying to initiate changes to work practices and conditions. They noted that such changes often require approval by union representatives. In the case of ABC organization, the situation was same. Some respondents of the ABC organization expressed the differences between the public and private sectors. They mentioned that accountants and accounting managers

in the private sector tend to have better educational backgrounds and more experience with ERP projects than the public sector. Some authors in literature have found important general differences between the public and private sectors. For example, Chang et al. (2000) and Timbrell (2008) described ERP implementation in the public sector, and stated that the issue of “ERP knowledge management” is most problematic in a government context.

Further, there appeared a range of opinions and findings in the literature. According to the findings of the ABC, the researcher believes that research on ERP implementation in the private sector most likely cannot be applied effectively to the public sector. Because when compared public sector and private sector, ABC organization is the only public sector organization which implement the ERPS in the Sri Lankan context (Personnel communication, October 29, 2014).

Thus, the public sector has only limited experience with ERP implementation compared to the private sector (Wanger & Lederer, 2004). Therefore, another challenge facing ABC organization is having a limited experience with ERP in public sector. Further, many studies have revealed that organizational, cultural, and staff changes or reduce the staff can result from an ERP system implementation (Kumar et al., 2002; Granlund & Malmi, 2002; Sutton, 2008). Yet, those findings do not match with the researchers’ findings. As the finance manager- financial reporting and budgeting explained; “No, as a public sector organization we are unable to carry out such a radical change within ABC organization. If government policy makers planned to reduced staff as private sectors do many obstacles may occur within corporation as well as country” (personal communication, November 13, 2014).

According to the findings, it is clear that though ERP brings noticeable changes to the organizations, there cannot observe changes like any reduction of the staff or cultural or organizational change, at ABC. On the other hand, some respondents explained that SAP was implemented at the ABC without any prior feasibility study. As mentioned by the respondents in their words “simply it is a copycat” (personal communication, October 29, 2014). As the internal audit manager believes even four years after the implementation of SAP, ABC is unable to implement the system very efficiently.

However, SAP provides significant number of Challenges as well as benefits. According to the case of ABC, the researcher found that many of those challenges arised due to lack of proper training, lack of skilled people, lack of practical knowledge about ERP in public administration (Timbrell, 2008; Balzli & Morard, 2012).

According to the findings of the ABC, the researcher identified that ERP implementation in the private sector cannot be applied effectively to the public sector. ABC organization is the only public sector organization which implement the ERPS in the Sri Lankan context (Personnel communication, October 29, 2014). Thus, the public sector has only limited experience with ERP implementation compared to the private sector (Wanger & Lederer, 2004). Therefore, another challenge facing ABC organization is having a limited experience with ERP in public sector. Much of the existent literature does not agree on the impact of ERP on the finance and accounting fields. Some authors have argued that its impact is limited (Granlund & Malmi, 2002; Scapens & Jazayeri, 2003). The researcher found that though the ERPS do not make radical

change to the ABC it has streamlined the accounting process through visibility, control and high quality, real time information. Further, it has changed the ways of working in the accounting division while enhancing and enriching the scope of the accountants' role. Moreover, it has brought out the accounting process from the accounting division to the entire organization while converting the accounting process forward oriented. However, the researcher found that weaknesses of the public administration diminish the impact of ERPS on the accounting process of the ABC organization.

CONCLUSION

The purpose of this part is to provide a summary of the study and provide key findings in a nutshell. Finally, limitations and suggestions to future researches are also discussed.

Key Findings

The objectives of this study were to identify the consequences of ERPS on accounting practices of the ABC organization, to explore the impact of ERPS on role of accountants of the ABC organization and to identify the benefits and challenges of the ERPS of the case organization. To understand the practical consequences of the ERPS on accounting process, identifying the changes in the accounting practices, roles of accountants and benefits and challenges derived through the ERPS is very much necessary. Further, need to identify the changes, exploring the accounting process prior and after the implementation of ERPS. Thus, in this study the accounting practices and the accountant's role prior and after the implementation of ERPS and the benefits and challenges of ERPS in ABC organization is scrutinized. Through the evaluation of data collected in the study, it is identified that ERPS has brought in

considerable changes in the accounting process in ABC organization. Although the ERPS has not influenced in adopting new accounting methods and techniques, it has aided the organization to improve the accounting process of the organization. Specific characteristics of ERPS such as integration, standardization and centralization have contributed to the changes in the accounting process (Scapens & Jayazeri 2003). ERPS facilitates incremental changes to the accounting process of the organization rather than changing the process radically. Although, there are no fundamental changes in the accounting practices/techniques by the implementation of the ERPS, yet, enlarge the roles of the accountants. Thus, the present study found that, through the study conducted it is found that, ERPS implementation facilitate the efficient and effective use of accounting while enlarge the role of accountants. But, in the case of public sector organization, it diminishes the effectiveness and efficiency of ERP system's due to weaknesses of public administration.

LIMITATIONS

As this is a qualitative study, the ability to generalize the findings is a significant limitation that the researcher confronted. Since the present study is conducted as a single case study, applicability of the findings to the other businesses is limited. The current study is limited to an organization in public sector in Sri Lanka. Hence, the findings of the study might not be comprehensively applied to the other private sector business in Sri Lanka as the nature of the sector influences the nature of accounting process.

FUTURE RESEARCHES

Since this study is limited to accounting process, a future study could be carried out as to study the impact of ERPS

on all business functions. By scrutinizing all the business functions, researchers can identify how the ERPS affect the whole business. This research is decided as a single case study due to the time constraints. However, a future research is possible on multiple case studies. Through multiple case studies, researchers can get a better knowledge on practical consequence of ERPS as it is able to compare and contrast the practices of more than one case. Multiple studies could be undertaken in the same sector and/or different sectors.

Finally, a longitudinal study is also possible on this phenomenon by selecting a company, which anticipates implementing an ERPS. Through the study, it can completely analyze how the ERPS implementation influences the accounting process of the organization. Thus, the researchers could gain an in depth knowledge on the consequences of ERPS.

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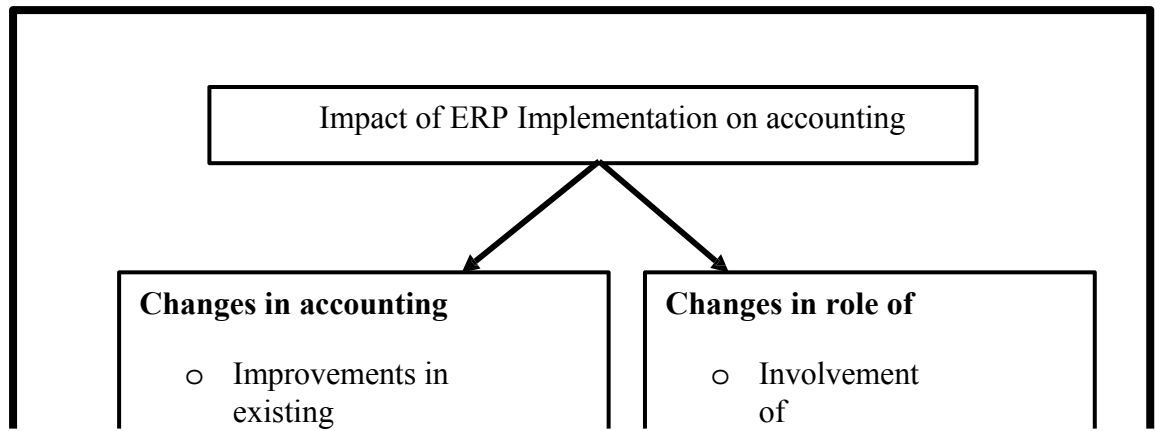
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A study on Automobile Recalls and its Impact on Supply Chains

Dr. C. Sengottuvelu, CPM (ISM-USA)

Professor & Head-Consultancy

SCMS Cochin School of Business,

Muttom, Aluva-683 106, Cochin, India.

sengottuvelu@scmsgroup.org / sengottuvelu_c@yahoo.com

Abstract

Today's competitive pressures compel companies to continually seek new ways of doing business. Supply chain management (SCM) is one such area which can provide an effective tool to build an advantage that no longer resides with the company's own capabilities, but with the relationships that the firm can forge with their external partners – the customers, the suppliers and other service providers, forming a network called the supply chain. If the supply chain is not managed properly then the delivery gets affected resulting in customer dissatisfaction and hence loss of business. The overall purpose of this study was to learn the recall reasons and its impact on supply chains.

Product recalls by the companies have become very common and increasing year after year. Some of these recalls are major in nature and business impacts are very high. The cost of recalls and its effect on insurance and other areas are significantly important considering the current business scenario.

The study will be exploratory in nature during initial phase which focuses on primary & secondary data and descriptive in nature in the final phase comparing the results with previous study. All the leading auto mobile companies and their recalls will be studied from 2004-2014 covering ten years. Mainly the data will be collected from secondary sources and published / reported by the companies. The final analysis will be based on nature of recalls, reasons for recalls, number of recalls and its impact on supply chains.

The study will focus on recalls as tool for transparency and competitive advantage. The major impacts on the supply chains, the company's strategic actions on recalls and its outcomes; the role of regulatory bodies and its stipulations, the level of compliance and commonalities of the recalls and company's strategic actions are studied during ten years of period.

Keywords: Supply chain management, recalls, regulatory bodies, business impacts, competitive advantage,

Role of Information Technology in Commerce and Management

Dr. Monica Bansal

Assistant Professor in Commerce
Panjab University Rural Centre, Kauni,
Shri Muktsar Sahib-152026 (Punjab) INDIA

Abstract

Technology compete a vital role within the growth of commerce and trade across the planet. it's terribly true that we've been doing business since a protracted before there have been computers; beginning from the straightforward idea of barter trade once the idea of a currency wasn't nonetheless introduced however business and commerce was still slow up till the purpose once the pc revolution modified everything. virtually each business relies on technology on all levels from analysis and development, production and every one the thanks to delivery. little to giant scale enterprises depend upon computers to assist them with their business wants starting from purpose of Sales systems, data management systems capable of handling every kind of knowledge like worker profile, consumer profile, accounting and chase, automation systems to be used in giant scale production of goods, package sorting, assembly lines, all the thanks to selling and communications.

Keywords: Digital Communication, Information Technology, Management, Specialization

INTRODUCTION

The last twenty years have marked a colossal increase within the variety of home computers. With it, pc house owners have invariably taken to entrepreneurship in several varied fields. Because of the expansion of technology, computers and also the web, new strategies are developed for process everyday business activities simply. While not the arrival of technology, routine tasks would otherwise have taken and large quantity of your time and specialization. Beyond question, the pc represents the highest technology development within the last century because it relates to businesses these days, each giant and little. Advances within the field of technology have created a colossal variety of business opportunities. Information Technology (IT) has been influencing society for thousands of years. Smoke signals, the abacus, writing, paper, pens and the printing press were all once considered the forefront of IT because those technologies were the latest and greatest in communication. But today it is widely accepted that the forefront of IT lies in digital communications. As with all

historical Information Technology developments, digital communication technology is revolutionary in terms of society, business, defense and culture. But what is it about digital communications that sets it apart from all other previous technological advances? What is the role that this technology can play in modern society?

Firstly, IT acts as an assistant. It's a medium that allows giant volumes of data to be keep, processed or transferred at lightning speed. This suggests that there's a lot of info at hand to form choices, maintain relationships, monitor markets or follow movements.

The power of this notion shouldn't be underestimated, it permits folks to form choices supported lots of up thus far info. The military, academic establishments and huge business have long understood the facility of this notion however it's solely been within the last 10 years that thought society has conjointly embraced the facility of data for each social movements and little business.

Secondly, Information Technology is an associate enabler. Solely a chosen minority of specialized firms within the world will claim that it's their business. Most companies and establishments use data Technology to alter functions that drive their core business. This could embrace higher communication between employees, suppliers or customers or it's going to embrace higher plus management. Regardless of the operator, data communication makes the storage, process or transfer of data a lot of economical than ever before. However it's necessary to notice that in essence it doesn't amend core businesses, ideals, ethics or movements. It simply allows them to operate at a larger scale far more expeditiously.

Lastly, Information Technology assumes the role of guardian. As knowledge and data is massed on around any subject you care to imagine, huge stores of information are rising able to service any new requests. And in this lies the protection contradiction in terms that trendy info Technology presents. One will argue that a lot of obtainable info makes our lives a lot of economical, safer and richer. While the opposite argument is that the exact same info that has these edges is additionally our mythical being heal owing to the protection implications of unauthorized infiltration.

There is very little doubt that the role of knowledge technology is directed and affected by the terribly technology that defines it. Today, that technology permits us to gather, manipulate and communicate plenty of knowledge. As a consequence, the role of IT revolves around up the potency, capacity, speed or accuracy of any components which will take pleasure in the functions that trendy data Technology systems offer.

REVIEW OF LITERATURE

The growth of information technology is changing its roles day by day. (Chalmers, Ricardo 2006)¹, No invention has ever influenced the human beings as computer has. In less than seven decades of its existence it has managed, materializing the Concept of a global village.² The reasons for the universal use of computer technology in business can best be determined by looking at how it is being used across the business world (Chandra S. and Strickland T., 2004)³. Information Technology refers to the creation, gathering, processing, storage and delivery of information and the processes and devices that make all that possible (Romano, N.C., Fjermestad, J. 2002)⁴. Information Tech has revolutionized the phase of business around the world. Local businesses have become international due to a simple website. I.T. has helped businesses in advertising (Talik Ö, Rslan, M, 2009)⁵. Communication has bloomed two business organizations if they need to work together can easily do so. Hotmail, when merged with MSN was easy since the service was online. Business these days require a lot of planning, due to high tech organization systems on computers, planning can be done on an organized pattern, with schedule formats, grant charts etc. Huge databases can now be controlled and stored on network and backup drives. Accessibility of files also has become an easy task with series of password keys and shared folders. Cash transactions are easily made, delay is reduced hence giving liquidity to business (Anderson, E W, Fornell, C, Lehmann, D R, 1994)⁶.

ROLE OF INFORMATION TECHNOLOGY IN BUSINESS

The role of data technology systems in an exceedingly business atmosphere will be classified into four broad classes. These classes embrace performance, communication through networking, management and

enterprise roles.⁷ Data technology provides business and industrial systems for businesses. These systems change businesses to perform effectively and with efficiency.

Function IT Systems

Function IT systems are applications that allow individuals to function effectively in the workplace. Examples of common IT systems that enhance workplace functions are word processor applications, spreadsheet applications, statistical analysis software and computer aided design (CAD) programs. Employees can work and perform their task individually or collectively using these specialized software technologies.

Network IT Systems

Network IT systems allow effective communication within and outside an organisation. Examples range from simple e-mail (electronic mail) to blogs, wiki sites, IM (instant messaging) and electronic conferencing systems. These types of technologies promote interaction and collaboration among working groups and also facilitate quick information flow at all levels.

Management IT systems

Management IT systems (MITS) can be defined as planned applications that are designed to process data and transform the processed data into useful information for management decision making. It should be noted that Management Information systems (MIS) are subsets of Enterprise IT systems (this is explained later on in this article). However, because of the vital role MIS play in a business environment, it is considered here as a major information technology for businesses.

In a typical scenario, management operates at different levels and so it is possible to apply management information systems at these varied levels. Basic examples of management information systems are human resources management systems, financial management information systems and marketing management information systems.

Enterprise IT Systems

Enterprise IT systems are technologies designed to integrate and manage entire business processes for large organizations. Typically, enterprise application software is hosted on large servers over a computer network. Transmission of information can either be internal or external. Examples of enterprise information systems may be accounting software, health care specific software or Electronic Data Interchange (EDI)⁸. Another good example of software application within this category is Customer relationship management software (CRM).

The role of Information technology in business is wide and varied. It can be said that IT provides a huge range of capabilities that enhance management performance at all levels. It is therefore important to understand the four major categories of IT systems and their functions and roles in a business environment.

CONCLUSION

Without this technology the thought of economic process would not become a reality. Currently all enterprises have the potential to travel international through the utilization of the net. If your business features a web site, that selling tool can permit your business to achieve purchasers across thousands of miles with simply a click of a button. This may not be attainable while not the net. Technology allowed businesses to grow and expand in ways that ne'er thought attainable.

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Gamifying Recruitment Process: A Qualitative Study Aimed At Bridging the Skills Gap in UAE Jobs Market

Hanan Abdullah Mohammed Saeed
Undergraduate Student of Business
Administration

Email: 1039164@students.adu.ac.ae
College of Business Administration,
Abu Dhabi University

Abu Dhabi University, P.O. Box 59911,
Abu Dhabi, UAE

Sobia Younis Younis

Undergraduate Student of Business
Administration,

E-mail: 1028746@students.adu.ac.ae
College of Business Administration,
Abu Dhabi University

Abu Dhabi University, P.O. Box 59911, Abu
Dhabi, UAE

Dr. Chowdhury Golam Hossan

Assistant Professor of Management

E-mail: Chowdhury.Hossan@adu.ac.ae

College of Business Administration,
Abu Dhabi University

Abu Dhabi University, P.O. Box 59911,
Abu Dhabi, UAE

Abstract

The overall purpose of HRM is to ensure that the organization is able to achieve success through people. And this is ensured by the two major practices and policies of HRM, recruitment and selection of job candidates. The aim of this research is to introduce gamification in recruitment strategies as a guider of high school students' educational and career selection that is driven by jobs market demands. The first part of this paper identifies thoroughly to the reader the definition and problem of skills gap in jobs market generally, and more specifically in UAE's context. Skills gap is the mismatch between what jobs market demands and what job seekers actually provide. Because such gap is widening instead of closing, although more graduates are entering jobs market and more jobs are available, recruitment strategy is defined to highlight the importance of attracting the right job candidates. Following, as it is very important to the reader to have an overall viewpoint of the meaning of Gamification in recruitment, how it influences behaviors and attitudes, and how it affects high school students' decision making, we interviewed three students and analyzed their perceptions towards the game element, recognizing the recruitment games' effect on students' selection of majprs. Finally, some concluding recommendations have been addressed.

Keywords: Skills gap, UAE's jobs market, High school students, Gamification, Recruitment.

INTRODUCTION

One of the biggest challenges that HR professionals face, nowadays, is the skills gap. On one hand, the number of job seekers is growing every year; while on the other, complaints of HR executives, about not being able to find suitable candidates, are also increasing. It seems that the void between what employers seek and what job seekers have to offer is getting bigger day by day. Such issues have forced organizations, the world over, to rethink and redesign their recruitment and selection functions. Gone are the days when recruitment and selection function comprised of, merely, matching CVs to job requirements. Instead, organizations are now out in search for a flexible, multi tasting, multi-talented workforce with an increased focus on

qualities like collaboration and teamwork. Attitudes and behaviors of job candidates have come to form the very core of selection and hiring decisions. Statistics show that around 50% of all American employers cannot find a qualified and suitable candidates for at least one job opening, similarly, 8 in 10 find the whole process, of filling job positions, very difficult. However, this problem is not one which is confined to United States; it's a global issue. Looking at UAE's job market, we find similar conditions prevailing in the job market. Statistics say that UAE will experience a labor gap of 200,000 by 2015, and this gap is expected to increase by 32% each year. In the light of these disturbing facts and figures, while most experts view educational reforms as a solution to this problem, this research

paper provides an insight into some new answers. It delves into the role companies can play, to bridge this gap. It suggests the introduction of gamification, in the recruitment function, to address the problem of skills gap. "Gamification", putting it simply, is the use of game mechanics to non-game activities to attract users. The suggestion of using games as a recruitment tool is based on the premise that, growing up, today's generation has been hugely impacted by gaming. Statistics show that 97% of all 12-17 years old in US are gamers. From these figures, we can estimate similar figures for youngsters in UAE. However, the phenomenon of using gamification is almost nonexistent in UAE's context, to date, and research on this topic is still at the infancy stage.

Thus, the main purpose of this research paper is to explore the effects of using gamification in recruitment as a tool to drive students' choice of their career paths. It examines the role gamification can play in changing the perception and attitude of students towards less desirable and unfamiliar career fields. It proposes that when students are exposed to recruitment games, they will be able to form a realistic idea of workplace, in general, and of the sector or field they prefer for work, in specific. Thus, on one hand, students will be able to avail the opportunity to make the right career decisions, at an early age. On the other, companies will be able to attract diverse groups of candidates from which they can easily pick the ones best suited to the job and their other requirements. Such a trend, if introduced successfully in the region, can lead to balancing the job market demands and expertise that job candidates acquire, thereby closing the skills gap. Experts predict that, in the coming years, there will be significant advances in the adoption of gamification, as an effective recruitment strategy, by

companies worldwide. These predictions seconded by Dubai's hosting of Expo 2020, which will create around 300,000 new job openings, increase the need for a smart, powerful tool that not only helps companies in recruitment but also fills the skills gap in the market.

Within the UAE's context, this research addresses the use of gamification in recruitment strategies and its role in driving high school students' educational and career decisions, to bridge the gap in local jobs market. The paper uses qualitative research methods i.e. in-depth interviews and observations, using a small sample of students, to support its hypothesis. Data collected is analyzed to find out how respondents' view gamification and the effects it has on driving certain attitudes and behaviors. Primary data collected is supported by data from secondary sources to ensure authenticity. Conclusions and recommendations are drawn based on findings from primary as well as secondary data.

STATEMENT OF THE PROBLEM

The studies reviewed agree that skills gap is a global challenge from which UAE is not in isolation, and as it moves towards its aim of building a knowledge-based economy, the country needs all the skilled graduates it can get. Some studies in UAE's context agree that reforming education at all levels is the solution to match students' skills with what jobs market needs, whereas others call for improving immigration policies to allow for importing skills that the local market falls short of. While one study emphasizes the role of career guidance in helping Emiratis make decisions about their future, this study takes it one-step further in improving recruitment strategies by adopting gamification in recruitment practices to influence high school students' impression of different career paths and drive their

selection of higher education to meet local jobs market's demand.

PURPOSE OF THE STUDY

While UAE is facing the challenge in how to prepare a generation that contributes effectively in the global labor market-driven knowledge economy, the purpose of this qualitative study will be to explore the effects of gamifying recruitment process on driving school students' educational and career goals, aiming at bridging the skills gap in UAE jobs market.

LITERATURE REVIEW

High School Students Face Problems Selecting Majors

Decisions regarding higher education, majors and career prospects are critical. High school, then, may seem like a logical time for young people to receive counseling about their job paths; yet CareerBuilder's Survey revealed that only 25% of polled job seekers received career guidance in high school, and 41% said they wished they had received more guidance. While the majority of employees claimed to have received minimal information when trying to decide which career path to pursue, 23% claimed to have received no information at all. This lack of information creates a set of challenges for young professionals, among whom many are entering the workforce with no knowledge of the types of entry-level jobs available to them (CareerBuilder, 2014). Emirati Experts revealed that 75% of successful high schoolers in UAE don't have clear vision about what majors they want to go for when joining higher education, 30% choose majors based on their friends' advice not their willingness, whereas 25% make such decision without any clear idea on those majors' nature. Students and their parents are concerned about a set of

core themes that are related to the selection of higher education. Such themes include what new academic disciplines the student should attend, how suitable a discipline is for both student's academic and professional expectations, to what extent a certain specialty has the attention of the business sector in the labor market, and how much return a discipline will bring to the student after earning a university degree (Alittihad Newspaper, 2011).

Skills Gap

According to the CareerBuilder's survey, 39% of people under 25 are either unemployed or underemployed, and 44% of college-educated workers under 25 have jobs that do not require a college degree (CareerBuilder, 2014). One of the biggest challenges HR executives face is the skills gap- the gap between what employers need and what job seekers are offering. This gap is actually widening instead of closing as employers are having a difficult time filling open jobs, despite the fact that more people than ever before are earning college degrees and entering jobs market. The American Bureau of Labor Statistics stated that more than half of employers say that they cannot find qualified candidates (Schawbel, 2014). Another study by Accenture revealed that among companies currently facing a skills shortage, 66% anticipate a loss of business to competitors, 64% face a loss of revenue, 59% face eroding customer satisfaction, and 53% say they will be forced to delay in developing new products or services (Brooks, 2013). McKinsey's The World at Work report found that there could be 20 to 23 million workers in advanced economies without the skills employers will need in 2020 (Freifeld, n.d.).

CareerBuilder survey reveals the reasons for the widening gap. 837 job seekers who felt there is a skills gap, and

55% of them thought that the skills gap is a result of education gaps in particular areas, 53% believed that the gaps of on-the-job training is to be blamed, and 42% felt that lack of knowledge about potential career opportunities contribute to the issue. Moreover, among 936 employers surveyed, 19% found that lack of job candidates' knowledge about how to search for a job is one of the factors widening skills gap (CareerBuilder, 2014).

Skills gap is a global issue, but the issue is serious in UAE because some industries are unpopular with school leavers. Shortages are found in health, engineering, mechanical and high-tech skills with these industries are regarded as less desirable career paths, as students lack awareness of what the jobs market is like or what expectations for particular sectors are (Bouyamoum, 2014). A study, carried out by Deloitte, claimed that UAE would have a work force gap of 200,000 by 2015, with key industries falling short. One of the areas in which there is a skill shortage now is Computer Science; the skills gap is increasing at a compound annual growth rate of 32%. To bridge the gap, a study recommended computer science being taught in elementary and secondary school, and suggested implementing a good immigration policy, so that the country can easily import the skills it needs (Paye, 2015). Another study revealed that engineering specialties suffer from a skills gap, which is resulted from the construction boom in UAE. Vacancies in those specialties are 5 times more than the number of universities' engineering graduates. The study emphasized the need to promote awareness tools to guide high school students towards studying engineering disciplines, with government support to provide distinctive career opportunities for engineering students (Sulaiman, et al., 2014).

Recruitment Strategy

Recruitment is a core area of HRM. It is not simply a technique for filling jobs – it is also levers for organizational change, sustaining employee commitment and achieving high performance (Price, 2007). Recruitment is defined as "the activity that generates a pool of applicants, who have desire to be employed by the organization" (Lewis, 1985). Recruitment phase aims to attract suitable candidates and examine them carefully to produce a short list for the selection process (Price, 2007). Having the urge to remain competitive, companies need to devise strategies for recruiting the best potential employees. They cannot afford to under invest in talent acquisition resources or tools, so they should always look to their future skills needs and their current skills mix when deciding recruitment strategies (Trade Journals, 2006). Such strategies must be dynamic and properly designed to suit the organizational needs and achieve business goals (K., 2010). Based on the business strategy, HR departments must forecast the skills that will be necessary in both short and long terms, after which, an assessment of the current workforce should be done. Finally, a gap analysis will determine what steps should be taken to ensure the workforce that is required for the future. This should answer questions such as how many will we need, what skills, where will we get them, and do they currently exist? (Freifeld, n.d.). Without excellent staff, companies cannot create excellence in other areas. One way of doing this is to develop a strong employer brand; a multi-dimensional construct designed to attract suitable candidates for employment, by providing job applicants with a realistic image of what it would be like to work in a company. This happens through encompassing such factors that make it a good place to work as bright office space or flexible working hours, though which cannot replace salary

differentials, can influence employment choices. (Pollitt, 2007)

What is Gamification?

Gamification has been defined as "the use of game mechanics and game design in a non-entertainment context." Gamification involves the application of game attributes like puzzle, play, transparency, design, and competition to real processes in an organizational setting so that routine tasks become more fun and engaging (Meister, 2014). The objective of using gamification in organizations is to change employees' behavior and attitude with the help of game psychology. Usually, games are designed with the purpose of making things fun and motivating for players; in contrast, conventional tools used in organization are not designed with that mindset. Therefore, gamification can be used to enhance employees' motivation and involvement in their work (Harbert, 2014). Another reason for gamifying the workplace is that young workforce, who is entering the job market nowadays, is very much technology oriented. By mixing work and play, organizations can utilize the abilities of this workforce and exploit its talents in a better and effective way. Using game techniques fosters friendly competition among employees to perform better when they compare game scores with each other (Kably, 2014). Currently, less than 5% of organizations, all over the world, are using gamification. However, analysts expect to see a rapid increase in the use of this technique in different organizational areas over the next few years as employers, everywhere, start trying to gain from the benefits that gaming tools can bring to the workplace (Harbert, 2014). According to a recent survey conducted by Avanade, 73% of all senior managers surveyed viewed the introduction of gaming techniques in the workplace as a top priority. Moreover, according to research giant, Gartner, 50%

of all organizations in the US will use gamification to manage their innovation activities by 2015, and that 70% of the Global 2000 organizations will start using gaming elements via at least one gamified application by the end of 2015 (Fairchild, 2015). Organizations have been using gamification only to attract more customers, retain them, and better engage them (James, 2015). However, now more and more organizations are moving towards adopting gamification in their internal applications and operations too.

Gamification and its Effect on Behavior and Attitude

According to a study by Gallop, more than 60% of workers, nowadays, are disengaged during work. The study concluded that employers have to come up with new and creative ways to change employees' behavior i.e. increase their engagement and involvement in the workplace. Increasing interest in gamification comes from a desire, on the employers' part, to achieve greater levels of employee's engagement (Meister, 2012). Since game players are known for being highly involved in the game they are playing, organizations have started asking how they can generate the same level of interest, in their employees during work, and use it in areas like recruiting, problem solving, and training and development (Meister, 2014). The inherent reward and incentive system built into gaming can keep employees engaged and thus trigger better performance and productivity. In addition, games' scores and rewards can be used as a basis for the rewarding system (James, 2015); (Meister, 2012). Besides having a positive effect on employee's behavior during the job, gaming can also be used to change the impressions people have about organizations before working there, which influences their job selection.

How can games change people's attitude? According to ABC Model of Attitude, every attitude consists of three components: (A) affective, (B) behavioral, and (C) cognitive. Research shows that with the help of game design, the affective and cognitive components of people's attitude can be changed. According to Elaboration Likelihood Model (ELM), humans process information either centrally or peripherally. Central processing of messages will lead to a stronger attitude change, and peripheral processing will lead to a weaker one. The traditional recruitment process and tools used are designed in a way that people process information peripherally; these tools are not engaging and might not change people's attitude. Therefore, when game design and elements are incorporated into recruitment process, people tend to process messages or information centrally which leads to a stronger attitude changes. It is the candidates' perception of the organization that affect their decisions whether to apply for it or not, so organizations can use gamification to influence how people think about them and attract larger and better skilled job candidates (Chow & Chapman, 2014).

Games as a Recruitment Tool

Over the past few years, more and more companies have started using gamification in their recruitment processes. Using gamification tools to measure job candidates can help organizations reap a variety of benefits such as attracting more diverse groups of job applicants, getting a more realistic picture of the skills and knowledge the applicants possess, providing insight into work processes within the organization, and making the whole recruitment process fun and engaging (CEB, 2014). Moreover, games provide job seekers with a fun way to know more about an organization, the type of work it offers, and its culture. Especially to the young workforce entering

the jobs market, gaming is a huge attraction. It transforms the boring job application process into an engaging, interactive and fun activity. For the recruiters, using gamification can give them an idea of how the job applicants think and would perform on the job, beforehand (James, 2015). Gamified assessments have been developed based on science and entertainment; it is the underlying science, data, and analytics that provide employers with rich insight into candidate's mental agility, cognitive speed, attention, and spatial aptitude. Playing a game produces data that psychometric algorithms and predictive analytics use to score each candidate for the data-driven HR manager. Inspired by traditional psychometric assessments, recruitment games work in just the same way as regular psychometric tests. The enjoyable and engaging game experience is underpinned by a validated and trusted predictive psychometric framework, to help employers identify high potential candidates in a fun, fast and reliable way (Figure 1 in Appendix A represents an example of a psychometric report generated from a recruitment game) (Revelian Company).

Many organizations have started using gamification in their recruitment strategies. NXP Semiconductors, a leading name in semiconductor manufacturing industry, is taking steps to accelerate its recruitment process by adopting gamification to address the challenge of finding the right talent at the right time from the jobs market (Accenture, 2013). In addition, L'Oreal, one of the world's largest cosmetics companies, employs gamification for recruitment in different fields including marketing, human resources, sales, and operations. These gaming tools allow job applicants to come up with solutions to real life challenges, and this assists the recruiters at L'Oreal to measure the applicant's skills and abilities

that are difficult to measure through traditional hiring methods (Kably, 2014). Furthermore, Upstream, a large marketing technology, has also taken up gamification as an innovative approach to recruitment and an effective measurement of job applicants in areas like ability to take on challenging work, creativity, innovation, understanding, knowledge, and analytical skills (Upstream, 2011). Marriot Inc., an international hotels chain, has also developed an online game called My Marriot Hotel to acquaint the young workforce, entering the job market, with not only the Marriott brand but also the company's culture and the hotel industry in general (Fairchild, 2015). Bank BNP Paribas ran two online games for potential new recruits; a coding-related exercise for students interested in technology and an adventure game where players encountered finance-related challenges (Langworth, 2014).

Recruitment Games for Millennials

Recent research suggests that graduates are not necessarily gaining job skills at university. Many employers complain that too many young Americans are simply not workforce ready. Though there is a disconnect between what many employers expect and what Millennials are prepared to deliver, companies must embrace those young people rather than simply shoe-horn them to conform. The Zogby Analytics poll conducted among 1,019 18-34 year old smart phone users offers some unique insights into understanding the world of this age cohort, and provides the great significance that video games play in the lives of young people. In the poll, 57% of the surveyed 18-34 year olds said that they play video games at least three times a week. Moreover, 67% said those games are important in helping them to learn how to create winning strategies, 70% felt games aid them in learning how to solve problems, whereas 63% noted the

importance of video games in teaching them how to work smoothly and successfully on a team. 50% said games were a big part in helping them resolve conflicts, and 66% felt playing video games is vital to help them understand new technologies that will be useful in life (Zogby, 2015). For organizations recruiting for their graduate program, a non-millennial-friendly brand perception can be a handicap that is not fast to change. There are several potential advantages for employers in using games to recruit graduates. Using games can help employers attract and engage students in a market where there is considerable competition for the best talent. Gamifying graduate recruitment could be good for students too. Recruitment games can assist in combining the process of applying for jobs with building the skills employers require (Langworth, 2014).

RESEARCH QUESTIONS

Central Question

How would the implementation of gamification as a recruitment tool drive school students' educational and career goals to help bridge skills gap in UAE jobs market?

Sub-Questions

- What affects high school students' selection of major?
- What causes skills gap in UAE's jobs market?
- How does gamification drive behaviors and attitudes?
- How would gamifying recruitment process help bridging the skills gap?

RESEARCH METHODOLOGY

Research Method

To achieve research's objectives, qualitative research methodology is used

as detailed answers (qualitative) are needed to address research questions. Three interviews were conducted to facilitate in-depth exploring of the issue. Researcher's personal observations have been noted during the interviews. Since number of respondents covered in this study is very small, personal observations would be a great tool to get in-depth understanding.

Data Collection

Data collected through interviews and observations are analyzed to identify games' effect on directing students' attitude toward achieving desired outcomes. The data is collected from primary sources. The interviews are based on open-ended questions to explore in-depth on the issue. The interviews were documented in a transcript form, and then analyzed to generate thematic codes. Coding is a method of discovery to the meaning of individual sections of data. These data function is a way of patterning, classifying, and later reorganizing each datum into emergent categories for further analysis. (Saldana, 2011)

Sampling

Graduate students of Abu Dhabi University were the population of this research to generalize the findings to UAE. Respondents to be qualified for this study should be undergraduate business students with an experience of using complex business simulation software. Only three respondents were found suitable for the interview to get detailed and accurate information as much as possible. The researchers took into their account the game element while choosing the participants. All participants had played a strategic management game called "Cesim Global Challenge", which is a simulation software aimed at testing the understanding and knowledge of players on how to operate a real business and its different functions, on a global level in a

dynamic environment (Cesim.com, n.d.). They have credential evidence of extensive usages of the software. To ensure the anonymity of the respondents, each interviewee is referred to as *Respondent*, and assigned a number from one to three.

Questionnaire Development

The semi-structured Interview's questions were based on the literature review. Applicable modifications have been made to reflect UAE's local context and situation. Questions covered the (elements) of the identified topic.

Codes (Major Themes)

Transcripts from the interview were analyzed using thematic content analysis to explore findings. During the interviews and researchers observations, seven major themes have been identified and related to conclude a connection between recruitment games for high school students and their selection of majors. The themes model along with the sub-codes are represented diagrammatically in Appendix B.

ANALYSIS AND DISCUSSION

This section analyzes the participants' responses and opinions on gamifying recruitment process and its potential effects on the selection of major for high school students. To reach this conclusion, seven main themes were identified and related: Selection of Major, skills gap, recruiting companies' role, recruitment strategy, gamification and perceptions, games as a recruitment tool, and recruitment games for millennials (refer to Figure 2 in Appendix B). Each theme is discussed in turn.

Selection of Major

Selecting major is one of the most critical decision in person's life. Respondents were questioned about their opinions on different phases students go

through, while selecting a major at university, and how they felt before and after these decisions. Researchers' observations of the responses confirmed with studies reviewed in section 4.1 of this paper. All respondents were of the view that FAMILY ADVICE greatly influenced their decisions about major choice. Respondent1 stated, "My oldest siblings, who were already working, shared their experience with me, so I got to know that if I choose a major, I should keep the job factor in mind", while, Respondent2 said, "My family and siblings helped me with my future. They had it planned for me", and Respondent3 stated, "my father had a large stake in helping me find the correct career which would help me fulfill my goals and aspirations". Moreover, the role CAREER COUNSELLING AT SCHOOL played in influencing student's major selection was noticed: "At school, we used to have an academic counselor, who used to guide us based on our personality and academic performance as to what jobs we should think of." [Respondent1] Respondents also admitted that, as high school students, their LACK OF SELF-AWARENESS influenced their perceptions of what career path they were interested in pursuing. Respondent1 said, "At high school, I was following science field, but then I realized that business major seems to be more favorable." Respondent2 said, "Back then, I did not know what I wanted." As respondents had lack of awareness about their preferences, UNCERTAINTY AND VAGUENESS while making their selection is resulted, with all admitted that, at that time, they were unaware of different kinds of jobs that existed for business students, and the different positions that could be applied for in companies. Respondent1 said, "To be honest, I did not know what kind of a job someone, who majors in business finance, could work in. I just knew there were many positions I could apply for." Similarly,

Respondent2 said, "I had an idea about the jobs out there, but it was very vague." Such ambiguity contributed to even more problematic issue, which is MAJOR EXPLORATION. Respondent3 said, "I chose business major as it covered all of the fields in business. During the decision process I was still unsure of what would best fit my skills, so it gave me a chance to explore."

All respondents also admitted that, as high school graduates, they didn't have a definite plan when it comes to major choice and career path. Respondents further stated that students may come to REGRET their decisions once they graduate from university and enter the jobs market: "the job market is so unpredictable that current graduates who cannot find a job suitable for them go into regret" [Respondent3]. Some students may even change their majors halfway through, which will result in WASTAGE OF RESOURCES in terms of time, effort and money. Respondent1, for example, said, "Once students graduate from university, they have already spent time, money, and effort. So, they would think that all what they put in their major goes to waste when they could not find a job that matches their skills and knowledge."

Skills Gap

As they are already university graduates, participant were asked questions related to their career prospects, to grasp the skills gap issue in UAE's jobs market from their point of view. To our expectations, all participants, who are fresh graduates, sensed this issue and pointed to the main factors of the widening skills gap in UAE's jobs market. LACK OF CAREER AWARENESS is noticed, as respondents agreed that while deciding on their university major, they had no or vague idea of what kind of jobs are there and what type of positions a certain major will qualify them to fill. Respondent1 said,

"I did not know what kind of job someone who majors in business could work in. I just knew that there were many different positions for which I can apply". Similarly, Respondent3 stated, "There were not many job counselors that helped through the job exploration phase; it was rather a discovery that was to be found by students themselves". Choices regarding higher education, majors and career prospects are critical, and with the lack of career awareness, those choices might be regretted later on when students graduate with a 4-year degree and either stay unemployed because they can't find jobs of their majors, or choose to work in low-skilled jobs in attempt to escape the UNEMPLOYMENT nightmare. For example, Respondent1 said, "I think the work that I was doing, during my internship and the one-month job, can be done by anyone regardless of the major. There were people with IT, marketing, and mass communication majors doing the same job as me, and to my surprise, one of the employees who did the same job as me was in grade 9." Respondent2 said, "I was looking for a job related to my field of study, which is accounting. Unfortunately, all jobs of my field of study require experience so that's forcing me to look for jobs in different fields." Respondent3 could not agree more, "at first I was looking for a job in bank; however, due to limitation I had broadened my mind in terms of the type of job." Companies that insist on experience send a message that they suffer from LACK OF ON-THE-JOB-TRAINING, and experience requirement pushes graduate students to look for jobs in different fields with low job requirements, believing that UNDEREMPLOYMENT is better than being unemployed. Based on the CareerBuilder's findings mentioned in section 4.2, underemployment is actually worse as the country does not get the optimum of those highly qualified people.

Due to that, all respondents agreed that many graduate students regret their choice of majors because they cannot find matching jobs. Respondent2 said, "Some might regret the career or major they choose later in life. I have many friends who have graduated and are currently working in a completely different field than the one they actually majored in and the reason for that is that there aren't any jobs out there for them." Such DEMAND-SUPPLY IMBALANCE leads most of the students to accept any kind of jobs even if those jobs are not what they have dreamt of. Another barrier to finding a major-related job is the LACK OF JOB SEARCH SKILLS. Respondent1 said, "to be honest I have not actually started searching for a job as I am still learning how to search and apply for jobs". Respondent2 said, "I'm not aware of any new recruitment tools or ways used."

These findings support the CareerBuilder's survey results referred to section 4.2, and have the most impact on the skills gap in UAE. Many jobs sectors have their full of skills, while others struggle for related expertise. Actually, skills gap in UAE is not an aggregate issue; many sectors do not have shortages in skills while some others are lacking skilled employees. With lack of awareness about what sectors available, many students go for the familiar specialties. UAE is throwing many opportunities especially with the country's vision towards sustainability, nuclear energy, and aerospace sciences. For this reason, the country cannot tolerate losing any of its skilled people. Instead of selecting a major that has surplus of skilled people who are struggling to find a job, and instead of having those skilled people go for low-skills jobs, it is recommended to direct student's attitude toward making decisions on their university majors and career paths at early stages...i.e. while still at high school.

Recruiting Companies' Role

As the focus of this study is to emphasize the role of business organizations in bridging the skills gap, respondents were also asked to express their opinions about what companies can and should do in spreading career awareness among students to close the gap. All the respondents were of the view that organizations should play an active role, by COOPERATING WITH HIGH SCHOOLS, in order to create awareness among students about their career choices and the jobs market demands. Companies need to interact directly with students by paying visits to high schools. These visits can give students a better idea of the jobs available in the market, and of the skills and expertise that recruiters look for in job candidates. Respondent1 said, "It should be 50:50; Schools should play a role in educating students, and companies should play such a supportive role by, for example, visiting senior schools and informing students on what programs the companies have and what skills and majors those companies need." Likewise, Respondent3 said, "There should be a collective process. Schools and organizations should join together and formulate an effective strategy that would help students to understand what the jobs market demands and decide accordingly." Raising awareness of the topic is essential; however, all respondents stressed the need for offering REAL WORK EXPERIENCE at an early stage rather than at the university senior level. Respondent1 said, "I think it is better to try the job when you're still deciding on your major because at that point you haven't really studied or invested in terms of money, effort, or time." Respondent3 also stated, "At high school it is a better time to undergo such a process because there is still time for a change of mind". Trying the job beforehand is better than trying it while holding the degree. Additionally, internship

at university's senior level does not necessarily provide students with a clear image of how work environment really is. Sharing their experience, both Respondents 1 and 3 respectively said, "there was nothing related to the core courses that I studied, so the internship did not really help me apply the knowledge and skills related to my major", "it was not related to my major; it was just a formality that was fulfilled as internships opportunities are limited over here." Supported by the findings of CareerBuilder's study, colleges and universities need to create pathways of communication with employers who are likely to hire their graduates with more COLLABORATIONS FOR EFFECTIVE INTERNSHIP EXPERIENCE, "I think to boost and motivate graduate students; universities should have agreements and collaborations with major companies to take students as interns." [Respondent1].

Recruitment Strategy

Another area on which respondents were asked to express their opinions was the use of latest recruitment trends by companies. Respondents denied knowledge of the latest recruitment tools that are being used by companies nowadays. However, all agreed that recruitment should not be limited to evaluating the candidates based on one factor such as academic performance, for it should not be the only selection criteria to judge their competence. For more effective recruitment strategy, recruiting companies should take into account multiple factors like abilities, skills and individual personality styles. If such a MULTI DIMENSIONAL CRITERIA is used in recruiting and selecting jobs candidates, companies will end up with making the right choices. In this regard, Respondent1 argued, "Someone with a GPA of 3.0 may be equipped to handle certain tasks in a better way than someone with a GPA of 4.0." Similarly, respondent2 commented,

“People’s attitude and their ability to adapt to the work environment are important indicators that should be considered when it comes to choosing employees.” In addition, respondents 1 and 2 agreed that techniques like IN-DEPTH INTERVIEWS and PERSONALITY TESTS are effective recruitment tools and should be used by companies. Respondent2 said, “Interviewing the candidate is important in my opinion because that way you get to see the candidate in person.” In reference to section 4.3, companies should focus on providing REALISTIC JOBS PREVIEW to help candidates get more knowledge about all aspects of the jobs they are applying for. Rather than insisting on experience as a criterion for recruitment, companies also have to focus on conducting PRACTICAL TESTS AT WORKPLACE to help the job applicants get an idea of what the job looks like, while at the same time provide companies with valid assurance of the candidate's suitability for the job. Respondent3 agreed, “Companies all depend on experience of candidates. However, they should give a training period for potential candidates in order to best judge for the right person”. Respondent1 also stated, “Recruitment should include a number of different tests not only academic ones but also those that will test candidates by putting them in a situation similar to real workplace.”

Gamification & Perceptions

Considering that this paper highlight the gamification concept, participants were asked to share their experience of "Cesim Global Challenge" game, which is a requirement of an exit course at university. Respondents indicated that GAME DESIGN has significant influence on how they played and reacted to the game. Respondent1 said, “The game was not designed in a way that makes all levels and rounds easy to understand.” Respondent2 said, “It was confusing at

some point but it was not that hard to understand.” However, respondents agreed that the game was a good SIMULATION of real world business challenges. Respondent1 said, “I can say that it represented just 60% of the real life because it was online, which is not as similar as if you are present in the workplace physically.” Respondent2 also said, “It does give an idea of how to deal with others when making a decision or how it’s important to apply all your basic knowledge about every area to be able to make the right decision.” Respondent3 confirmed, “This online simulation was a great opportunity that allowed students to have a feel of practical business life. It was not just a game; it was an experience that one faces when going into the real life.” Learning in such virtual environment brings both CHALLENGE & FUN to players. For example, respondent2 said, “I enjoyed the game; it was very challenging in my opinion because we had to apply all our knowledge of the 4 years of university. It helps students to understand the work environment in a fun way”. Respondent3 agreed, “I enjoyed the game thoroughly. It covered all business aspects. In addition, students all felt the competitive vibe in them to win.” Whether the game achieves its objectives or not is decided by its INFLUENCE ON THE ATTITUDES AND BEHAVIOR of players. All respondents confirmed that games do affect people’s behavior and perceptions. For example, respondent1 said, “games do have an influence on the attitudes and behavior; they affect the critical thinking.” Respondent3 confirmed, “It is a form of an artificial world in which a student is very close to the real world.” Furthermore, game contents have the potential in CONTRIBUTION TO KNOWLEDGE. Respondent1 said, “In the end of the game, I learned many things. I would say that 60% of knowledge about different jobs and sectors in the market could be based

on the games". These responses verify the results conducted by Zogby poll indicated in section 4.7 of this research, and stressed that gamification is a driver of people's attitude due to the focus on the engagement and fun elements.

Games as a Recruitment Tool

Introducing games as a recruitment tool has become an integral part of ONLINE RECRUITMENT nowadays. More companies have started to include gamification in their recruitment strategies to help convey their DEMAND OF MAJORS AND SKILLS in a way that affect PERCEPTIONS OF CERTAIN JOBS. After introducing the idea of recruitment games, all respondents supported the use of games as a recruitment tool in UAE. Respondent1 said,

"Based on the game element and on how I respond to it, I believe my perception of a certain major or job would change accordingly... As far as I know, I think using games as a recruitment tool has not yet been implemented in companies here in Emirates. I believe this is a kind of online recruitment."

Not only would the company be able to strengthen its brand among perspective job candidates, but it would also determine its FUTURE TALENTS who best fit the organization. Making a directed decision will help organizations get a more realistic picture of the skills and knowledge those future talents possess. From the psychometric results those recruitment games generate, employers will be able to recruit the best of all job applicants, "Companies' most important assets are their human resources, so they should make sure that their employees have a variety of strengths."

Recruitment Games for Millennials

The presence of a new age cohort who simply sees and does things differently requires introducing the jobs

market to them in a MILLENNIALS' FRIENDLY APPROACH. New recruitment tools, such as social media, are not enough to give those millennials a clear idea of what jobs are available in the market and what majors and skills are needed. Introducing games as recruitment tools to help high schoolers make CAREER-BASED SELECTION OF MAJOR receives a positive response from all participants. Respondent1 stated, "For high school, it would be beneficial to play the game as it gives students a straight idea to what major they should choose according to the field of interest they would like to work in after graduating from university". Respondent2 also said, "I'm with the idea and yes high school students would accept it.., because it sheds some light on one of the most important decisions they will make or have to make". Playing recruitment games would contribute to INTEREST DISCOVERY. Supporting the ELM model described in section 4.6, Respondent1 said, "if there is a game related to engineering and I hate engineering, but then I play the game in engineering and actually enjoy it, then I would have a liking towards pursuing engineering instead of business as a major, as I would be interested to work in engineering sector." Respondent3 said, "It would allow students to understand what they enjoy the most; high school students would like the idea of gaming as it is a virtual simulation of the real world; if it is just a tool for students to explore then it is a great opportunity." Furthermore, such directed games would increase students' AWARENESS OF JOBS AND MARKETPLACE, "I think it's a good idea, it would help students get an idea about the different fields in the business and may even help with their choice of which major to study. It may help with their perceptions on how the business is running or how it's like to run the organization" [Respondent2].

Respondent1 said, "If high school students are given this experience in a game pattern, not only will they have more MOTIVATION, but they will be interested because of the game element."

By driving students' selection of majors to match with what jobs market demands, games as a recruitment tool would play a vital role in bridging the skills gap in UAE's context. It is not too early to attract best talents while still at high school. Some might claim that recruitment games are better for university graduates as they have the knowledge and skills required by jobs market. Although recruitment games can be tailored according to the segment employers target, respondents' answers in the previous sections proved that recruiting games are better used to attract students who are still deciding on their major, as students will be pretty much on the right track if they were able to decide on career choices while still at high school level, not to forget the savings in resources such as time, money, and effort resulting from choosing the right major. Helping students make such critical decisions with clear idea on what jobs and specialties that the country needs would assist in making career-based selection of majors, and therefore, bridging the gap in the sectors that are falling short.

Table 1 in Appendix C summarizes the best quotes respondents gave in regard to the main themes of this study.

RECOMMENDATIONS

After in-depth analysis of the respondents' transcripts, recruitment games can act as assessment and selection tools of the best job candidates, and they can also be used as awareness techniques to provide a realistic jobs preview to eliminate the ambiguity and vagueness students have whenever this topic comes into discussions. Having complete understanding of pros and cons of the workplace and different jobs

requirements in a fun, challenging aspect, students at high schools would have an opportunity to develop a certain reaction towards the best job or workplace they perceive they are interested in for future career. For recruitment games to achieve their goals, companies should pay attention to build the games in a millennial-friendly way to fit the basic understandings of high school students. Complexity is not recommended for those young people, as the purpose of these games is introducing the jobs world to students and eliminating uncertainty and vagueness while not trying to measure job-related skills directly. The psychometric data that those games generate, after students play the challenges, would help recruiters to assess those students on the level of suitability and fit with the organizational culture and environment. Personality traits, problem solving abilities, and critical thinking all will be measured and compared among competitors to decide on the future talents. As far as the researchers aware, many companies in UAE, especially governmental one, have academic scholarship programs for high school students. Such programs are part of their strategies to create a knowledge-based economy. They select students to continue higher education at top universities inside and outside the country and then secure those students jobs after graduation. Since the selection process is basically based on academic performance results such as high school percentage, the researchers suggest that those organizations implement gamification in recruiting those students for their scholarship programs. Announcing national recruitment game competition among students will enable the companies evaluate systematically and objectively all players and select the best not because of their academic history, but because of

their ability to fit and adapt to the different situations.

Attention should be drawn to the fact that not all audiences are online or play games, so companies shouldn't use recruitment games as a substitute for all current recruitment tools. Games are to be integrated into recruitment strategy with other traditional methods so that all potential talents are captured. Moreover, gaming techniques used for recruitment have to be different from those designed for training and development purposes. Games designed for recruitment and selection purposes would be played only once as opposed to games made for training that would allow users more room for practice. To implement recruitment games effectively, adjustments should be applied to the recruitment strategy at the organizations. Companies should forecast the skills that will be necessary in both short and long terms, then, assess the current workforce, and finally, implement the recruitment games with the target, in which future candidates probably exist, been determined.

And it is worthy to mention that those companies who invest in gamification for recruitment and selection would be able to test the candidates in various situations, and; therefore, will be 100% certain of the selection they make. As a result, probationary period would be affected positively and reduced to its minimal, as companies already know that the candidate selected is the best fit.

LIMITATIONS AND FUTURE RESEARCH PROPOSALS

After in- This paper attempts to address the skills gap problem that UAE is currently facing; however, it has some limitations. Firstly, the sample size that was taken from the population to conduct this qualitative research was very small. Interviews were conducted with only three subjects. This was mainly due to some

constraints the researchers faced in terms of time, resources available, and the suitability for the topic. Based on these three sets of responses. Therefore, future research conducted in a similar area but based on findings representing a larger portion of the population will be more conclusive.

Secondly, data collection, for this qualitative research, was solely based on one method i.e. interviews. Other qualitative techniques like direct observation and focus groups were not used. Hence, it is suggested that future researchers use a variety of data collection techniques so that findings that are drawn up are more authentic.

Thirdly, the interview subjects were requested to respond to questions, about using gamification in recruitment, based on their experience with "*Cesim Global Challenge*". In this regard, it is important to note that *Cesim* is a game not designed to recruit or select people. Rather, it is gaming software, which aims at providing users with only a simulation of business environments. Therefore, there is some possibility that respondents might have thought, felt and reacted differently had they been exposed to a recruitment game, designed with the sole purpose to recruit/select people. Future research, which is based on experiences of interview subjects with a proper recruitment game, will be more revealing.

In addition, the research sample was not very diverse as it was largely made up of graduates from the same university i.e. Abu Dhabi University. Future research directed towards studying how students from different universities, in different regions of the country, perceive gamifying recruitment may also provide researcher and practitioners with important insights. Similarly, broadening the research sample, in the future, to include high school students can also help

consolidate the knowledge and findings that are being gathered on the subject.

CONCLUSION

To sum up, UAE has experienced a boom, during the past decades, when it comes to the level of activity in the educational sector. This level of activity is expected to accelerate, in the next few years, as UAE's economy recovers from the previous economic recession and starts its uphill climb. These circumstances make it very necessary to ensure that education, with which the younger generations are being equipped, is of the best quality. Education, at all stages, needs to be designed in a way that it not only makes them responsible, well-educated adults, but also prepares them for challenges dominating the job market today. One such challenge, in UAE's job market, is the skills gap. This skills gap issue and what different stakeholders can do to resolve it are the focal points of this research. One solution the paper proposes, to resolve this issue, is gamifying recruitment function of companies. Using such an innovative approach to recruitment, companies will be able to communicate what they desire to the workforce entering the job market, and thus, attract new talents. This hypothesis is backed up using qualitative research methods, i.e. interviewing a small sample of students, to find out their views on skills gap and gamification. Our findings support the hypothesis with respondents having an overall favorable opinion of using gamification to resolve the skills gap issue. To effectively close this gap, respondents also stressed the importance of direct involvement from all parties having a stake in the issue i.e. companies and high schools. Also, decisions regarding higher education, career path, and major choice were seen, by respondents, as critical factors in resolution of the issue. Experiencing trial version of work was also deemed

important by respondents. Based on these findings, we deduce that companies have to introduce gaming keeping in view the needs of different group of students. Companies need to plan the whole process of marketing jobs just like products are marketed after extensive planning. High school students have been exposed to simple and engaging games that will increase their awareness about certain fields and generate interest so that they might consider adopting that field as their career. Based on these games, companies may also pick job candidates. As for university graduates and other job seekers, companies may design tougher games that will, actually, test the skills and abilities the job candidates claim that they possess. Candidates, who are excelling in these games, may be taken in by companies for further evaluation. This way companies will attract diverse, multi-talented candidates instead of just hiring people with long years of experience. All of these practices, if implemented correctly, will lead to bridging the skills gap experienced by UAE's job market.

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Appendix A

Name	Level of suitability					Assessment score				
	Far Below Average	Below Average	Average	Above Average	Far Above Average	RCAT	RTPH	RWSA	RWRS	MSCEIT
Katherine Adams						79% V	71%	83%	82%	79%
Cherie Halls						46% V	70%	49%	73%	78%
Scott Hill						31% NV	51%	21%	55%	59%
Malcolm Vesper						22% V	37%	10%	30%	46%

Figure 1: Psychometric report generated from a recruitment game

*Source: Revelian Company website, is gamification the special sauce for graduate recruitment?

www.revelian.com

Appendix B

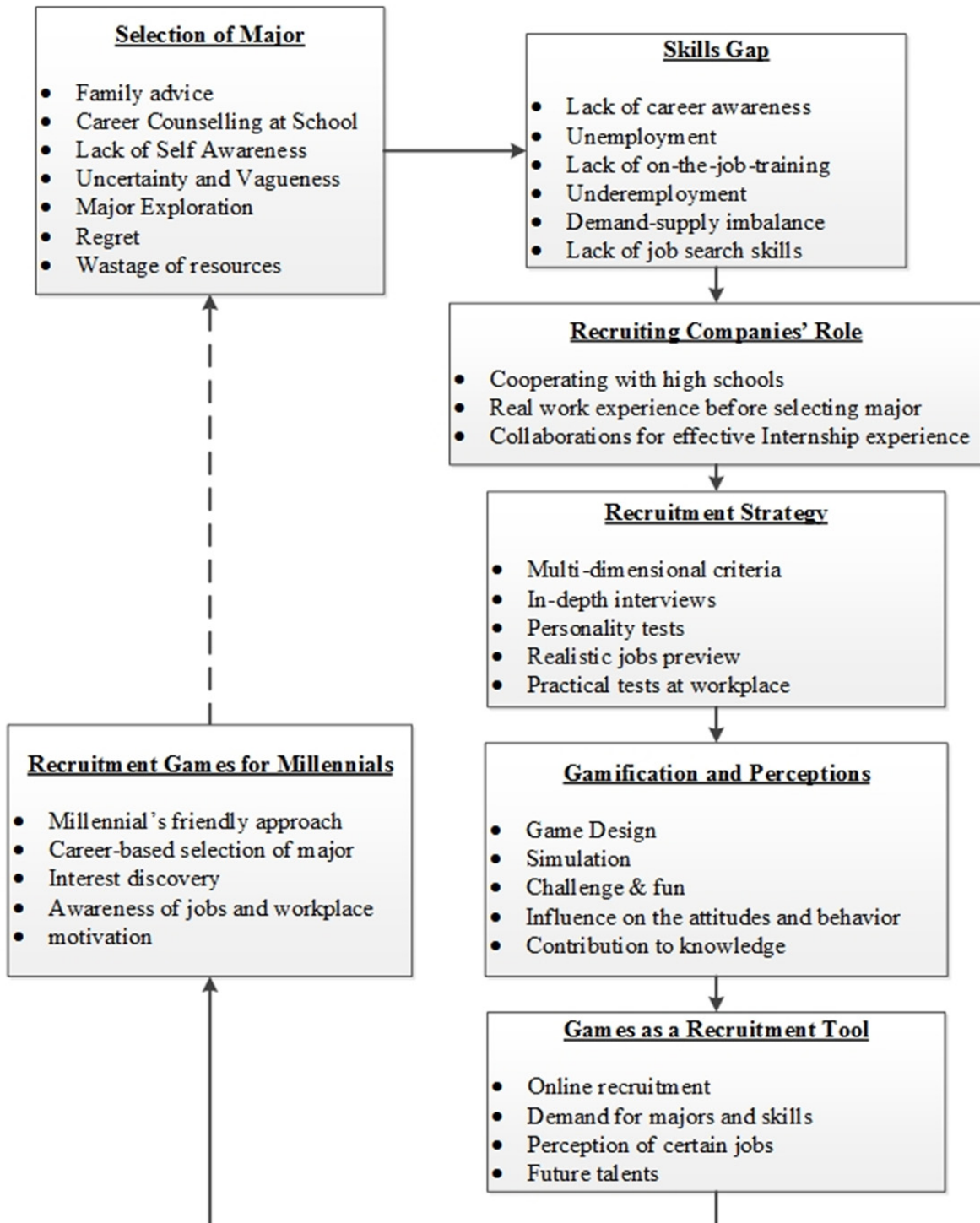


Figure 2: Themes Model of Recruitment Games Effect on Students' Selection of Major

Appendix C

Table 1. Best Quotes of Respondents

THEME	EXAMPLE
Selection of Major	<p><i>"I had an idea about the jobs out there, but it was very vague."</i> [Respondent2]</p> <p><i>"Once students graduate from university, they have already spent time, money, and effort. So, they would think that all what they put in their major goes to waste when they could not find a job that matches their skills and knowledge."</i> [Respondent1]</p>
Skills Gap	<p><i>I was looking for a job related to my field of study, which is accounting. Unfortunately, all jobs of my field of study require experience so that's forcing me to look for jobs in different fields."</i> [Respondent2]</p> <p><i>"I think the work that I was doing, during my internship and the one-month job, can be done by anyone regardless of the major. There were people with IT, marketing, and mass communication majors doing the same job as me, and to my surprise, one of the employees who did the same job as me was in grade 9."</i> [Respondent1]</p>
Recruiting Companies' Role	<p><i>"There should be a collective process. Schools and organizations should join together and formulate an effective strategy that would help students to understand what the job market demands and decide accordingly."</i> [Respondent3]</p> <p><i>"I think to boost and motivate graduate students; universities should have agreements and collaborations with major companies to take students as interns."</i> [Respondent1]</p>
Recruitment Strategy	<p><i>"Recruitment should include a number of different test not only academic ones but also those that will test candidates by putting them in a situation similar to real workplace."</i> [Respondent1]</p> <p><i>"Recruiting companies all depends on experience of candidates. However, they should give a training period for potential candidates in order to best judge for the right person"</i> [Respondent3]</p>
Gamification & Perceptions	<p><i>"This online simulation was a great opportunity that allowed students to have a feel of practical business life. It was not just a game it was an experience that one faces when gone in to the real life."</i> [Respondent3]</p> <p><i>"I enjoyed the game; it was very challenging in my opinion because we had to apply all our knowledge of the 4 years of university. It helps students to understand the work environment in a fun way"</i> [Respondent2]</p> <p><i>"Games do have an influence on the attitudes and behavior: they affect the critical thinking."</i> [Respondent1]</p>
Games as a Recruitment Tool	<p><i>"As far as I know, I think using games as a recruitment tool has not yet been implemented in companies here in Emirates. I believe this is a kind of online recruitment... Companies' most important assets are their human resources, so they should make sure that their employees have a variety of strengths."</i> [Respondent1]</p>
Recruitment Games for Millennials	<p><i>"I'm with the idea and yes high school students would accept it."</i> [Respondent2]</p> <p><i>"It would allow students to understand what they enjoy the most"</i> [Respondent3]</p> <p><i>"If high school students are given this experience in a game pattern, not only would will they have more motivation, but they will be interested because of the game element."</i> [Respondent1]</p>

The Analytic Hierarchy Process (AHP) Based Solution Strategy In the Faculty Selection Problem. A Theoretical and Applied Investigation

S. S. Appadoo
Department of Supply Chain
Management
University of Manitoba,
Winnipeg, Manitoba, Canada

N.A.R.V.M. Hemarathne
Department Agribusiness and
Agricultural Economics
University of Manitoba,
Winnipeg, Manitoba, Canada

C.R.Bector
Department of Supply Chain
Management
University of Manitoba,
Winnipeg, Manitoba,
Canada

A. Thavaneswaranc
Department of Statistics
University of Manitoba,
Winnipeg, Manitoba, Canada

Abstract

In this paper, we use the Analytic Hierarchy Process (AHP) to select the most suitable faculty member in a higher learning facility such as a university or a college subject to some known evaluation criteria. This decision making approach will, in our view, assist in selecting the most suitable faculty member in a fair and unbiased manner. We also discuss different approach to obtain the criteria weights. Towards the end of this paper, the concept of rank reversal is explained through a classical known numerical example taken from Belton and Gear [2, 3, 4]. An illustrative example applied to a faculty selection process demonstrates the computational method adopted in this paper.

Keywords: Quantitative approach, Multi Level Analytic Hierarchy Process (ML-AHP), Consistency, Ranking, Unbiased, Multi criteria decision making (MCDM) problem, Pairwise comparison, Consistency ratio (CR), Saaty's eigenvector method (SEM)

INTRODUCTION

Recently, there has been a growing interest in using multi criteria decision making methods (MCDM) in decision making. One of the most widely cited applied (MCDM) approaches and mathematically techniques is the Analytic Hierarchy Process (AHP), developed by Satty [26, 27, 28, 29] in 1980's. It is important to point out here that AHP is the only solution strategy and effective quantitative technique to solve MCDM problem using the concepts of pairwise comparison of various criteria. AHP allows decision makers to structure complex decision making problems in hierarchical form in a systematic manner. According to Alonsa and Lamata [1] it is argued that the concept of pairwise comparison method was first introduced by Fechner [13] in 1860 and further developed by Thurstone [33] in 1927. Based on the idea of pairwise comparison, Saaty [26] proposes the

analytic hierarchy process as a method for multi-criteria decision-making. For further discussions pertaining to the theory of AHP, interested readers are referred to Satty [26, 27, 28, 29] for detail. There are number of studies related to the application of AHP in decision analysis. We will discuss only those limited few that are relevant to the topic of discussion in this paper. AHP has been applied to solve various types of decision problems, see (Handfield et al [16], Ishizaka and Labib [17], Li and Ma [22], Fedrizzi and Giove [12], Wijnmalen [36] among others) for some of the recent applications. Braglia et al. [5] used AHP to determine the relative importance of weights of alternative material handling devices. Malczewski et al. [24] used a combined AHP and integer linear programming model in land use planning. Cebi and Bayraktar [6] proposed an AHP model to evaluate the relative performance of suppliers for every raw material. Korpela et

al. [18] used the combined AHP-MILP approach to deal with the general logistics distribution problem. Ghodsypour and O'Brien [15] adopted the AHP to determine the relative importance weightings of the suppliers with respect to three criteria: cost, quality, and service. Kearns [19] proposed the AHP to evaluate the relative importance weightings of alternative information systems. Malladi and Min [24] applied the combined AHP-MILP approach to select the best high-speed internet access technology for each rural community. Crary et al. [9] applied the AHP in the US Navy to evaluate the relative importance weightings of alternative ships with respect to various missions. Lam and Zhao [20] used the combined AHPQFD approach to identify appropriate teaching techniques. Lee and Kwak [21] applied the combined AHPGP approach to deal with the resource allocation problem in the health-care system. Zhou et al. [37] successfully applied the combined AHPGP approach in the scheduling problem in a petrochemical company. The present paper is organized as follows. In Section 1, we summarize the preliminaries related to the theory of AHP. A literature review pertaining to some of the recent application of AHP is also presented in this section. The AHP model and some weighting methods to compute the priority weights is given in Section 3 of the paper. In Section 4, we discuss an application of AHP in an academic setup. Finally, conclusion and directions for future research directions are given in Section 5.

Preliminaries and Notation

Before discussing the Analytic Hierarchy Process, we present some definitions, properties and definitions that will be used in the sequel. Both eigenvectors and eigenvalues are important as they constitute the building block in the theory of AHP. Most of these related definitions and properties may be

found in [26, 27, 28, 29], Chatelin[7] and the references therein.

Definition 1.1 An eigenvector of a square $n \times n$ matrix A is a vector W such that

$$AW = \lambda W \quad (1.1)$$

where W is a non-zero vector referred to as the eigenvector of A and λ is the corresponding eigenvalue. Note that λ can be real or imaginary. In the theory of AHP, we are more interested in the maximum value of λ (written as λ_{\max}). The characteristic polynomial of the square matrix A is usually denoted mathematically by $|A - \lambda I|$. The characteristic polynomial of A will be denoted by $\chi_A(\lambda)$. The set of distinct eigenvalues is denoted by $\sigma(A)$ and is referred to as the spectrum of the square matrix A .

Definition 1.2 The rank of a matrix A is defined as the number of linearly independent columns of matrix A . Note that a matrix of rank one has exactly one nonzero eigenvalue.

Definition 1.3 The trace of some matrix A , denoted $\text{Tr}(A)$, is the sum of the entries in the diagonal. The trace of a matrix is also defined as the sum of its eigenvalues.

Definition 1.4 An eigenvalue of a square $n \times n$ matrix A is the scalar λ associated with an eigenvector W .

Definition 1.5 A consistent matrix is one in which for every entry (the entry in the i^{th} row and j^{th} column), $a_{ij} = \frac{a_{kj}}{a_{ki}}$

Definition 1.6 The principal eigenvalue, denoted λ_{\max} , of a matrix is the largest eigenvalue of that matrix.

The eigenvector method also yields a measure for inconsistency. The degree of inconsistency is measured by the principal eigenvalue λ_{\max} .

If A is a pairwise comparison matrix of the size n, it can be shown that $\lambda_{max} > n$ and A is consistent if and only if $\lambda_{max} = n$.

Hence, one sees the consistency of a pairwise $n \times n$ comparison matrix A by the quantity $\lambda_{max} - n$.

Definition 1.7 Let $A = (a_{ij})$ be an $n \times n$ real matrix. A is said to be positive provided that $a_{ij} > 0$

for all $i, j = 1, \dots, n$.

Definition 1.8 A reciprocal matrix is one in which for each entry $a_{ij}, a_{ji} = 1/a_{ij}$ (reciprocity). Hence, a positive reciprocal matrix has a form such as

$$A = \begin{pmatrix} 1 & a_{12} & \dots & a_{1n} \\ \frac{1}{a_{12}} & 1 & \dots & a_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ \frac{1}{a_{1n}} & \frac{1}{a_{2n}} & \dots & 1 \end{pmatrix} \tag{1.2}$$

Definition Let $A = (a_{ij})$ be an $n \times n$ positive reciprocal matrix. A is said to be consistent (in Saaty's sense) provided that $a_{ij} \cdot a_{jk} = a_{ik}$ (transitivity) for all $i, j, k = 1, \dots, n$. Thus, a pairwise comparison matrix is called consistent if the transitivity and the reciprocity rules are respected.

Definition 1.10 The consistency index (CI) for a pairwise comparison matrix A is the numerical value

$$CI = \frac{\text{Principal eigenvalue} - \text{size of matrix}}{\text{size of matrix} - 1} = \frac{\lambda_{max} - n}{n - 1} \tag{1.3}$$

The numerator $\lambda_{max} - n$ measure how far the principal eigenvalue is from the consistent case. We divide $(\lambda_{max} - n)$ by $n - 1$, which gives us an average of the other $n-1$ eigenvalues of our pairwise comparison matrix. Note that the consistency index CI is not uniquely defined.

Remark 1.1 For a reciprocal $n \times n$ matrix with all entries greater than zero, the principal eigenvalue, λ_{max} will be greater than or equal to n. That is, $n \leq \lambda_{max}$. The number of judgments, J, that have to be made in a full pair-wise comparison can be

determined (Belton and Gear [2, 3, 4]) by the following expression

$$J = \frac{n(n-1)}{2}, \text{ or } \int_0^1 xn(n-1)dx \tag{1.4}$$

Below, we give the mathematics supporting the AHP model is given below. Most of the materials in this section can be found in Satty [26, 27, 28, 29] and Chou et al [8] for detail and the references therein.

2.Analytic Hierarchy Process

Let $C_1, C_2, \dots, C_i, \dots, C_j, \dots, C_n$ denote the n different criteria to be considered in a MCDM problem. Our objective is to find the weights $w_1, w_2, \dots, w_i, \dots, w_j, \dots, w_n$ given the pairwise comparison matrix A. Let $a_{ij}, i, j = 1, 2, \dots, n$ be the elements of C_i when compared with C_j and the matrix A be denoted by

$$A = \begin{bmatrix} a_{11} & a_{12} & \dots & a_{1j} & \dots & a_{1n} \\ \vdots & \vdots & \ddots & \vdots & \ddots & \vdots \\ a_{i1} & a_{i2} & \dots & a_{ij} & \dots & a_{in} \\ \vdots & \vdots & \ddots & \vdots & \ddots & \vdots \\ a_{n1} & a_{n2} & \dots & a_{nj} & \dots & a_{nn} \end{bmatrix} \tag{2.1}$$

Where $a_{ji} = 1/a_{ij}$. If the judgement $\int_0^1 xn(n-1) dx$ are perfect in all comparisons, then $a_{ik} = a_{ij} \cdot a_{jk}$ for all and by the definition of consistency, we refer to the matrix A as being a consistent matrix (see Saaty [27] for detail). An obvious case of a consistent matrix A is when its elements $a_{ij} = w_i/w_j$, where $i, j = 1; 2; \dots, n$. Thus, when matrix A is multiplied by the weighting vector given by $w = (w_1, w_2, \dots, w_n)^T$, one gets

$$AW = \begin{bmatrix} w_1/w_1 & w_1/w_2 & \dots & w_1/w_j & \dots & w_1/w_n \\ w_2/w_1 & w_2/w_2 & \dots & w_2/w_j & \dots & w_2/w_n \\ \vdots & \vdots & \ddots & \vdots & \ddots & \vdots \\ w_i/w_1 & w_i/w_2 & \dots & w_i/w_j & \dots & w_i/w_n \\ \vdots & \vdots & \ddots & \vdots & \ddots & \vdots \\ w_n/w_1 & w_n/w_2 & \dots & w_n/w_j & \dots & w_n/w_n \end{bmatrix} \begin{bmatrix} w_1 \\ w_2 \\ \vdots \\ w_j \\ \vdots \\ w_n \end{bmatrix} = n \begin{bmatrix} w_1 \\ w_2 \\ \vdots \\ w_j \\ \vdots \\ w_n \end{bmatrix} = nW \tag{2.2}$$

Note that a_{ij} is the subjective rating given by the decision-maker. The difference between consistent case and the actual values is w_i/w_j , then

$$AW = \begin{bmatrix} 1 & a_{12} & \dots & a_{1j} & \dots & a_{1n} \\ 1/a_{12} & 1 & \dots & a_{2j} & \dots & a_{2n} \\ \vdots & \vdots & \ddots & \vdots & \ddots & \vdots \\ 1/a_{1j} & 1/a_{2j} & \dots & 1 & \dots & a_{jn} \\ \vdots & \vdots & \ddots & \vdots & \ddots & \vdots \\ 1/a_{1n} & 1/a_{2n} & \dots & 1/a_{jn} & \dots & 1 \end{bmatrix} \begin{bmatrix} w_1 \\ w_2 \\ \vdots \\ w_j \\ \vdots \\ w_n \end{bmatrix}_{n \times 1} = \lambda_{max} \begin{bmatrix} w_1 \\ w_2 \\ \vdots \\ w_j \\ \vdots \\ w_n \end{bmatrix}_{n \times 1} = \lambda_{max} W \tag{2.3}$$

Thus, $AW = nW$ cannot be calculated directly. Therefore, Saaty [26, 27, 28, 29] suggested using the maximum eigenvalue, λ_{max} of the solution of matrix A to replace n, yields $AW = \lambda_{max}W$. By this method, one can obtain the characteristic vector, referred to as the priority vector in the AHP literature.

Preference Scale Consistency Test in AHP

In order to help the decision maker assess the pair-wise comparisons, Saaty [26, 27, 28, 29] created a nine point intensity scale of importance between two elements. The suggested numbers to express degree of preference between the two elements A and B are shown in Table 1 given below.

Definition 2.1 The deviations from consistency are expressed by (2.4) as Consistency Index (C.I.)

$$C.I = \frac{\lambda_{max} - n}{n - 1} \tag{2.4}$$

Definition 2.2 The ratio of C.I. to R.I. is called the consistency ratio (C.R.). Generally, a consistency ratio of 0.10 or less is acceptable. In the event that the consistency ratio is greater than 0.10, the operator must re-evaluate the weight assignments within the matrix violating the consistency limits. C.R is computed by dividing C.I. by a value obtained from the table of Random Consistency Index (R.I) created by Saaty[27].

$$\frac{C.I}{R.I} = \frac{1}{(n-1)} \frac{\lambda_{max} - n}{n - 1} \tag{2.5}$$

When the order of a comparison matrix is $n > 15$, the average values of the random index may be roughly calculated by the formula given by Taha[32].

$$R.I. = \frac{1.98(n-2)}{n} \tag{2.6}$$

In which case, a modified version of (2.5) yields,

$$C.R. = \frac{C.I}{1.98(n-2)} = n \left(\frac{C.I}{1.98n - 3.96} \right) = \left(\frac{\lambda_{max} - n}{1.98n - 3.96} \right) \left(\frac{n}{n-1} \right) \tag{2.7}$$

Weight Characterization in AHP

In this section, we provide some of the common techniques used to calculate the priority weighs in the AHP formulation (see Gao et. al [14] for more details).

(a)The geometric mean (also sometimes known as Logarithmic Least Squares Method GM-LLSM) is supported by most of the AHP community. It is simply the normalized geometrical means of the products of the row elements of matrix A, Gao et. al [14] as shown below,

$$w_i = \frac{\sqrt[n]{\prod_{j=1}^n a_{ij}}}{\sum_{i=1}^n \left(\sqrt[n]{\prod_{j=1}^n a_{ij}} \right)} \quad (i=1,2,3,\dots,n) \tag{3.1}$$

The GM-LLSM solution is the solution of following optimization problem

$$\text{Min } Z = \sum_{i=1}^n \sum_{j=1}^n \left[\ln a_{ij} - \ln \left(\frac{w_i}{w_j} \right) \right]^2 = \sum_{i=1}^n \sum_{j=1}^n [\ln a_{ij} - \ln w_i + \ln w_j]^2 \tag{3.2}$$

$$\text{S.t } \sum_{i=1}^n w_i = 1, w_i > 0, (i = 1, 2, 3, \dots, n)$$

(b)Normalization of Row Average (NRA) method, Gao et. al [14], sums up each row element and standardizes it by summing all elements of the matrix. Hence, we have

$$W_i = \frac{\sum_{j=1}^n a_{ij}}{\sum_{i=1}^n \left(\sum_{j=1}^n a_{ij} \right)} \quad (i=1,2,3,\dots,n) \tag{3.3}$$

(c) Let $A = (a_{ij})$ be an $n \times n$ pairwise comparison matrix. The process of finding the priority weights are as follows. Firstly we normalize the column vectors in the

judging matrix, then add the normalized matrix in rows. This approach is normally referred to as the sum method in the AHP literature. The result is normalized again to get the eigenvector:

$$W_i = \frac{1}{n} \sum_{j=1}^n \frac{a_{ij}}{\left(\sum_{i=1}^n a_{ij}\right)} \quad (i=1,2,3,\dots,n) \quad (3.3)$$

The Eigen Value Method which is usually referred to as EM in Saaty [26] notation. EM is known to uniquely capture transitivity in inconsistent matrices. The priority vector derived from EM is denoted by $W = (w_1, w_2, \dots, w_n^T)$. The judgement matrix is denoted as $A = (a_{ij})$, $a_{ji} = 1/a_{ij}$, $a_{ij} > 0, i, j = 1, 2, \dots, n$. EM solves for the principal eigenvector in $AW = \lambda_{max}W$, where λ_{max} is the principal eigenvalue of A. The EM solution is given by Gao et.al [14],

$$w = \lim_{k \rightarrow \infty} \left(\frac{A^k e^T}{e^A k e^T} \right) \quad (3.5)$$

where $e = (1, 1, 1, 1, 1, \dots, 1)$. It consists in taking as weights the components of the (right) eigenvector of the matrix A, (see Wang and Elhag[35] for detail). In our notation the eigenvector is defined by

$$AW = \lambda_{max}W \quad (3.6)$$

Where λ_{max} is the largest eigenvalue of A. It must be noted here that this eigenvector solution is normalized additively, i. e. $\sum_{i=1}^n w_i = 1$.

(e) Another approach to calculate the priority weights is given by Belton and Gear [2, 3, 4]. In order to avoid rank reversal, they suggest normalizing the weights of alternatives using their maximum rather than their sum, which can be expressed as

$$w_i = \frac{w_i}{\max_{k=\{1,2,\dots,n\}} \{w_{ik}\}}, i=1,2,\dots,n \quad (3.7)$$

where $W = (w_1, \dots, w_n)^T$ is the B-G normalized weight vector which we call B-G weights for short. Such a modification is referred in the literature as B-G modified AHP.

Some Numerical Examples

In the following subsection, we provide some numerical examples to illustrate the various methods one can use to compute the priority vector from a pairwise comparison matrix.

Example 1 In this example we illustrate the GM-LLSM given by (3.1) to calculate the priority vector. The priority vector is computed by normalizing the result of taking the n^{th} root of the multiplied elements of the comparisons matrix that lie in a row. Let, A be a pairwise comparison matrix, then following (3.1), the priority weights is calculated as follows,

$$A = \begin{bmatrix} 1 & 4 & 8 \\ \frac{1}{4} & 1 & 7 \\ \frac{1}{8} & \frac{1}{7} & 1 \end{bmatrix}$$

The normalized priority weights are as follows.

$$W = \begin{cases} w_1 = \frac{\sqrt[3]{1 \times 4 \times 8}}{(\sqrt[3]{1 \times 4 \times 8}) + (\sqrt[3]{\frac{1}{4} \times 1 \times 7}) + (\sqrt[3]{\frac{1}{8} \times \frac{1}{7} \times 1})} = 0.68404 \\ w_2 = \frac{\sqrt[3]{\frac{1}{4} \times 1 \times 7}}{(\sqrt[3]{1 \times 4 \times 8}) + (\sqrt[3]{\frac{1}{4} \times 1 \times 7}) + (\sqrt[3]{\frac{1}{8} \times \frac{1}{7} \times 1})} = 0.25964 \\ w_3 = \frac{\sqrt[3]{\frac{1}{8} \times \frac{1}{7} \times 1}}{(\sqrt[3]{1 \times 4 \times 8}) + (\sqrt[3]{\frac{1}{4} \times 1 \times 7}) + (\sqrt[3]{\frac{1}{8} \times \frac{1}{7} \times 1})} = 5.6316 \times 10^{-2} \end{cases}$$

The eigen vectors corresponding to the maximum Eigen value are $\begin{bmatrix} w_1^* \\ w_2^* \\ w_3^* \end{bmatrix} = \begin{bmatrix} 0.68405 \\ 0.25965 \\ 5.6319 \times 10^{-2} \end{bmatrix}$ which, as above, is almost identical to vector of priorities based on GM-LLSM calculation.

Example 2 : Consider the pairwise comparison matrix given below.

$$A = \begin{bmatrix} 1 & \frac{1}{8} & \frac{1}{4} \\ 8 & 1 & \frac{1}{5} \\ 4 & 5 & 1 \end{bmatrix}$$

To compute the priority weights, we normalize each of the rows by dividing by

the sum of the column, then averaging each of the rows to get the priority vectors.

$$W = \begin{cases} w_1 = \frac{1}{3} \left(\frac{1}{1+8+4} + \frac{\frac{1}{3}}{\frac{1}{8}+1+5} + \frac{\frac{1}{4}}{\frac{1}{4}+\frac{1}{5}+1} \right) = 8.9915 \times 10^{-2} \\ w_2 = \frac{1}{3} \left(\frac{8}{1+8+4} + \frac{1}{\frac{1}{8}+1+5} + \frac{\frac{1}{4}}{\frac{1}{4}+\frac{1}{5}+1} \right) = 0.30553 \\ w_3 = \frac{1}{3} \left(\frac{4}{1+8+4} + \frac{5}{\frac{1}{8}+1+5} + \frac{\frac{1}{4}}{\frac{1}{4}+\frac{1}{5}+1} \right) = 0.60456 \end{cases}$$

It is very easy to show that the eigen vector priority weight are

$$\begin{bmatrix} w_1^* \\ w_2^* \\ w_3^* \end{bmatrix} = \begin{bmatrix} 7.5015 \times 10^{-2} \\ 0.27855 \\ 0.64645 \end{bmatrix}$$

Example 3 Consider an $n \times n$ reciprocal pairwise comparison matrix A given below where the symmetric terms are reciprocals of each other.

$$A = \begin{bmatrix} 1 & 1 & 3 & 0.5 & \frac{1}{3} \\ 1 & 1 & 0.5 & 2 & \frac{2}{3} \\ \frac{1}{3} & 2 & 1 & 3 & 2 \\ 2 & 0.5 & \frac{1}{3} & 1 & \frac{1}{3} \\ 3 & \frac{1}{3} & 0.5 & 3 & 1 \end{bmatrix}$$

To find the eigen vector corresponding to λ_{max} matrix A , we proceed as follows.

$$(A - \lambda I) = \begin{bmatrix} 1-\lambda & 1 & 3 & 0.5 & \frac{1}{3} \\ 1 & 1-\lambda & 0.5 & 2 & \frac{2}{3} \\ \frac{1}{3} & 2 & 1-\lambda & 3 & 2 \\ 2 & 0.5 & \frac{1}{3} & 1-\lambda & \frac{1}{3} \\ 3 & \frac{1}{3} & 0.5 & 3 & 1-\lambda \end{bmatrix} \quad (3.10)$$

In order to find the characteristic equation, set $\det(A-\lambda I) = 0$ as follows,

$$\Rightarrow \begin{vmatrix} 1-\lambda & 1 & 3 & 0.5 & \frac{1}{3} \\ 1 & 1-\lambda & 0.5 & 2 & \frac{2}{3} \\ \frac{1}{3} & 2 & 1-\lambda & 3 & 2 \\ 2 & 0.5 & \frac{1}{3} & 1-\lambda & \frac{1}{3} \\ 3 & \frac{1}{3} & 0.5 & 3 & 1-\lambda \end{vmatrix} = 0 \quad (3.11)$$

The characteristic polynomial $\chi_A(\lambda)$ of A is

$$\chi_A(\lambda) = \lambda^5 - 5\lambda^4 - 50.778\lambda^2 - 41.81\lambda - 39.599 = 0 \quad (3.12)$$

The eigenvalues of A are $\lambda_i = \begin{bmatrix} 6.4154 \\ -0.25588 \pm 2.7865i \\ -0.45184 \pm 0.76429i \end{bmatrix}$, where $\lambda_{max} = 6.4154$. The eigen vector associated with maximum eigen value $(A - \lambda_{max}I)w = 0$ is,

$$\begin{bmatrix} 1-6.4154 & 1 & 3 & 0.5 & \frac{1}{3} \\ 1 & 1-6.4154 & 0.5 & 2 & \frac{2}{3} \\ \frac{1}{3} & 2 & 1-6.4154 & 3 & 2 \\ 2 & 0.5 & \frac{1}{3} & 1-6.4154 & \frac{1}{3} \\ 3 & \frac{1}{3} & 0.5 & 3 & 1-6.4154 \end{bmatrix} \begin{bmatrix} w_1 \\ w_2 \\ w_3 \\ w_4 \\ w_5 \end{bmatrix} = 0 \quad (3.13)$$

and $w_1 + w_2 + w_3 + w_4 + w_5 = 1$. We have the following $\begin{bmatrix} w_1 \\ w_2 \\ w_3 \\ w_4 \\ w_5 \end{bmatrix} = \begin{bmatrix} 0.19935 \\ 0.22288 \\ 0.24139 \\ 0.12224 \\ 0.21415 \end{bmatrix}$

Below, we list some of the important properties of eigen values and eigen vectors which will be used in establishing some of the results in this paper. Interested reader may consult Chatelin[7] for more detail.

Remark 3.1 (a) Let A be a $n \times n$ square matrix, the eigenvectors of A and A^2 remain the same, whereas its eigenvalues are squared.

(b) The eigenvalues of A and A^T are the same, but their eigen vectors are not the same.

(c) If k is a positive integer, λ is an eigenvalue of matrix A , and W is a corresponding eigenvector, then λ^k is the eigen value of A^k and W is the corresponding eigen vector.

Remark 3.2 The left eigenvectors of A are the right eigenvectors of its transpose, and are denoted by y_i , (see Tang et al [31]) for detail.

$$A^T y_i = \lambda_i y_i, y_i \neq 0$$

(3.14) can also be stated as $y^T A = \lambda y^T$. The left eigenvector approach means that the priority vector is calculated based on

$$(AY)^T = (\lambda_{max} Y)^T$$

$$Y^T A^T = \lambda_{max} Y^T$$

Example 4 Consider the reciprocal $n \times n$ matrix A as given below. The right and the left eigen values and its corresponding eigen vectors are as follows.

$$A = \begin{bmatrix} 1 & 3 & 3 \\ 1 & 3 & 3 \\ 3 & 3 & 1 \end{bmatrix}, \quad A^T = \begin{bmatrix} 1 & 1 & 3 \\ 3 & 3 & 1 \\ 3 & 3 & 1 \end{bmatrix} \quad (3.15)$$

The characteristic polynomial are $\chi_A(\lambda) = \chi_{A^T}(\lambda) = \lambda^3 - 3\lambda^2 - \frac{4}{3}$ and the eigen values corresponding to $\chi_A(\lambda) = \chi_{A^T}(\lambda) = 0$ are given below.

$$\lambda_i = \begin{pmatrix} 3.1356 \\ -6.7805 \times 10^{-2} + 0.64856i \\ -6.7805 \times 10^{-2} - 0.64856i \end{pmatrix} \quad (3.16)$$

Note that the left and right eigen values of A and A^T are identical. The normalized right eigen vectors corresponding to λ_{max} is $W = \begin{bmatrix} 0.58415 \\ 0.28084 \\ 0.13501 \end{bmatrix}$ and the normalized left eigen vectors corresponding to

λ_{max} is $W^* = \begin{bmatrix} 0.13501 \\ 0.28083 \\ 0.58415 \end{bmatrix}$, respectively.

Remark 3.3. According to Tang et al [31],

- a. The right eigenvector approach is based on the pairwise comparison of elements of how one element is better than another, while the left eigenvector approach is based on

the pairwise comparison of how one element is worse than another.

- b. Unlike the right eigenvector approach, the smaller the value in the eigenvector, the higher the ranking of the object is when we use the left eigenvector approach.
- c. Results show that the two approaches in calculating the Eigen vectors may give contradictory rankings.

Faculty Selection Procedures

Faculty selection is a multi-criteria decision making problem and as such recruiting the best faculty is a time consuming task in a higher learning environment. The faculty selection problem requires several criteria to be considered simultaneously. Below, we discuss a numerical example related to faculty selection and rank them accordingly. Essential criteria are as described below.

There are several criteria to be considered for a tenure tract faculty job. These criteria are conveniently organized under four headings, namely

- Teaching at the undergraduate and graduate level (**T**).
- Student Advising (**SA**).
- Service to his/her profession (**S**).
- Research (**R**).
- Qualification, Recommendation and Experiences (**QRE**).

To be considered for a faculty job position at a higher learning institution, candidates are expected to be outstanding (or have potential of becoming an outstanding element) in most of the categories mentioned above. Below, we give a short description of each of the criteria considered above.

- a. Teaching is considered a very important function of a faculty member. A good measure of teaching effectiveness is the faculty member's course evaluation. Other

measures can include comments made by students and graduates who have been in the candidates courses in current or previous years. Note that course material, examinations, projects, reports etc, can be used as evidence of teaching effectiveness in the classroom.

- b. The candidate experience in advising and mentoring students both at the undergraduate, graduate level and assisting junior faculty members in their academic jobs is an important quality of a faculty members. They are role models for the coming generations.
- c. Faculty members should carry on professional services such as consulting, service in professional societies and associations, and advisory/editorial work on professional journals. In addition, it is expected that faculty member contribute to the functioning of the campus community by serving on committees, undertaking a fair share of assignments in his or her own department.
- d. Faculty members should have a solid research agenda. Measures of excellence in this area include quality, quantity, and impact factor of publications, including papers, monographs, books and research reports; evaluation of research by others; patents, awards for research, invited lectures, financial support and the contribution of a faculty member research towards the needs of the local communities and the society in general.
- e. A well detail description of each candidates qualification is required for the faculty selection process. The following information should also be provided, regarded education, degree granting

institution and discipline. All former positions held with dates should be made available to the committee.

An Application of AHP In Faculty Selection

In this section, a hypothetical faculty selection process is presented to demonstrate the computational process of the AHP model. Assume that there is a university that wants to hire a faculty member out of five candidates selected from a pool of 200 applicants. The pairwise comparisons for each of the five faculty members for each criterion and the pairwise comparison matrix for the criteria are as follows. Our objective is to select the AHP best candidates to be recommended for the job.

Table 1, gives the pairwise comparison matrix for each of the five candidates with respect to teaching.

Table 2, gives the pairwise comparison matrix for each of the five candidates with respect to student advising.

Table 3, gives the pairwise comparison matrix for each of the five candidates with respect to service.

Table 4, gives the pairwise comparison matrix for each of the five candidates with respect to research.

Table 5, gives the pairwise comparison matrix for each of the five candidates with respect to Qualification, Recommendation and Experiences.

Table 6, gives the pairwise comparison matrix for each of the five criteria with respect to the goal.

Each of the pairwise comparison tables are tested for consistency and each of them has a C.R. < 0.1 which according to Saaty [26] passed the test for being a consistency pairwise comparison matrix.

Using the eigen vector methods, we calculate the priority vectors for each of the pairwise comparison matrix as shown in Table 7. Note that the last column of Table 7 list the overall priority vectors along with a ranking of each of the five candidates. We have the following ranking pattern for the five candidates, $A > B > D > C > E$ respectively.

As an illustration, we include a sixth candidate F which we take as identical to candidate C. We recalculate the overall ranking as illustrated in Table 8. Based on the ranking pattern as illustrated in the last column of Table 8, we make the following observations.

It may be observed from Table 8 that

- a. The ranking has not changed at all.
- b. the final scores of each candidates have decrease quite significantly, even though both of the pairwise comparison matrices for C and F are identical.
- c. we do not observe any kind of rank reversal.

In the next example, taken from Saaty and Hu [30], we illustrate that different methods of calculating priority weights may lead to different ranking patterns and in Subsection 4.3, we illustrate the phenomenon of rank reversal through an Example taken directly from Belton and Gear [2, 3, 4].

An Illustrative Example

This example, taken from Saaty and Hu [30], shows that priorities may be ranked differently. Suppose we have four criteria: C_1 , C_2 , C_3 , and C_4 respectively. Under each criterion, there are four alternatives, namely A_1 , A_2 , A_3 , and A_4 respectively. The judgment matrices and the corresponding priority vectors derived by using the following methods.

- a. The Eigen Value Method which is usually referred as EM in terms of Saaty [26] notation.
- b. The geometric mean (also sometimes known as Logarithmic Least Squares Method GM-LLSM).
- c. B-G normalized weight vector which we call B-G weights for short.
- d. The sum method.
- e. The vector normalization approach.

Following are the pairwise comparison matrices

With respect to the Goal	$C_1 \begin{pmatrix} 1 & 2 & 2 & 4 \\ 1/2 & 1 & 3 & 3 \\ 1/2 & 1/3 & 1 & 4 \\ 1/4 & 1/3 & 1/4 & 1 \end{pmatrix} \begin{matrix} A_1 \\ A_2 \\ A_3 \\ A_4 \end{matrix}$	$\begin{pmatrix} 0.41166 & 0.42194 & 0.9166 & 0.2417 \\ 0.31570 & 0.30727 & 0.6875 & 0.3352 \\ 0.19351 & 0.19063 & 0.5000 & 0.1789 \\ 0.07911 & 0.08015 & 0.1875 & 0.3137 \end{pmatrix} \begin{matrix} \text{EigenMethod} \\ \text{LLSM} \\ \text{Max} \\ \text{Sum Method} \end{matrix}$	$\begin{pmatrix} 0.41166 & 0.42194 & 0.9166 & 0.2417 \\ 0.31570 & 0.30727 & 0.6875 & 0.3352 \\ 0.19351 & 0.19063 & 0.5000 & 0.1789 \\ 0.07911 & 0.08015 & 0.1875 & 0.3137 \end{pmatrix} \begin{matrix} \text{EigenMethod} \\ \text{LLSM} \\ \text{Max} \\ \text{Sum Method} \end{matrix}$	$\begin{pmatrix} 0.41166 & 0.42194 & 0.9166 & 0.2417 \\ 0.31570 & 0.30727 & 0.6875 & 0.3352 \\ 0.19351 & 0.19063 & 0.5000 & 0.1789 \\ 0.07911 & 0.08015 & 0.1875 & 0.3137 \end{pmatrix} \begin{matrix} \text{EigenMethod} \\ \text{LLSM} \\ \text{Max} \\ \text{Sum Method} \end{matrix}$	$\begin{pmatrix} 0.24042 \\ 0.33520 \\ 0.17660 \\ 0.24777 \end{pmatrix} \begin{matrix} \text{Vector Norm} \\ \text{Vector Norm} \\ \text{Vector Norm} \\ \text{Vector Norm} \end{matrix}$
With respect to Criterion C ₁	$A_1 \begin{pmatrix} 1 & 2 & 2 & 4 \\ 1/2 & 1 & 3 & 3 \\ 1/2 & 1/3 & 1 & 4 \\ 1/4 & 1/3 & 1/4 & 1 \end{pmatrix} \begin{matrix} A_1 \\ A_2 \\ A_3 \\ A_4 \end{matrix}$	$\begin{pmatrix} 0.41166 & 0.42194 & 0.9166 & 0.2417 \\ 0.31570 & 0.30727 & 0.6875 & 0.3352 \\ 0.19351 & 0.19063 & 0.5000 & 0.1789 \\ 0.07911 & 0.08015 & 0.1875 & 0.3137 \end{pmatrix} \begin{matrix} \text{EigenMethod} \\ \text{LLSM} \\ \text{Max} \\ \text{Sum Method} \end{matrix}$	$\begin{pmatrix} 0.41166 & 0.42194 & 0.9166 & 0.2417 \\ 0.31570 & 0.30727 & 0.6875 & 0.3352 \\ 0.19351 & 0.19063 & 0.5000 & 0.1789 \\ 0.07911 & 0.08015 & 0.1875 & 0.3137 \end{pmatrix} \begin{matrix} \text{EigenMethod} \\ \text{LLSM} \\ \text{Max} \\ \text{Sum Method} \end{matrix}$	$\begin{pmatrix} 0.41166 & 0.42194 & 0.9166 & 0.2417 \\ 0.31570 & 0.30727 & 0.6875 & 0.3352 \\ 0.19351 & 0.19063 & 0.5000 & 0.1789 \\ 0.07911 & 0.08015 & 0.1875 & 0.3137 \end{pmatrix} \begin{matrix} \text{EigenMethod} \\ \text{LLSM} \\ \text{Max} \\ \text{Sum Method} \end{matrix}$	$\begin{pmatrix} 0.3151 \\ 0.1990 \\ 0.1375 \\ 0.0663 \end{pmatrix} \begin{matrix} \text{Vector Norm} \\ \text{Vector Norm} \\ \text{Vector Norm} \\ \text{Vector Norm} \end{matrix}$
With respect to Criterion C ₂	$A_1 \begin{pmatrix} 1 & 2 & 2 & 4 \\ 1/2 & 1 & 3 & 3 \\ 1/2 & 1/3 & 1 & 4 \\ 1/4 & 1/3 & 1/4 & 1 \end{pmatrix} \begin{matrix} A_1 \\ A_2 \\ A_3 \\ A_4 \end{matrix}$	$\begin{pmatrix} 0.41166 & 0.42194 & 0.9166 & 0.2417 \\ 0.31570 & 0.30727 & 0.6875 & 0.3352 \\ 0.19351 & 0.19063 & 0.5000 & 0.1789 \\ 0.07911 & 0.08015 & 0.1875 & 0.3137 \end{pmatrix} \begin{matrix} \text{EigenMethod} \\ \text{LLSM} \\ \text{Max} \\ \text{Sum Method} \end{matrix}$	$\begin{pmatrix} 0.41166 & 0.42194 & 0.9166 & 0.2417 \\ 0.31570 & 0.30727 & 0.6875 & 0.3352 \\ 0.19351 & 0.19063 & 0.5000 & 0.1789 \\ 0.07911 & 0.08015 & 0.1875 & 0.3137 \end{pmatrix} \begin{matrix} \text{EigenMethod} \\ \text{LLSM} \\ \text{Max} \\ \text{Sum Method} \end{matrix}$	$\begin{pmatrix} 0.41166 & 0.42194 & 0.9166 & 0.2417 \\ 0.31570 & 0.30727 & 0.6875 & 0.3352 \\ 0.19351 & 0.19063 & 0.5000 & 0.1789 \\ 0.07911 & 0.08015 & 0.1875 & 0.3137 \end{pmatrix} \begin{matrix} \text{EigenMethod} \\ \text{LLSM} \\ \text{Max} \\ \text{Sum Method} \end{matrix}$	$\begin{pmatrix} 0.3466 \\ 0.1999 \\ 0.1218 \\ 0.3050 \end{pmatrix} \begin{matrix} \text{Vector Norm} \\ \text{Vector Norm} \\ \text{Vector Norm} \\ \text{Vector Norm} \end{matrix}$
With respect to Criterion C ₃	$A_1 \begin{pmatrix} 1 & 2 & 2 & 4 \\ 1/2 & 1 & 3 & 3 \\ 1/2 & 1/3 & 1 & 4 \\ 1/4 & 1/3 & 1/4 & 1 \end{pmatrix} \begin{matrix} A_1 \\ A_2 \\ A_3 \\ A_4 \end{matrix}$	$\begin{pmatrix} 0.41166 & 0.42194 & 0.9166 & 0.2417 \\ 0.31570 & 0.30727 & 0.6875 & 0.3352 \\ 0.19351 & 0.19063 & 0.5000 & 0.1789 \\ 0.07911 & 0.08015 & 0.1875 & 0.3137 \end{pmatrix} \begin{matrix} \text{EigenMethod} \\ \text{LLSM} \\ \text{Max} \\ \text{Sum Method} \end{matrix}$	$\begin{pmatrix} 0.41166 & 0.42194 & 0.9166 & 0.2417 \\ 0.31570 & 0.30727 & 0.6875 & 0.3352 \\ 0.19351 & 0.19063 & 0.5000 & 0.1789 \\ 0.07911 & 0.08015 & 0.1875 & 0.3137 \end{pmatrix} \begin{matrix} \text{EigenMethod} \\ \text{LLSM} \\ \text{Max} \\ \text{Sum Method} \end{matrix}$	$\begin{pmatrix} 0.41166 & 0.42194 & 0.9166 & 0.2417 \\ 0.31570 & 0.30727 & 0.6875 & 0.3352 \\ 0.19351 & 0.19063 & 0.5000 & 0.1789 \\ 0.07911 & 0.08015 & 0.1875 & 0.3137 \end{pmatrix} \begin{matrix} \text{EigenMethod} \\ \text{LLSM} \\ \text{Max} \\ \text{Sum Method} \end{matrix}$	$\begin{pmatrix} 0.3466 \\ 0.1999 \\ 0.1218 \\ 0.3050 \end{pmatrix} \begin{matrix} \text{Vector Norm} \\ \text{Vector Norm} \\ \text{Vector Norm} \\ \text{Vector Norm} \end{matrix}$
With respect to Criterion C ₄	$A_1 \begin{pmatrix} 1 & 2 & 2 & 4 \\ 1/2 & 1 & 3 & 3 \\ 1/2 & 1/3 & 1 & 4 \\ 1/4 & 1/3 & 1/4 & 1 \end{pmatrix} \begin{matrix} A_1 \\ A_2 \\ A_3 \\ A_4 \end{matrix}$	$\begin{pmatrix} 0.41166 & 0.42194 & 0.9166 & 0.2417 \\ 0.31570 & 0.30727 & 0.6875 & 0.3352 \\ 0.19351 & 0.19063 & 0.5000 & 0.1789 \\ 0.07911 & 0.08015 & 0.1875 & 0.3137 \end{pmatrix} \begin{matrix} \text{EigenMethod} \\ \text{LLSM} \\ \text{Max} \\ \text{Sum Method} \end{matrix}$	$\begin{pmatrix} 0.41166 & 0.42194 & 0.9166 & 0.2417 \\ 0.31570 & 0.30727 & 0.6875 & 0.3352 \\ 0.19351 & 0.19063 & 0.5000 & 0.1789 \\ 0.07911 & 0.08015 & 0.1875 & 0.3137 \end{pmatrix} \begin{matrix} \text{EigenMethod} \\ \text{LLSM} \\ \text{Max} \\ \text{Sum Method} \end{matrix}$	$\begin{pmatrix} 0.41166 & 0.42194 & 0.9166 & 0.2417 \\ 0.31570 & 0.30727 & 0.6875 & 0.3352 \\ 0.19351 & 0.19063 & 0.5000 & 0.1789 \\ 0.07911 & 0.08015 & 0.1875 & 0.3137 \end{pmatrix} \begin{matrix} \text{EigenMethod} \\ \text{LLSM} \\ \text{Max} \\ \text{Sum Method} \end{matrix}$	$\begin{pmatrix} 0.3151 \\ 0.1990 \\ 0.1375 \\ 0.0663 \end{pmatrix} \begin{matrix} \text{Vector Norm} \\ \text{Vector Norm} \\ \text{Vector Norm} \\ \text{Vector Norm} \end{matrix}$

It may be seen that for each pairwise comparison matrix above, the corresponding priority vectors are different and there are differences in the ranks given by the different methods. After synthesis, we obtain the following overall ranking.

Ranking based on the Eigen Method.	$\begin{matrix} A_1 \\ A_2 \\ A_3 \\ A_4 \end{matrix} \begin{bmatrix} 0.41166 & 0.0754 & 0.0754 & 0.41166 \\ 0.31570 & 0.3540 & 0.3540 & 0.31570 \\ 0.19351 & 0.1603 & 0.1603 & 0.19351 \\ 0.07911 & 0.4102 & 0.4102 & 0.07911 \end{bmatrix} \begin{bmatrix} 0.41166 \\ 0.31570 \\ 0.19351 \\ 0.07911 \end{bmatrix} = \begin{bmatrix} 0.24042 \\ 0.33520 \\ 0.17660 \\ 0.24777 \end{bmatrix}$
Ranking based on the LLSM.	$\begin{matrix} A_1 \\ A_2 \\ A_3 \\ A_4 \end{matrix} \begin{bmatrix} 0.42194 & 0.0784 & 0.0784 & 0.42194 \\ 0.30727 & 0.3471 & 0.3471 & 0.30727 \\ 0.19063 & 0.1615 & 0.1615 & 0.19063 \\ 0.08015 & 0.4128 & 0.4128 & 0.08015 \end{bmatrix} \begin{bmatrix} 0.42194 \\ 0.30727 \\ 0.19063 \\ 0.08015 \end{bmatrix} = \begin{bmatrix} 0.25089 \\ 0.32710 \\ 0.17612 \\ 0.24578 \end{bmatrix}$
Ranking based on the Max approach.	$\begin{matrix} A_1 \\ A_2 \\ A_3 \\ A_4 \end{matrix} \begin{bmatrix} 0.9166 & 0.1770 & 0.1770 & 0.9166 \\ 0.6875 & 0.7500 & 0.7500 & 0.6875 \\ 0.5000 & 0.4062 & 0.4062 & 0.5000 \\ 0.1875 & 0.8750 & 0.8750 & 0.1875 \end{bmatrix} \begin{bmatrix} 0.9166 \\ 0.6875 \\ 0.5000 \\ 0.1875 \end{bmatrix} = \begin{bmatrix} 1.2222 \\ 1.6497 \\ 1.0344 \\ 1.2461 \end{bmatrix}$
Ranking based on the Sum Method.	$\begin{matrix} A_1 \\ A_2 \\ A_3 \\ A_4 \end{matrix} \begin{bmatrix} 0.2417 & 0.0778 & 0.0778 & 0.2417 \\ 0.3352 & 0.3466 & 0.3466 & 0.3352 \\ 0.1789 & 0.1700 & 0.1700 & 0.1789 \\ 0.3137 & 0.4054 & 0.4054 & 0.3137 \end{bmatrix} \begin{bmatrix} 0.2417 \\ 0.3352 \\ 0.1789 \\ 0.3137 \end{bmatrix} = \begin{bmatrix} 0.17424 \\ 0.36436 \\ 0.18676 \\ 0.38265 \end{bmatrix}$
Ranking based on the Vector Norm.	$\begin{matrix} A_1 \\ A_2 \\ A_3 \\ A_4 \end{matrix} \begin{bmatrix} 0.3151 & 0.0620 & 0.0620 & 0.3151 \\ 0.1990 & 0.1999 & 0.1999 & 0.1990 \\ 0.1375 & 0.1218 & 0.1218 & 0.1375 \\ 0.0663 & 0.3050 & 0.3050 & 0.0663 \end{bmatrix} \begin{bmatrix} 0.3151 \\ 0.1990 \\ 0.1375 \\ 0.0663 \end{bmatrix} = \begin{bmatrix} 0.14104 \\ 0.14316 \\ 9.3428 \times 10^{-2} \\ 0.12792 \end{bmatrix}$

We note that the different methods rank the alternative differently. We have

- $EM \mapsto A_2 > A_4 > A_1 > A_3$
- $LLSM \mapsto A_2 > A_1 > A_4 > A_3$
- $Max \mapsto A_2 > A_4 > A_1 > A_3$
- $SumMethod \mapsto A_4 > A_2 > A_1 > A_3$
- $VectorNorm \mapsto A_1 > A_2 > A_4 > A_3$

However, each method has its own benefits and drawbacks.

(a) According to Saaty and Hu [30], they claimed that EM is the only valid method for deriving the priority vector from a pairwise comparison matrix, particularly in situation when the pair-wise comparison matrix is inconsistent. Because the other proposed methodology give different rankings, thus are unacceptable for deriving priorities in decision making as they do not capture the essential idea of transitivity.

Rank Reversal Example

Belton and Gear [2, 3, 4] consider the following example to illustrate the concept of rank reversal. It is shown through a detail numerical example that the rank order of alternatives in an AHP model may change if we add or even delete alternative(s) from the existing set of alternatives. As a result, an alternative that is less preferred to another alternative becomes more preferred and vice versa. Below, we consider an example of rank reversal that occurs as a result of adding a copy of the best existing alternative. Table 9, Table 10, Table 11 contain an example of a reciprocal comparison matrix before adding a copy of the best existing alternative. The criteria are equally important and all are assigned weights of 1/3.

The corresponding normalized eigen vectors corresponding to the max eigen values for Table 9, Table 10 and Table 11 are as follows.

$$\begin{pmatrix} 1/11 & 9/11 & 8/18 \\ 9/11 & 1/11 & 9/18 \\ 1/11 & 1/11 & 1/18 \end{pmatrix} \begin{pmatrix} 1/3 \\ 1/3 \\ 1/3 \end{pmatrix} = \begin{pmatrix} 0.45118(2) \\ 0.46970(1) \\ 7.9125 \times 10^{-2}(3) \end{pmatrix}$$

The corresponding normalized weight vectors are

$$\begin{pmatrix} 1/20 & 9/12 & 8/27 \\ 9/20 & 1/12 & 9/27 \\ 1/20 & 1/12 & 1/27 \end{pmatrix} \begin{pmatrix} 1/3 \\ 1/3 \\ 1/3 \end{pmatrix} = \begin{pmatrix} 0.36543(1) \\ 0.28889(2) \\ 0.05679(4) \end{pmatrix}$$

CONCLUSION

In this paper, we discuss the AHP model and provide some numerical illustration. The methodology adopted in this paper may also be applicable and extended to other MCDM models as well.

The priorities for the criteria's in the AHP model are tested for consistency and all the consistent priorities are then aggregated to provide an overall ranking. This ranking mechanism will in our views providing a quantitative approach to systematically select the best faculty member in a more effective, objective and unbiased manners.

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Table 1 : Preference scale for pairwise comparisons

Preference level	Numerical value
Equally preferred	1
Equally to moderately preferred	2
Moderately preferred Moderately to strongly preferred Strongly preferred	3
4	4
5	5
Strongly to very strongly preferred Very strongly preferred	6
7	7
Very strongly to extremely preferred Extremely preferred	8
9	9

Where R.I is the average random consistency index, its value can be obtained as shown in Table 2.

Table 2 : R.I values for n items being compared

Size of the matrix	1	2	3	4	5	6	7	8	9	10
R.I	0	0	0.58	0.90	1.12	1.24	1.32	1.41	1.45	1.51

<i>Table 1</i>		Teaching					<i>Table 2</i>		Student Advising				
Faculty Member		A	B	C	D	E	Faculty Member		A	B	C	D	E
A		1	$\frac{1}{5}$	3	$\frac{1}{2}$	5	A		1	3	2	2	5
B		5	1	7	1	7	B		$\frac{1}{3}$	1	1	3	3
C		$\frac{1}{3}$	$\frac{1}{7}$	1	$\frac{1}{4}$	3	C		$\frac{1}{2}$	1	1	2	3
D		2	1	4	1	7	D		$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{5}$	1	2
E		$\frac{1}{5}$	$\frac{1}{7}$	$\frac{1}{3}$	$\frac{1}{7}$	1	E		$\frac{1}{5}$	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{5}$	1

<i>Table 3</i>		Research					<i>Table 4</i>		Service				
Faculty Member		A	B	C	D	E	Faculty Member		A	B	C	D	E
A		1	4	9	2	9	A		1	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{9}$
B		$\frac{1}{4}$	1	2	2	4	B		4	1	2	1	1
C		$\frac{1}{9}$	$\frac{1}{2}$	1	1	4	C		2	$\frac{1}{2}$	1	$\frac{1}{2}$	$\frac{1}{4}$
D		$\frac{1}{2}$	$\frac{1}{2}$	1	1	4	D		3	1	2	1	1
E		$\frac{1}{9}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	1	E		9	1	4	1	1

<i>Table 5</i>		Q.R.E				
Faculty Member		A	B	C	D	E
A		1	$\frac{1}{2}$	$\frac{1}{5}$	$\frac{1}{3}$	1
B		2	1	$\frac{1}{3}$	1	1
C		5	3	1	6	4
D		3	1	$\frac{1}{6}$	1	4
E		1	1	$\frac{1}{4}$	$\frac{1}{4}$	1

<i>Table 7</i>	Teaching	Student Advising	Research	Service	Q.R.E	Overall Priority Vector
Alternatives	$w_1 = 0.0468$	$w_2 = 0.1254$	$w_3 = 0.5461$	$w_4 = 0.1745$	$w_5 = 0.1072$	
A	0.1522	0.3917	0.5330	0.0569	0.0741	0.3652(1)
B	0.4335	0.2156	0.1815	0.2496	0.1366	0.2047(2)
C	0.0716	0.2049	0.1039	0.1078	0.5161	0.1599(4)
D	0.3050	0.1209	0.1430	0.2385	0.1843	0.1689(3)
E	0.0378	0.0691	0.0386	0.3472	0.0888	0.1016(5)

Alternatives	Teaching	Student Advising	Research	Service	Q.R.E	Overall Priority Vector
	$w_1 = 0.0468$	$w_2 = 0.1254$	$w_3 = 0.5461$	$w_4 = 0.1745$	$w_5 = 0.1072$	
A	0.1478	0.3282	0.5135	0.0504	0.0525	0.3430(1)
B	0.4114	0.1772	0.1585	0.2199	0.0940	0.1765(2)
C	0.0650	0.1702	0.0881	0.0967	0.3375	0.1255(4)
D	0.2779	0.0981	0.1196	0.2116	0.1145	0.1398(3)
E	0.0327	0.0558	0.0319	0.3244	0.0636	0.0894(5)
F	0.0650	0.1702	0.0881	0.0967	0.3375	0.1255(4)

C_1	A	B	C	EM
A	1	$\frac{1}{9}$	1	$\frac{1}{11}$
B	9	1	9	$\frac{9}{11}$
C	1	$\frac{1}{9}$	1	$\frac{1}{11}$

C_2	A	B	C	EM
A	1	9	9	$\frac{9}{11}$
B	$\frac{1}{9}$	1	1	$\frac{1}{11}$
C	$\frac{1}{9}$	1	1	$\frac{1}{11}$

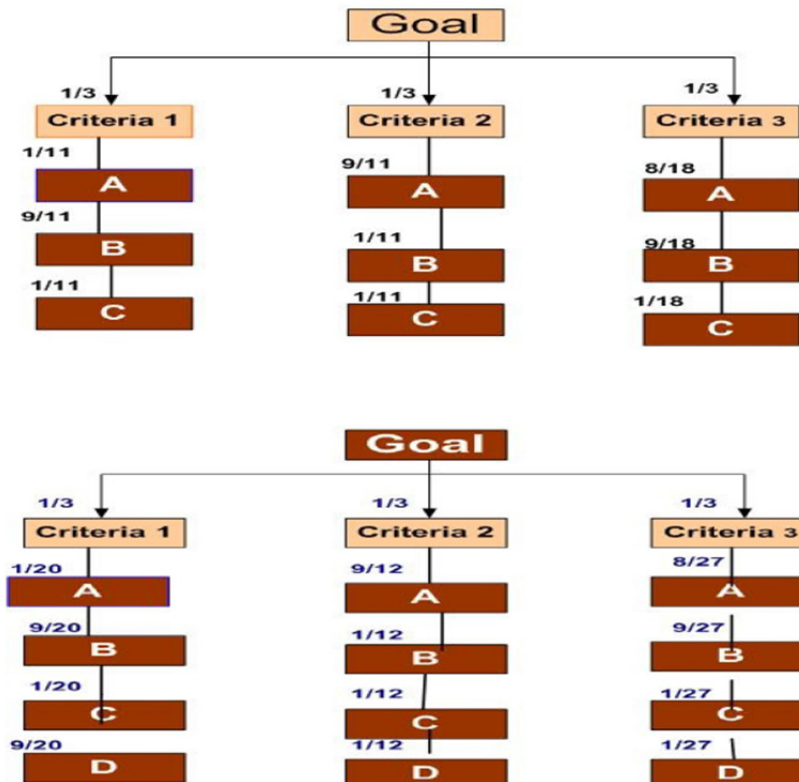
C_3	A	B	C	EM
A	1	$\frac{8}{9}$	8	$\frac{8}{18}$
B	$\frac{9}{8}$	1	9	$\frac{9}{18}$
C	$\frac{1}{8}$	$\frac{1}{9}$	1	$\frac{1}{18}$

C_1	A	B	C	D	EM
A	1	$\frac{1}{9}$	1	$\frac{1}{9}$	0.05
B	9	1	9	1	0.45
C	1	$\frac{1}{9}$	1	$\frac{1}{9}$	0.05
D	9	1	9	1	0.45

C_2	A	B	C	D	EM
A	1	9	9	9	0.750
B	$\frac{1}{9}$	1	1	1	0.083
C	$\frac{1}{9}$	1	1	1	0.083
D	$\frac{1}{9}$	1	1	1	0.083

C_3	A	B	C	D	EM
A	1	$\frac{8}{9}$	8	$\frac{8}{9}$	0.296
B	$\frac{9}{8}$	1	9	1	0.333
C	$\frac{1}{8}$	$\frac{1}{9}$	1	$\frac{1}{9}$	0.037
D	$\frac{9}{8}$	1	9	1	0.333

It is shown that the third and fourth ranks are reversed



Impact of Facebook On The Students

R. Anjana (Asst. Professor)
Dept. Of Management
Dr. Lankapalli Bullayya College
Visakhapatnam,
Andhra Pradesh (India)
Ph. +919849830162

Krishna K
(IT Consultant), SPA BSL

Abstract

Since the inception of Facebook in the year 2004, its use has been increasing drastically. Facebook is one of the social networking sites that has rapidly changed the way humans interact. It has won the attraction of all the age groups whether adults, youngsters or the teenagers. It is used immensely by the students for social interactions and network building. Facebook has penetrated the lives of the students and have a deep impact on the way they express themselves. Though it can have positive impact on the students, the negative impact has overshadowed the goodness of Facebook. For my study entitled "Impact of Facebook on the Students" I have collected both the primary and secondary data. The primary data is collected by administering the questionnaire to 200 college students in the Visakhapatnam city consisting of the intermediate, degree and post graduate students. The questionnaire is divided into three sections (Demographics, impact on behaviour and studies). The primary objective of this study is to analyse if the impact of Facebook on students is positive or negative. This objective is met by analysing other secondary objectives. The secondary objectives are to find the impact of the Facebook on the behaviour and the studies of the students.

Key words: Facebook, students, social interactions, network building, studies

INTRODUCTION

When the Facebook was launched on 4 February 2004 by Mark Zuckerberg, he would have never thought that it would become one of the most popular social networking sites in the world. Though, this site was started for the students, today it is used by all the age groups. Also many studies have shown that the facebook has negative impact more than the positive impact on the students.

Facebook has an impact on the social life and the studies of the students. As facebook is available in the mobile, it makes the students to be in regular and constant touch with their friends and relatives. It also helps them to unite with their old and distant friends. But unfortunately the recent studies have shown that the facebook also causes the feeling of jealous and sometimes the low self esteem when they go through the

postof the life style of other people. Sometimes they get dissatisfied with their own life.

Facebook has become an addiction to many of the students. Instead of concentrating on the studies the students are distracted by the pictures, comments or chatting with the known and strangers even during the exam times.

LITERATURE REVIEW

Nearly 85 percent of college students log on to Facebook every day according to "techcrunch.com". As per a survey done by OnlineEducation.net, 96% of the students use facebook and this has a negative impact on their studies leading to the lower grades. The extended presence on facebook can have a harmful effects on productivity and task performance.(Canales et al.,2009; Karpinski and Duberstein, 2009. The long hours spent on facebook seem to decrease student's academic

performance and thus their grades. Students spend an average of 30-35 minutes per day surfing Facebook (Schulten, 2009b); some people recognize that they have outsourced their social life exclusively to facebook (Schulten, 2009a, p.1);

OBJECTIVE OF THE STUDY

To study the impact of the facebook on the behaviour of the students.

To analyse the relation between the facebook and the studies of the students..

To understand the pattern of the time spent by the students on facebook.

To analyse the relation between the facebook and the health of the students.

RESEARCH METHODOLOGY OF THE STUDY

To do the study, a sample of size 200 was selected conveniently (convenient sampling procedure). This sample consists of both male and female students of different colleges pursuing intermediate, degree or masters in the Visakhapatnam city. The age of the respondents ranges from 15 to 24. A questionnaire was administered to this sample to get the information regarding the impact of facebook on the students.

Methods of data collection

A combination of Interview method and Questionnaire method is used to collect data from the respondents.

Sample Design

Under sample design the method of convenient Sampling is been used to collect data from the respondents.

Sample Size

Sample of size 200 is chosen for the collection of the data.

DATA ANALYSIS AND INTERPRETATION

Two way ANOVA, test of correlation and the percentage methods are used for the analysis and interpretation of the data.

ANALYSIS AND DISCUSSION

1. Hypothesis H_0 : There is no impact of the facebook (which time they spent on facebook) on the behaviour of the students.(row)

H_1 : There is an impact of the facebook (which time they spent on facebook) on the behaviour of the students

2. Hypothesis H_0 : There is no impact of facebook (number of hours they spent on Facebook) on the behaviour of the students(column)

H_1 :There is an impact of facebook((number of hours they spent on facebook) on the behaviour of the students

As the F critical value(3.006917) > F test value(0.51861), we accept null hypothesis(Row). There is no impact of facebook on the behaviour of the students in terms of when they spent their time on the facebook whether morning, afternoon, evening, night or all the day.

As the F critical value(3.006917)< F test value(3.052632), we accept the alternate hypothesis(column). There is an impact of the facebook on the behaviour of the students in terms of how much time they spent on facebook.

3. Correlation between the number of hours spent on facebook and the studies & concentration on studies

The students are of the opinion that the time they spent on the facebook neither have any impact on their concentration on studies nor the marks or the grades they get. Though many studies have proved that the facebook has a negative impact on the students and their studies, but most of the

students do not agree and say that their facebook.

But most of them have agreed that they are addicted to facebook and keep checking the status and the posts of their friends and relatives all over the day. 18% of the respondents completely agree that they are addicted 18% of the student respondents completely agree that they are addicted to facebook. These students are more interested to know what is happening in others life and regularly updates their pictures and activities of their life. 38% of the respondents says that they are somewhat addicted to the facebook There are 44% of the respondents who are not addicted to the facebook. But they also log in to the facebook daily.

4.Device used for Facebook:

Most of the respondents (64%) use mobile as it is most handy and can be used anywhere and at any time even when the person is in transit. As there are smart phones available in all ranges, it is possible even for almost everyone to afford such mobile phone.

5.Why do students use Facebook?

Most of the respondents (48%) use facebook to spend time with friends and relatives. They feel they can develop good social relations with their friends and relatives even though they are distant away. 32% of the respondents use facebook for just fun or time pass. They are interested to know what is happening in others life. 10% of the respondents are interested in making new friends, be it strangers or through someone else. Only 4% use facebook for chatting as there are other apps for the chatting which are more popular. 6% of the respondents use it for education purpose like sharing their college work or any other knowledge.

studies are not affected by the **6.Impact of number of hours on the health of the students(food habit and depression/mood swings)**

To understand the relation between the facebook and the health of the students the test of correlation was done. It can be seen that as the number of hours spent on the facebook increases, there is a negative impact on the food habit though not much. They some times forget to eat or eat less as the time increases. The increase in the number of hours in facebook also leads to the increase in depression or the mood swings of the respondents.

CONCLUSION

Facebook was introduced to assist the students for the education purpose. But unfortunately, today very few students use it for the knowledge purpose. In fact they are not able to concentrate on studies and are slowly getting addicted to it. Sometimes they also get depressed seeing the better lifestyles of the other people by seeing their posts. This even leads to their mood swings. Most of the students use it for their personal like spending time with their friends and relatives or making friends for the fun and time pass. Some use it for chatting and some even use the facebook for making friendship with the strangers. The number of hours they spend on facebook have a negative impact on their health as they don't eat on time and get busy in checking the status of the other people on facebook. It has also shown a negative impact on their behaviour also. They get annoyed if they are disturbed when on facebook. The facebook has totally changed the outlook of the people. They say that they are developing good social relations with their friends and relatives but unfortunately without their knowledge they are getting distant from their own people who are very near to them.

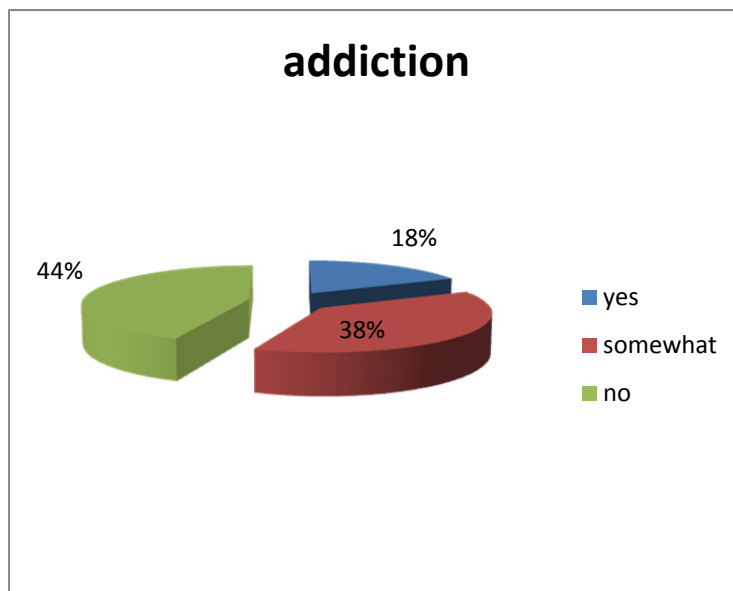
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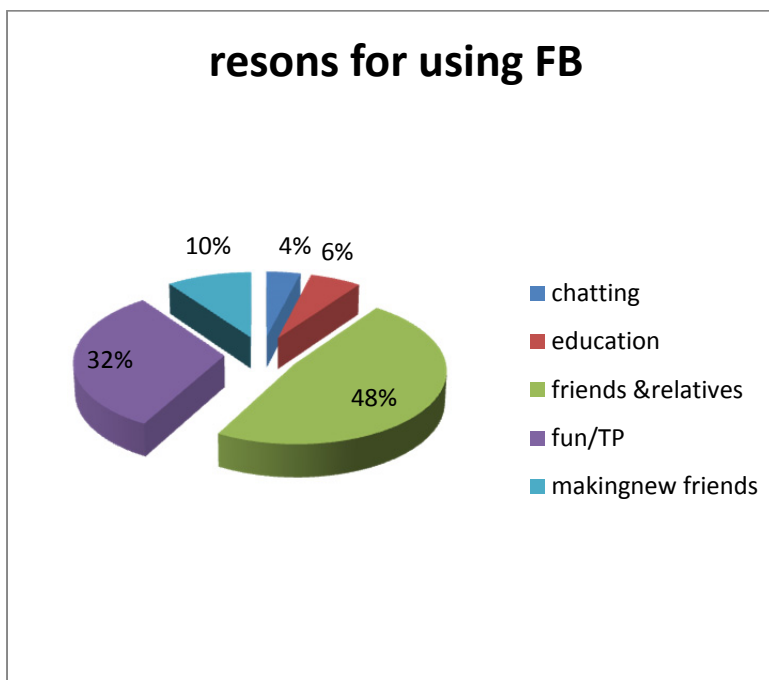
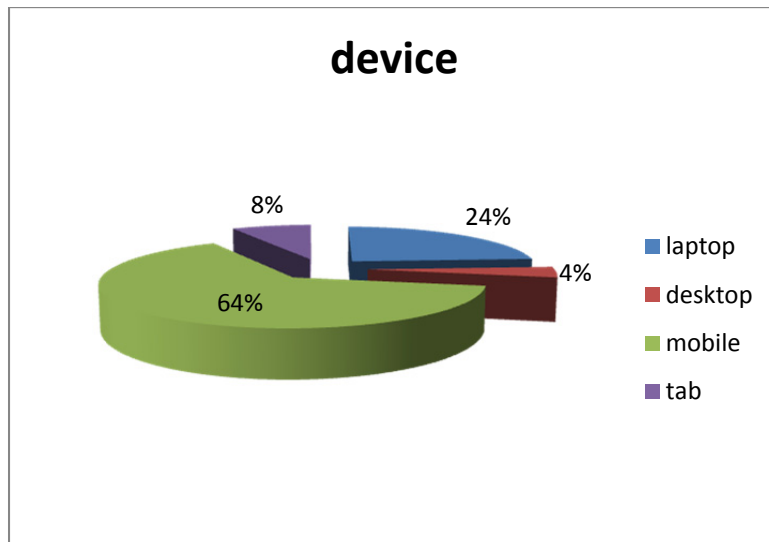
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ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Rows	204.8	4	51.2	0.842105	0.51861	3.006917
Columns	742.4	4	185.6	3.052632	0.047782	3.006917
Error	972.8	16	60.8			
Total	1920	24				

	Hrs
Hrs	1
affect conc. on studies	0.570544
Impact on Studies	0.570544
less marks	0.220971

	hrs	food habit	depression
hrs	1		
food habit	-0.44821	1	
depression	0.766965	0.045835	1





Delusion of a Fine-Arts PhD among Young Bengali Artists and Art Scholars

Dr. Ritwij Bhowmik
Assistant Professor,
Department of HSS,
IIT Kanpur

Abstract

For over a century, Bengali artist and art scholar remained the forefront in the development of modern Indian art and art education. Conventionally Bengali Fine-Artists unlike most other streams never cared of any higher degree of its sake and dedicated themselves for the amelioration of Indian art practise. However the recent trend of getting a Fine-Arts PhD degree, primarily for a secure job purpose, detaching many young artist and art scholars from the independent practice of fine-art. Do the Bengali Art scholars and artists really need a PhD in Fine-Arts? This essay will attempt to see how the notion of a Fine-Arts PhD works rapidly in the psyche of the fledged Fine-Arts graduates of West-Bengal and also question on its possible divergence of young artist from creating art works.

Key Words: Art Education, Fine-Arts PhD, Visual Culture, MFA, BFA.

INTRODUCTION

The highest education is that which does not merely give us information but makes our life in harmony with all existence. — Rabindranath Tagore

The recent upsurge for PhD among the Fine-Arts graduates in Bengal gave birth to some fresh new debates, whether obtaining PhD is a committal necessity for Fine-Arts students? More important question, if this recent trend of the PhD is diverting the potent youths from succeeding a creative career ahead.

Recently, I had a chance to communicate with a fresh (BFA) graduate from the Painting Department of a notable Fine-Arts institute of West-Bengal. My random question to him was “what will you do next?”, as my constant assumption was that he might answer on ensuing a career as an artist or at least show his interest in art-teaching. But his answer was something unexpected, as he wanted to

pursue PhD course in any one of the Indian Art Academies. His answer was unanticipated to me but not very uncommon in the recent fine-arts graduates. More annoyingly his emphasis was mainly on the academic degree, rather than the awarding Institute or research topic/motivation. His answer certainly incited me to carry on a little more inquest with few recent graduates and faculty members to comprehend the situation. Here, I should state that, in West Bengal there are four renowned art institutions, among them three are offering PhD courses in Fine-Arts/Visual-Arts, Kala-Bhavana (Visva-Bharati University) has started PhD course much before than the other two institutes. The result was more astonishing than the previous solitary answer, and it fascinated me with a newly emerging “PhD craving” among the Art Students.

Let us discuss about the oldest Fine-Arts institute of West-Bengal which

started offering PhD in Fine-Arts much before of all other Bengali¹ art-academies. In 1919, the establishment of the Kala-Bhavana (as an Institute of Fine-Arts under the Visva-Bharati University) by Noble laureate poet Rabindranath Tagore was perceived as the milestone of the Art Education history of India (Sen 2010). Tagore himself was against the sluggish and unproductive education system (Bhattacharjee 2014). Kala-Bhavana, with its avant-garde schooling, embarked a fresh new wave of Art practice, which soon created a niche for itself in the Indian art scenario². Luminaries of this great Institute, such as Ramkinkar Baij, Binod Behari Mukherjee, Satyajit Ray and K. G. Subramanyan, all were successful in their respective fields but none chased the PhD dream like the current generation. Even until the last decade, Kala-Bhavana students had the highest number of participation in all major art events in India and abroad. But this tradition too is facing a large scale decline, as the new generation students rather prefer a research based “safe” career than the “challenging” independent artistic career.

Less than four decades ago the PhD degree course was introduced in Kala-Bhavana as a research based academic degree for the young Art Historians and art theoreticians, which was much before than any other regional Art Institute in West-Bengal. The Kala-Bhavana education system has an effective independent ambiance, unlike any other Indian Art Institute it caters students to imagine and create without any restrictions. The terminal degree it offers is the MFA (Masters of Fine-Arts) which without any subjugation (such as the M. Phil in other disciplines) can proceed directly to PhD level course. The MFA, within its usual 2 years tenor, predominantly observes more space for studio based Fine-Arts practice than the theoretical training or study based

research (except the Art History students, which is undoubtedly a less popular subject among the Fine-Art Students) which is a necessity for pursuing further academic research; hence, leaving the students almost impromptu for the next higher level academic degree like the “PhD”. The fine-arts (or ‘studio based art’ students of Painting, Graphics, Sculpture, Design, Ceramics etc.) students during their university courses, are being motivated to pursue an artistic career; ironically after the graduation, they ultimately desert this career option in search of a more “relevant” degree. Thus, instead of contending in the Art field, students self-captivate themselves within the parochial confinements of PhD course, at various Art Institutes. A look at these “enrolled PhDs” will show that, generally a PhD student spends about 6 to 7 valuable years of his/her academic life in pursuit of PhD; ironically most of the time he/she fails to achieve it after prolong time period or even worse, develops a “depressed” personality unable to produce Art.

Most of the students of Kala-Bhavana or any other notable Fine-Arts institute of West-Bengal, conventionally come from humble background and the biggest reason behind this that the institute never discriminate students for their racial or economic background.

From my intimate proximity with the students of Kala-Bhavana I have learnt that it’s quite difficult for many to even sustain their undergraduate studies let alone post-graduate and doctoral education. After five years of full-time undergraduate degree (BFA) course, all most everyone is motivated to take the two years full-time post-graduate (MFA) course – which is comprehensible as these two years post-graduate training will hone their skills that they achieved in their undergraduate years; also it provides some extra time to contemplate and prepare before they enter

professional art market or take up a suitable job. There was a time when many talented students used to utilize this time to search for innovative career paths, like opening up individual studios or start their own designing units. But now, most of the 'talented' students can think of only one pursuance – register for a PhD course and then secure a faculty position. If we are ignoring the PhD course length (which could be anywhere between five to seven years; technically lengthier than the undergraduate degree), then a general fine-arts student's (who could be tomorrow's artist) continuous pursuit of all six years (four years of BFA and two years of MFA) should be enough for him/her to work professionally and technically there's no exigencies of that additional 'doctoral education'. Apart from these, economic support is an obvious factor for pursuing any such doctoral education. An economically backward student and his/her family obviously can not sustain long (and also expensive, which includes tuition fees, study materials etc.) educational pursuit. Also we have to understand that during a full-time (or even for that sake, part time) Fine-Arts PhD course, it's very for any students to find and work (and 'earn' from it) while they are studying. Often the rigorous course work and academic research (if one is committed enough to complete it in given time) of doctoral programme doesn't allows students to breath.

Does one need a PhD degree to produce art? The obvious answer will be 'no'. As a matter of fact, one doesn't even require any college/university degree to produce art. The degrees are necessary to learn basic techniques of various fine-arts mediums which help the young minds with their creative endeavor. The university fine-arts degrees such as BFA/MFA are also useful to get various jobs at different levels of the society, ranging from art-teacher to

creative designer, illustrator, animation artist and many more. Despite all these and the professional artistic career, 'college lectureship' remains one of the most fascinating job opportunities among the Bengali fine-arts graduates. And one can effortlessly assume that in the competition for securing a 'college lectureship', getting a PhD degree is one the most crucial factor for any such aspiring fine-arts scholar.

However, the self-contradictory opinion that widely affirmed by the Art Academy graduates is that, PhD degree is a "mandatory qualification" for obtaining a faculty position in any Indian Art Institutes. On the contrary a recent rule by the UGC (University Grants Commission), said that the NET (National Eligibility Test by the UGC) is mandatory factor while the PhD is not, for the Lecturer position³; a recent study of the present faculties engaged in a noted Kolkata Art-College will support this fact⁴. So, this false alarm is getting baneful for the bright Indian artists and causing their diversion from their conventional career paths.

The discussion can go beyond that, when we look at the "half-baked"⁵ students (read would be Artists of tomorrow) struggling for the Fine-Arts PhD course, which is ironically, not meant for them. In some other Asian countries like China, Japan, Taiwan and South Korea, this situation is quite the reverse. Unlike India, students in their freshmen year precisely select whether to join practicing Fine-Arts/studio-art disciplines or adopt Art-theory/art-history base educations, and thus follow it accordingly to yield properly trained "Artists" and "Art Theorists/Historians". It is the high time that our Art Academies like Kala-Bhavana, should adopt similar education process, which, instead of misleading the student will help them to become successful in their career.

If getting a job is the main concern, then it is a known fact that the conventional job opportunities for fine-arts graduates are relatively scarce than any other general stream graduates. And certainly these small job windows are subject to a cut-throat competition, all thanks to the growing number of private and semi-private art-academies who are ceaselessly producing army of fine-arts graduates. Whereas the conventional art-markets are observing less and less new talents are joining the current.

The delusion of a "Fine-Arts PhD" stirred the perception of art education and career as an artist among the Bengali Fine-Arts students. To be precise, until now, this fatal anomaly is extensively overlooked by every possible scrutiny. Without any doubt, the Indian Art Education is incomparable with any other educational streams, and our policy makers should consider this while introducing new changes. If the necessary of the higher 'art-education' is only for better job opportunity, then it should be re-examined and redesigned. The pioneers of Indian art never actually compromised with their passion to create art for some job or higher education; instead they were certain about their motivation and career aspirations. This makes them distinguishable from the new fine-arts graduates. It is a time, when the entire art fraternity should think and debate over this matter with great concern. In conclusion, it can be said that, this recent trend has reached into an alarming stage. If this decline continues, soon Indian art scene will face an absence of a whole generation of talented young artists, and then the next generations will eventually succumb entirely within this PhD delusion.

I would like to thank the authorities of Academic Research Publishers (ACRPUB) and Academic Research Conferences (ARC) for providing me this

opportunity to publish my article in this renowned academic research journal.

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A Study on Portrayal of Women in Advertisements and It's Effect on Cultural Values

Dr.A.Krishnan

Associate Professor, PG and
Research Dept. of Commerce,
Govt. Arts College for Men,
Chennai, Tamilnadu, India.

Selvadurgadevi Kandavel

PhD Research Scholar, Barathiyar
University, Coimbatore,
Tamilnadu, India.

Pawline .M

PhD Research Scholar, Mother Teresa
University, Kodaikanal, Tamilnadu,
India.

ABSTRACT

Today everyone needs to advertise their products to inform the customers about the product, increase the sales, acquire market share, and attain top position in their respective industry. Every business spends lot of money for advertising their products but the money spent will lead to success only when the best techniques of advertising are used for the product. In recent years, advertising has witnessed a significant transformation in attracting customer to buy/use their products/services. The need for advertisements has risen to great levels in print and visual media. One among the transformation is the way women are depicted in advertising, with changing times, reflecting the transformation taking place in society. Advertising is one of the major media that affect our daily life consciously and unconsciously and are responsible to play a significant role in shaping the society in a much broader perspective. Women today are no longer consolidated behind kitchen walls. Their aspiration for stepping out in the world made society to think differently. Marketer wisely utilized this transformation process to launch their product and advertisement strategically. This paper is a part of research work and the report will seek to define the portrayal of women in advertisements and its effect on cultural values. Survey research method is used for the analysis on the basis of gender and age. The literature review indicates that the women are portrayed mainly as an object of attraction. The results argue that the portrayal in advertising is changing the concept of respect about women, spreading uncultured values and also indicate women's physical beauty as an instrument to induce the products demands.

Key Words: Advertisements, Portrayal of Women, Effect on Cultural Values.

Growth and Performance: The Case of the Luxury Industry

Ashok Som

ESSEC Business School

Abstract

Brand and line extension represents an essential vehicle for growth and is currently one of the most applied marketing strategies within the luxury sector. Though it has its advantages, there are several risks associated with pursuing such a strategy. Consequently, this paper attempts to understand the growth and performance dilemma in the new era of luxury expansion. An integrative model of key success factors behind brand and line extensions is proposed by combining current research with empirical findings obtained through an explorative and qualitative research design based on primary data from eight semi-structured interviews with managers from luxury brands. Significantly, the predominant themes are alignment and consistency between the consistent brand cues such as storytelling, values, heritage, tradition and visual icons.

INTRODUCTION

The fundamental strategic challenge consists of balancing the inherent tension between a luxury brand's heritage, new product development and growth (Vigneron & Johnson 2004, Berthon et al. 2009, Keller 2009, Interview 4). Brand extensions challenge the trade-off between exclusivity and accessibility as higher volumes risk destroying the "dream value" through over-diffusion (Dubois & Paternault 1995). As expressed by Bernard Arnault, Chairman and CEO of LVMH: "Some brands [...] have slid off the map of prestigious goods to become a sort of mass market luxury items" (The Economist 2003: 67 referred in Dall'Olmo Riley et al. 2004: 41). This potential dilution of the parent brand (John & John 1993, John et al. 1998, Stegemann 2006, Hagtvad & Patrick 2009, Keller & Sood 2012) cannot only lead to loss of exclusivity (Pitta & Katsanis 1995), but also to a reduced perception of quality (Aaker & Keller 1990, Dacin & Smith 1994, Völckner & Sattler 2006) and decreased profitability

(Jacobson & Lane 1997, Reddy et al. 2009).

DELIMITATION

To promote further systematic insights into the field of key success factors behind brand and line extensions, a careful definition of the scope of interest and an examination of the main theoretical constructs are necessary to set the boundaries of this study. The following section includes a delineation of (1) the field of research, (2) growth through brand and line extensions and (3) success factors. Success is an ambiguous concept beyond the scope of this project to fully exhaust. Instead, it will be clearly delineated in relation to the specific subject matter of the study.

First of all, the scope of this project is the domain of personal luxury including apparel and leather goods, perfume and cosmetics, wine and spirits and watches and jewelry (incl. crystal objects). Although these product categories are driven by different dynamics, e.g. the hunt for the

best active ingredients in perfume and cosmetics versus the constant innovation and the embodiment of the creative director in clothing (Interview 4), they all belong to the intimate sphere of the consumer, they are primarily distributed through selective retail channels and they address the same segments of consumers (Achille 2014).

Second of all, brand extension is in general understood as a marketing and branding practice that exploits “the use of established brand names to enter new product categories or classes” (Aaker & Keller 1992: 35), e.g. Hermès’ full furniture line from 2011 (Luxury Insider 2011) and Berluti’s ready-to-wear collection launched in 2012 (Martin 2013). Line extensions, on the other hand, can be defined as “[...] the use of an established brand for a new offering in the same product class or category” (Reddy et al. 1994: 243), meaning that these products only differ slightly from the parent brand in terms of color and varieties. Examples include second lines such as Chloe’s See by Chloe and perfume ranges such as Chanel Chance, Chanel Chance Eau Fraiche and Chanel Chance Eau Tendre, which are variations of the same perfume base. Brand extensions thus entail products and concepts different from the brand’s core business while line extensions coin the development of the existing range.

Finally, as mentioned above, success is a broad and elusive concept difficult to define. Although success is subject to the large majority of work carried out by scholars investigating brand and line extensions (e.g. Aaker & Keller 1992, Bhat & Reddy 2001, Czellar 2003, Hem et al. 2003, Völckner & Sattler 2006, Hagtvéd & Patrick 2009, Reddy et al. 2009, Stankeviciute & Hoffmann 2011, Rühle et al. 2012, Milberg et al. 2013), the definition of success remains inconclusive, vague and undetermined. Some examples include growth strategy and branding purposes. To

evaluate the success of a growth strategy, the measures can be as extensive as sales figures, profitability, ROI and payback time (Ambler & Styles 1997, Dall’Olmo Riley et al. 2004, Sjödin 2007, Reddy et al. 2009, Sattler et al. 2010) with success supposedly meaning increasing sales figures, improved profitability, positive return of investment and a short payback time. In terms of branding, relevant success indicators could to be improved brand image, increased brand awareness, positive brand extension attitude and purchase behavior while failure would then indicate brand dilution (e.g. John & Loken 1993, Dubois & Paternault 1995, Gürhan-Canli & Maheswaran 1998, Balachander & Ghose 2003, Lau & Phau 2007, Hagtvéd & Patrick 2009). This implies that the definition of success depends on the goal description and the motives for launching the extension that success simply translates into whether or not the brand achieves its fixed objectives.

Research Gap and Research Question

Studies have generated important insights into a number of areas of the process of consumers’ attitudes towards growth of brand strategy but not many have dwelled deeply into a model and factors of growth in the luxury industry. As pointed out by Czellar (2003), the vast majority of existing luxury and non-luxury research focuses thus on consumer characteristics, predominantly rooted in cognitive psychology (e.g. Aaker & Keller 1990, Park et al. 1991, Broniarczyk & Alba 1994, Bhat & Reddy 2001, Monga & John 2010), and pays only little attention to other factors such as consumer heterogeneity, competitor and distributor activity. Moreover, only few scholars have investigated brand extensions from a managerial perspective such as profitability and the decision-making process (e.g. Dall’Olmo Riley et al. 2004, Reddy et al. 2009). In general, research widely neglects

external factors such as megatrends, industry structure and the general context.

The paper argues that the success growth through brand and line extension does not only depend on consumer characteristics and perceptions and marketing activities, but rather on a number of interdependent internal (e.g. brand strategy) and external factors (e.g. the luxury context) that are considered to be of equal importance to achieve sustainable growth through brand and line extensions. Drawing on the advantages and challenges of growth as identified in the existing literature outlined in previous section, this project aims at investigating the following research question:

What are the drivers of growth and profitability in the luxury industry?

This research thus strives to equip luxury managers with the necessary generalizable knowledge for carrying out future brand and line extensions successfully, thereby providing them with a path for long-term sustainable growth.

The Institutional Context of Luxury

The neo-classic economical perspective falls short when analyzing the luxury industry. Leading scholars such as Porter (1979, 2008) and Barney (1995), who are concerned with firms' heterogeneity and variations in industry structure and firm behavior, seek to develop competitive strategy that enables firms to achieve sustainable competitive advantage through differentiation – either in terms of positioning or the unique combination and employment of resources, respectively. They subscribe to a research paradigm based on assumptions of rationality, market mechanisms and arm's length relationships, but fail to encounter that buying a luxury good is an emotional rather than a rational process: The price far exceeds the functional benefits and the

authenticity is worshipped over flawlessness of the product (Kapferer & Bastien 2012).

Institutional theory, on the other hand, represents a sociological method of studying the idiosyncratic nature of luxury. It rejects the neo-classic paradigm's "atomized, under socialized conception of human action" (Granovetter 1985: 383) and insists on understanding the social context in which a phenomenon is embedded because "[...] the world is a product of our ideas and conceptions – the socially created and validated meanings that define social reality" (Scott 1998: 163). This implies that economic transactions are conducted within social relations, for which reason one must take into account a number of non-rational factors such as norms, values, social assumptions and "rules of the game", as these are expected to influence the interaction between a brand and its surrounding environment. As a consequence, a brand's structure and strategic choices are a result of a socially constructed context where external institutions determine the behavior of brands: "Organizations are affected, even penetrated, by their environments; but they are also capable of responding to these influence attempts creatively and strategically" (Scott 2001: 178).

Institutions do not only define the market opportunities by shaping the opportunity set for individual brands, but shape the formal structure of those brands and the overall industry, meaning institutional fields: "(...) those organizations that, in the aggregate, constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services or products" (DiMaggio & Powell 1983: 148).

Instead of examining the differences between brands, institutional theory aims at understanding the interplay between brands and institutions to uncover the striking similarities within an organizational field in furtherance of analyzing the causal relationships, phenomena and processes that exist within the field (Meyer & Rowan 1977, DiMaggio & Powell 1983, 1991, North 1990, Scott 2001). Although luxury as a concept is absolute and superlative (Kapferer & Bastien 2012), there are a number of general rules and myths, besides from the mere fact of selling luxury products, that a brand must adhere to in order to be perceived as a legitimate luxury player: e.g. protected titles such as “haute couture”, the “Made in...” label, which is in particular important for watches, the desire for handmade, authentic products with a strong heritage and savoir-faire as well as the timeless nature of the products captured in Patek Philippe’s iconic advertisement with the tagline “You never actually own a Patek Philippe. You merely look after it for the next generation”. Institutional theory thus serves as an instrument to properly define the boundaries of the industry and to understand its underlying mechanisms.

For brands seeking to grow through brand and line extensions it is therefore imperative to understand the regulative, normative and cultural-cognitive institutions inherent in society as legitimacy – or license to operate – only can be gained by adhering to these institutional rules (Meyer & Rowan 1977, North 2005). Legitimacy is of paramount importance because it improves the brand’s economic performance and hence its chances of surviving (Suchman 1995, Weber 1978).

The Institutional Paradox and its Implications for the Strategy of Luxury Brands

The institutional rules and rational myths outlined above have become norm and source of legitimacy in the organizational field of luxury, thereby affecting customer demand and driving sales for brands that have incorporated these written and unwritten rules (Meyer & Rowan 1977). Legitimacy is the most important resource for brands operating in a highly institutional context as it grants access to other resources and improves a brand’s chances of survival (Meyer & Rowan 1977) because “[it] is a generalized perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions” (Suchman 1995: 574). One of the main challenges that luxury brands face when extending their brand into new product categories is to take the time to establish credibility within this new territory. Marc Puig, CEO of Carolina Herrera, stresses this point: *“Each brand needs to focus on core topics, and do these right, rather than branching/branding out too quickly. We want to grasp the full potential before moving into new areas”* (quoted in Dauriz & Tochtermann 2012: 10).

Brands obtain legitimacy through compliance with institutional rules and rational myths (Meyer & Rowan 1977, DiMaggio & Powell 1983), which occurs through the process of isomorphism where “[...] organizations may model themselves on other organizations” (DiMaggio & Powell 1983: 151) in order to respond to the demands that exist in the institutional context. This imitation can be observed in the way that two of the largest conglomerates within the industry describe their business. LVMH describes the company as *“[...] An unrivalled group of powerfully evocative brands and great names that are synonymous with the history of luxury. A natural alliance between*

art and craftsmanship, dominated by creativity, virtuosity and quality,” (LVMH 2014: 2) while Richemont underlines that: *“Each of Our Maisons represents a proud tradition of style, quality and craftsmanship which Richemont is committed to preserving”* (Richemont 2014: 2).

The example demonstrates the institutional paradox: while striving to be unique, LVMH and Richemont become more homogenous due to the myths that “may be felt as a force, as persuasion, or as invitations to join in collusion” (DiMaggio & Powell 1983: 150). The consequence is that not only does the individual brands get more homogenous, the entire field of luxury gets homogenized. In addition, the institutional rules and rational myths such as “Made in France” and the desire for handmade authenticity are counter-intuitive to efficiency and profit maximization, which place luxury brands in the dilemma between adhering to these written and unwritten rules or improving efficiency (Meyer & Rowan 1977, DiMaggio & Powell 1983, North 2005). Besides, luxury brands that are isomorphic with the institutional context of luxury also partly surrender internal control: “Organizations whose structures become isomorphic with the myths of the institutional environment [...] decrease internal coordination and control in order to maintain legitimacy” (Meyer & Rowan 1977: 340).

In sum, institutional theory’s conceptual framework is thus a theorization of cognitive institutions such as general rules of the game, world view, norms, values, assumptions, ideas and trends, that affect the relation between the luxury brand and the surrounding society (Meyer & Rowan 1977, DiMaggio & Powell 1983). As luxury is a highly institutionalized context, it leaves little room for the brand to follow a unique strategy. Those often non-explicated rationales reduce complexity and regulate the behavior of consumers

and brands, but pose a great challenge for companies that wish to grow. Luxury brands can experience a decoupling due to lack of understanding of the new product category in which they expand, a market where they are not embedded in the institutional context.

METHODOLOGY

The methodology has been adopted to understand how the research question can extend previous studies by developing a comprehensive integrative model of key success factors of growth of a brand. It also provides an overview of the complex relationship between the different elements and concepts, it integrates internal factors, such as the brand’s decision-making process and brand strategy, and external factors, in terms of the particularities of the luxury context and megatrends. It takes into account that a company’s actions cannot be analyzed in a vacuum, but has to be seen in the light of its institutional context (Meyer & Rowan 1977, DiMaggio & Powell 1983). It thereby expands and enriches the existing linear process-based model (Czellar 2003) toward a holistic understanding of the process of successful brand extension, thus providing managers with a tool for decision making, which allows for the analysis of prudent allocation of resources.

Second, this research proposes a holistic model extending the existing theoretical body consisting of knowledge built on experimental design and statistical modeling (e.g. Boush et al. 1987, Broniarczyk & Alba 1994, Balanchander & Ghose 2003, Völckner & Sattler 2006, Hagtved & Patrick 2009, Sattler et al. 2010, Magnoni & Roux 2012, Albrecht et al. 2013). The qualitative method has been chosen to discover alternative perspectives of brand extension, thus revealing new insight benefiting the long-term development of the field (Mick & Fournier

1999 in Czellar 2003). In addition some studies are based on fictitious brands, which can be assumed to distort the results (Hem et al. 2003).

Identification of Success Factors

After having determined the different motives for extending, we identified five key factors behind brand and line extension success that will be elaborated on below. The focal point is alignment, regardless whether one considers the actual offer, the quality, the vision or the brand identity.

The integrative model combines theoretical insights from the academic literature on brand extensions with the archival data while also accounting for the specificities of the institutionalized context of luxury. The model proposes that successful growth through brand and line extensions depends on the theoretically widely recognized success factors (left box) plus the five success factors identified in the empirical data (center box) that to the greatest extent possible must apply to any brand extension in question. The model is presented in Figure 2 below.

DISCUSSION AND CONCLUSION

To address the theoretical dimension of the model, previous research has alluded to that growth of successful brands depends on the four main success factors: The parent brand, the extension category, the fit and the consumer characteristics. However, it can be argued that consumer characteristics are less important in the luxury context due to the reverse power balance between consumer and luxury brand. Consumers follow the brands like loyal devotees (Chada & Husband 2006), implying that their expertise, involvement in the extension category, innovativeness and perception of risk related to purchase are overruled by the allure of the brand's symbolic value and general hedonistic promise. Thus, when

downplaying the importance of consumer characteristics, our analysis clearly reinforces the contention that some of the primary success factors in the luxury industry are the overall perceived fit, the parent brand and the extension category.

From the archival data, our findings strongly emphasize the notion of alignment. While the first empirical success factor – add value through originality – refers to the strength of the creation and the extension category, the remaining four factors strongly accentuate alignment and fit between the parent brand and the extension in terms of extension concept, product category, specific product attributes, previous extensions and resources and capabilities, irrespective of type of parent brand and nature of the extensions investigated. Following this line of argumentation, our findings suggest that:

The more original and value-adding an extension is

The more coherent the style, quality, image and price match the brand's existing product range

The more relevant the extension is to the core business and the DNA

The more it adheres to the philosophy of the founder

The more it employs the brand's visual codes

the more successful the extension will be.

Consequently, this research suggests that resources should be allocated to reinforce the alignment process. In addition, resources must be allocated to the development of the creation as a strong creation is even considered a precondition for succeeding.

When comparing the two perspectives we see strong similarities and overlaps between the existing research and

empirical data, suggesting the replenishing function of our findings as a type of elaboration of the three factors fit, parent brand and extension category with a predominant emphasis on fit. Further, drawing on the notion of fit and alignment, we significantly see evidence of the importance of consistent brand cues in terms of style, quality, price, image, storytelling, values, heritage, history, tradition and visual icons. This points to the fact that no elements can be disregarded in the world of luxury.

In the framework of institutional theory, the notions of alignment and fit indicate that the brand must follow a number of general "luxury rules" to avoid damaging its mysterious aura and to be perceived as a legitimate luxury player, which leaves little room to follow an individual strategy. All this then explains why luxury represents an entirely different approach to understanding the consumer and managing the brand: Buying a luxury product is an emotional decision guided by social processes that attach intangible values to it in order to seduce the customer and spur the dream. Mastering this complex alchemy requires a profound understanding of both the luxury industry and the individual brand.

CONCLUSION

To conclude, this paper investigates key success factors behind brand and line extensions in the luxury industry by combining current research with empirical findings into an integrative model that prospectively can be used as a decision-making tool, thus achieving long-term sustainable growth. First of all, this project examines the concept of luxury and its institutional context in order to account for the specificities of this industry. From the analysis of the intrinsic nature of luxury it is evident that luxury represents a radically different attitude to conceptualize the

consumer and manage the business. With a price that far exceeds its functional value, buying a luxury product is better thought of as an emotional process. Accordingly, a luxury brands' most important asset is the brand itself, referring to its ability to turn physical objects into dreams and social markers through social processes that attach an abstract meaning to the products. Second of all, this research shows that luxury brands must adapt to the highly institutionalized context in which they are embedded to exploit the great growth potential offered by the personal luxury goods industry. Complying with institutional rules and rational myths such as country-of-origin, authenticity and heritage is indispensable for being recognized as a legitimate luxury actor and hence becoming a part of consumers' consideration set. Third of all, by bridging the current research with our empirical findings, this project identifies five key success factors behind brand and line extensions in the luxury industry: (1) add value through originality, (2) stay at the level of the brand regarding price, quality, style and image, (3) create relevance to core business and alignment with DNA, (4) stick to the vision of the founder and (5) assure consistency in brand identity and image. Significantly, the predominant themes are the alignment between the parent brand and the extension and the extension in itself, which resonates with the existing research on the field. This research thus finds evidence that the more original and relevant an extension is, the better it matches the style, quality, image and price of the brand's existing product range and the more it adheres to the philosophy of the founder and employs the brand's visual codes, the more successful the extension will assumedly be. Consequently, this research suggests that resources should be allocated to reinforce the alignment process, hence protecting luxury brands from over-extension by preparing them for a future of new

adventures into adjacent product categories.

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Table 3: Overview of each Brand’s Position on Key Success Factors

Factor	A	B	C	D	E	F	G	H
Add value through originality	X	X				X		X
Stay at level of brand (quality, design, price, image)	X		X			X		X
Create relevance to core business and alignment with DNA	X	X	X	X	X	X	X	X
Stick to philosophy of the founder/brand	X			X	X	X	X	X
Assure consistency in brand image and identity	X	X	X	X	X	X	X	X

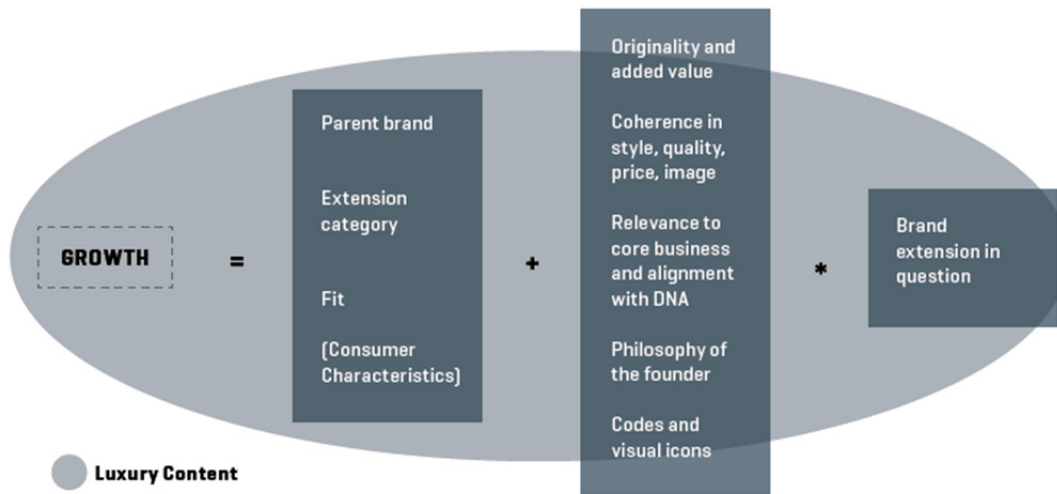


Figure 2: Integrative Model of Key Success Factors behind Brand and Line Extensions

An Application of the Multi Level Analytic Hierarchy Process in the Managers Performance Evaluation Process

N.A.R.V.M.Hemarthnea

Department of Agribusiness and Agricultural Economics
University of Manitoba

S.S. Appadoo

Department of Supply Chain Management
University of Manitoba

Abstract

The most significant factor of a company's accomplishment is its successful management. It is like the backbone of the company. When attaining to company's goals, performance assessment of managers is an essential movement. Purpose of this study is to find out an easy, effective and efficient technique of evaluating the performance of managers using qualities and characteristics such as leadership, knowledge, creativity, confidence, integrity etc which is specific to company and even for the departments in the company. This paper discuss how to determine complex multi-criteria decision process using the Analytical Hierarchy Process (AHP) which is used in simple method as well as multi-layers creating AHP model in evaluating the performance of managers, found by T.L. Saaty. When deciding the decision on the comparative effect of each criterion, it guides the decision maker. As well it directs to select choice for each alternative in each criterion. Final results of AHP is a prioritized grading of the decision alternative based on the overall performances of managers to pick the best one using a pair-wise comparison, which carried out for all criteria and sub criteria separately. This study illustrates how to select the best manager according to their performance over four criteria and twelve sub-criteria with a descriptive example to explain the application of AHP model in real world.

Keyword: AHP, Quantitative Approach, Multi Level Analytical Hierarchy Process, Multi-Criteria Decision Process, Pair-wise Comparison, Consistency Ratio, Ranking

Workplace Politics: Ways To Succeed In An Unreliable World

Niyati Chaudhary
Sirsa - 125055 (Haryana)

Abstract

Most human relationships involve some kind of back-and-forth play for power. Whether it's a struggle for control of the thermostat or getting a promotion, offices are notorious political battlegrounds. Politics reduces the productivity of individuals and eventually the organization is at a loss. It majorly affects the relationship amongst the individuals. Friends turn foes due to politics. Politics never helps in the long run. Nothing productive comes out of politics; instead it leads to criticism and negativity at the workplace. Ultimately it is an individual's hard work and intelligence which benefits him. There's a thin line between persuasion and manipulation, and the negative connotation exists because of the few bad eggs that use unethical tactics in their pursuits. However, with some attention to employee behavior and that of his coworkers, it's possible to cope effectively with office politics.

Keywords: Workplace Politics, Office Politics, Relationships, Unethical Tactics

INTRODUCTION

Office politics arises when employees tend to misuse their power to gain undue attention and popularity at the workplace. Employees indulge in work politics simply to tarnish their colleague's reputation to obtain advantages and come in the good books of their superiors. If you really have the potential, there is nothing stopping you. Politics reduces the productivity of individuals and eventually the organization is at a loss. People tend to spend their maximum time in pulling each other's legs and playing nasty politics at work.

Individuals find it difficult to concentrate on work due to unnecessary politics at the workplace. Remember the organization pays you for your hard work, and not for playing politics at workplace. It majorly affects the relationship amongst the individuals. Friends turn foes due to politics. People stop helping and most importantly trusting each other. Office politics also increases conflicts and tensions at the workplace. Employees do not enjoy at the workplace and treat work as a burden. Politics never helps in the

long run. Ultimately it is an individual's hard work and intelligence which benefits him.

Employees must enjoy a healthy relationship with their colleagues to give their best. Discussions are important to reach to the best option. Due to politics people avoid interacting with their fellow workers and thus fail to reach to innovative conclusions. The concept of team work and working in groups get nullified in cases of work politics. Criticism increases as a result of office politics and people tend to crib more. One should not favor any of his team members just because he offers him a lift daily to work. One should keep his personal and professional lives separate. Office politics promotes negativity at the work place.

LITERATURE REVIEW

It was indicated that in an organization, politicking activities in organization may create conflicts. Factor analyses of data from an organizational climate survey performed by Parker, Dipboye and Jackson (1995) suggested that organizational politics is an important dimension of peoples' perception of the

work environment. As maintained by Chang Rosen, Levy (2009) perceptions of organizational politics had a stronger relationship with role conflict. The authors also revealed that perceptions of organizational politics have strong, positive relationship with strain and turnover intention and strong, negative relationships with job satisfaction and affective commitment. In particular, perceptions of organizational politics were associated with increased psychological strain, which associated directly with reduced performance, as well as indirectly with increased turnover intentions through reduce morale.

The game of office politics has specific rules and boundaries (Frankel, 2004). While these rules will vary with the company, some rules are invariant; they include behaving ethically and treating people fairly rather than behaving in a deceitful, unethical manner. The game of office politics is competitive, but it does not include playing unfairly to assure winning at another person's expense (Cole, 1999). Dobson and Dobson (2001) agree that office politics and behaving ethically are not mutually exclusive; they believe that it is possible for principled persons to help create an office environment that "rewards and supports good behavior rather than political sneakiness" (p. xii).

Organizational politics means the influence processes enacted to manage the multiple competing interests existing in the organizations. Pfeffer (1981) defined organizational politics as: "activities taken within organizations to acquire, develop, and use power and other resources to obtain one's preferred outcomes in a situation in which there is uncertainty or dis-sensus about choices" (Pfeffer, 1981). Kurchner Hawkins and Miller (2006) considered organizational politics as an exercise of power and influence that

primarily occurs outside of formal organizational processes and procedures. Political behaviors consist of influence tactics designed to further self and/or organizational interests, and its basic aim is to reconcile and effectively manage such potentially competing interests"" (Kurchner-Hawkins & Miller, 2006). Drory and Romm (1990) argued that power is an organizational resource which increases as a result of controlling the resources of organization and politics is related to such power attainment.

Vigoda (2003) describes organizational politics as the unique domain of interpersonal relations in the workplace. Its main characteristics are the readiness of people to use power in their efforts to influence others and secure personal or collective interests or, alternatively, to avoid negative outcomes within the organization (Bozeman, Perrewe, Kacmar, Hochwarter, & Brymer, 1996). The wide variety of definitions of organizational politics suggests that the concept is in transition and under continuous debate (Vigoda-Gadot & Drory, 2006).

OBJECTIVE

The main objective of writing this article is to explore the reasons for Workplace Politics and also to suggest ways to avoid or reduce Workplace Politics. Further, it also elaborates how it affects employees and organizations.

REASONS FOR WORKPLACE POLITICS

Politics arises when employees try to gain something which is beyond their control by tarnishing their colleague's reputation. It has been observed that employees who are indulged in office politics pay less attention to their work. Individuals play politics at the workplace when they tend to misuse their power simply to come in the limelight and gain attention of the superiors as well as the

management. Nothing productive comes out of politics; instead it leads to criticism and negativity at the workplace.

Politics increases stress and also spoils the relationship amongst individuals.

People willing to come in the limelight without much effort depend on politics

There are certain individuals who attend office just for the sake of it and do not believe in working hard. Such individuals have no other option than to depend on nasty politics. They try their level best to create a negative image of their fellow workers just to come in the good books of the management.

Mike, Joe and Tim represented the branding team of a reputed organization. Mike and Joe gave their hundred percent at work while Tim believed in tarnishing their image in front of Jack - their superior. Jack had blind faith on Tim and trusted him completely. He never gave Mike and Joe their due credit and blamed them for every mistake. Tim on the other hand was promoted and appointed as the new team leader.

Personal Relationships

Personal relationships amongst employees can sometimes also lead to politics. Politics arises when individuals go all out to support their friends, relatives or neighbours at the workplace. One should never mix business with personal life. Your team member might be your best friend, but at work he needs to be treated just like others. No special favours should be granted to him.

Blame Games

One should always have a control on his tongue at the workplace. Speak relevant and don't always find fault in others. Listen to what the other person has to say. Everyone's opinion is important.

One should learn to own his responsibilities.

Lack of Trust

It is essential to trust your colleagues. Your fellow worker might confide something in you, but that really does not mean you will walk up to your boss and disclose all his secrets. If you can't help anyone, you have no rights to harm him even. One should remember that eventually it is trust and human relationships which help in the long run. Your colleague can even be your best friend. If one really has the potential, his efforts never go unnoticed. Remember there is no short cut to success.

Manipulations

Manipulating information to mislead superior also leads to politics at the workplace. One should pass on information in its desired form.

Gossips

Politics also arises when employees are indulged in unnecessary gossips. Leg pulling, criticism, backstabbing, hatred lead to politics. A jealous employee would never want his fellow workers to do well.

EFFECT OF POLITICS ON ORGANIZATION AND EMPLOYEES

Decrease in overall productivity

Politics lowers the output of an individual and eventually affects the productivity of the organization.

Common observation says that individuals who play politics at the workplace pay less attention to their work.

They are more interested in leg pulling and back biting. They spend most of their times criticizing their fellow workers.

As a result of politics at the workplace, employees fail to achieve

targets within the stipulated time frame. Work gets delayed in such an organization.

Affects Concentration

Individuals find it difficult to concentrate on their work. They are more interested in spoiling the other person's image in front of the superiors.

An individual involved in politics is bound to make more mistakes as his focus is somewhere else.

Spoils the Ambience

Politics leads to a negative environment at the workplace.

It spoils the relationships amongst individuals. An individual playing politics at the organization is disliked by all.

Changes the Attitude of employees

Politics changes the attitude of the employees.

Even the serious employees lose interest in work and attend office just for the sake of it.

Internal politics do not allow employees to give their hundred percent at work.

No matter how much hard work an employee puts in, it goes unnoticed in a politically driven organization.

Demotivated employees

A non performer can be the apple of his boss's eye simply due to politics, thus demotivating the performers.

Discussions are essential at the workplace to extract the best out of employees. Evaluating the pros and cons of an idea always helps in the long run. Employees playing politics always look for an opportunity to tarnish the image of the fellow workers.

Employees feel demotivated when they are not rewarded suitably or someone who has not worked hard gets the benefits due to mere politics.

Increases Stress

It is rightly said that problems evaporate if discussed. Individuals find it difficult to confide in any of their fellow workers due to the fear of secrets getting leaked.

Politics increases the stress level of the employees. Individuals are not machines who can work continuously for 8-9 hours without talking to others. It is important to have friends at the workplace who help you when needed.

Individuals fail to trust each other.

Wrong Information

Employees indulged in politics manipulate information and it is never passed on in its desired form.

Superiors get a wrong picture of what is actually happening in the organization.

A wrong person walks away with the credit in an organization where employees are indulged in politics.

ROLE OF EMPLOYEES IN AVOIDING POLITICS

Employees indulge in politics to save their job and gain attention without working hard at the workplace. Individuals strive hard to win appreciation of the superiors by tarnishing the image of their fellow workers.

It is the organization which suffers; if the employees are engaged in politics. Politics never benefits anyone in the long run, instead affects the performance of individuals.

Employees play a crucial role in avoiding politics at the workplace.

Employees must enter office with a positive state of mind.

Leave your ego at the doorstep.

Avoid being jealous at the workplace.

Don't unnecessarily find faults or criticize fellow workers.

Avoid backbiting and making fun of others.

Don't try to spoil your colleague's image in front of superiors or management.

If someone has confided in you, never ever disclose his secrets in front of others.

Don't open anyone's documents, files and notepads.

Do not check your fellow worker's emails.

One should not overhear anyone else's conversation.

It is essential to concentrate on own work, rather than interfering in other's business.

Employees do not play politics when they are engaged in productive work. The management must ensure that the employees are enjoying their work and do not get time to indulge in nasty politics.

Never spread rumours about anyone at the workplace.

Try your level best to stay out of controversies.

Avoid playing blame games at workplace. Learn to own your mistakes.

An individual must pass on information in its desired form.

Avoid data manipulation.

Don't believe things unless and until you receive a confirmation.

Discuss things with individuals face to face and try to sort out issues on an open platform.

Don't try to overshadow the efforts of your fellow workers.

One should not get influenced easily.

Avoid taking sides at the workplace. Too much of friendship leads to unnecessary personal favours at the work place.

Communicate through emails or written modes of communication. Mark a bcc to your superior to keep him in the loop as well.

Promote open communication at the workplace.

The team leader must interact with his subordinates on an open forum. Don't discuss things with individuals separately.

Delegate responsibilities as per the interest and educational qualifications of individuals. Employees play politics whenever there is a job mismatch.

Transparency must be maintained at all levels to avoid dirty politics.

Incentive plans and schemes should be discussed with the employees beforehand.

Celebrate important festivals at the workplace to bring the employees closer to each other.

Assign fixed lunch timings for employees. Let them discuss things amongst themselves apart from work at the lunch hour. Such activities strengthen the bond amongst the employees.

Don't always treat your fellow workers as mere colleagues. Even they

can be your friends and help you at the hours of crisis.

Don't bring your personal rivalries to work. Keep your personal and professional life separate.

Learn to trust your fellow workers.

Never play with words.

Avoid double standards at the workplace.

Respect each other's privacy.

OFFICE POLITICS: BAD AND GOOD

Staying away from office politics isn't easy. Love it or hate it, it's real, it's present, and it isn't going away any time soon. Get used to it, understand it, accept it, and learn to play. Your job, even your long term career, may depend on it.

Almost two-thirds of workers interviewed by Robert Half International said involvement in office politics is at least somewhat necessary to get ahead today.

While the term "office politics" sounds negative, that isn't necessarily so. Yes, politics can be negative, practiced by unscrupulous individuals to promote themselves, while not caring about who they may damage in the process or how their behavior could hurt their organization. But engaging in positive office politics is also possible. That means being smart, recognizing the realities of the power bases within your organizations and taking full advantage of that knowledge to promote yourself and your projects. Think of it as strategic networking.

In any organization, some people have more power than others. This may be due to their official place in the pecking order, to their high level of technical expertise, or to their personal characteristics — their charisma, that makes other people like them and want to please them and be close to them. Both

personal needs and work-related goals are natural playing fields for office politics. Here's one common scenario where personal needs may call for political skills:

Someone in your department is going to be promoted. Several of you vie for the promotion. A conflict of interests exists, and the candidates compete; "office politics" come into play. Positively, that means showing the powers-that-be that you are well qualified and deserve the promotion. Negatively, it could mean helping those powers to see just how inadequate your competitors are. In extreme cases, negative political maneuvering could even mean sabotaging your competitors' efforts at work, to make them look bad.

Sometimes, politics are entered into by work teams, rather than individuals, when those teams are striving to achieve some specific work-related goal. Many groups care passionately about decisions at work and this encourages political behavior as they seek to get their way. The issue may stem from different views on how to best proceed on some project. Or, it could be a question of whose department gets priority funding.

In the many situations in which conflicts arise between sub-groups within the organization, the question is, how badly does each team want to get what it wants? "Winning," in such situations, may take some carefully considered political thinking. If your team is competing with other teams for limited resources it may lead to a kind of "tribal warfare." Such inter-group competition and politicking are not necessarily for the greater good.

OFFICE POLITICS: FIVE GUIDELINES FOR PLAYING IN THE MUD WITHOUT GETTING DIRTY

Politics in the office is as unavoidable as traffic at rush hour or

fireworks on Independence Day. Few people enjoy office politics but, being human, they get pulled into sticky situations in spite of best intentions. Even when inane or petty (i.e. almost always), office politics inject tension, discomfort and drama into the workplace; often leaving employees feeling like participants in some bizarre reality TV show. At worst, office politics are a drain on morale and highly damaging to company culture.

Can Office Politics be Avoided?

Human nature will always result in differences of opinion, varying attitudes and potentially conflicting personalities. Personal agendas and different perspectives will often lead to misunderstandings. Barring the invention of a telepathic device, we must rely on imperfect communication skills. The question is: if office politics can't be avoided, how do we thrive in this modern political jungle?

Tip 1: Stop and count to ten

The modern office is fraught with difficulty. Human civilization is still relatively young. The rapid advance of society and industry has brought our primal fight/flight response into environments it wasn't designed for; including the workplace. As tempted as you may be, you can't beat up colleagues who threaten or annoy you. Neither can you run into a dark cave and wait for danger to pass. Not when danger is Mike from accounting rejecting an expense report, or Jane in marketing taking credit for your ideas.

What you can do, before reverting to a knee-jerk fight or flight response, is engage your less primitive reasoning brain and stop for a moment. Remember you have a choice. Give yourself time to respond in a way which won't escalate the situation, or require hiding in a dark cave until Friday. Remember: "You don't need to

attend every argument you're invited to." ~ Unknown

Tip 2: Know your goal

There are two sides to even the most infuriating situation. Both parties in any conflict want to accomplish something. Understanding your goal will help you determine your best response. Understanding the other person's goal will provide insight into the nature of the conflict and how to resolve it. Gaining a clear picture of everyone's objective (including what's best for the company), will help you decide whether it's more important to be right or to make progress in a given situation. You may even find it makes sense to reserve your energy for a more important battle.

Tip 3: Grow your circle of influence

Infighting at work is seldom confined to those directly involved. Sooner or later, others get drawn in. Before you find yourself in a difficult situation and needing allies, think about who listens to you and respects you at work. Cultivate those relationships. Help those colleagues solve their sticky workplace problems; then, when you need some support, it's more likely they'll be there for you.

Tip 4: Surface the real problem

When it comes to office politics, it's seldom about what you think it's about. Rather than guessing at the cause of an uncomfortable situation or assuming the reason for someone's malicious behavior, do some digging.

Start by asking others you work with if they've noticed the problem and whether they have any idea what's behind it.

Avoid the temptation to disparage the person you're having a challenge with.

Until you know the underlying reason for what appears to be workplace sabotage, reserve judgment.

Finally, ask to meet privately with the co-worker involved; explain your concerns with specific comments or actions and then ask her to share what has provoked them.

You may be surprised at what you learn. Perhaps you inadvertently slighted this person first—or maybe your political adversary had no idea you were being negatively impacted.

Tip 5: Listen first, speak second

We all like to get our point across. In the office, the loudest voice often wins. Our impulse, especially when a situation has triggered a “fight” response, is to get our view in early and often. The more agitated we get, the more we tend to impose our opinion on anyone who will listen or read an email. The best way to disarm an antagonist is to listen and strive to understand the alternate point of view. Having been heard, your nemesis will be much more inclined to listen.

A little friendly competition in the workplace can be energizing and motivating. Yet, when workplace competition goes underground and becomes office politics, it undermines everyone and damages the organization. Conflict will happen. Bringing it out into the open and resolving it without slinging mud or leaving people bruised creates a win for everyone involved.

WAYS TO SURVIVE OFFICE POLITICS

Office politics are a fact of life in every workplace where more than one person works, and some offices have particularly difficult political situations. However, with some attention to your behavior and that of your coworkers, it's possible to cope effectively with office politics. This article will guide you through the steps on how to survive office politics.

Steps

Give time and understand the psyche of your colleagues and seniors. It is important to understand the people you are working with: to know what motivates them, what they do outside the organization, what do they aspire to be, and their view of the organization.

No one is going to give this kind of information to you on a platter. You have to be careful, tactful and above all you have to be a good listener. Everyone wants to be heard. If you can just listen to people, within a short span of time you will develop their confidence in you. Becoming a confidante is the best possible thing in any set up, personal or professional.

Listen and only listen (this is more important if you are a new employee) and if there is something that you do not agree with keep it to yourself - no need to spell it out and try and make the person change his or her opinion. This goes for all you colleagues and your seniors. Listen to them, see what drives them and then make an opinion. If you understand the people then it is easier to deal with them.

Be nice and cordial to all. This is more true for bigger organisations/offices, as you don't know when and whom you might have to work with! Whereas in smaller offices, the groups once established doesn't get changed often and hence less/no issues.

So be nice to people. It will help in working and also in getting information, in knowing what's happening all around, the office politics etc. Being nice does not mean that you have to be the ever smiling or the flattering types. Make sure that you disagree and put across your opinion/point also for otherwise you may be taken for granted.

If you are consistent and always stand for a certain group of things, people around you will understand and start

respecting it too. There is no need to show disagreement unless it is a do or die situation which is usually an illusion.

Devise new ways of approaching issues. Out of box thinking always helps most of all in dealing with human resources. Now in general if people are professional then they are expected to behave in a particular manner and at least do as expected and spelled out in their job description.

The problem arises when they don't want to do that and behave badly. Usually it's not just a single person but a group of people who behave this way. All of them have the same attitude and the same alibi for not working – they have been in the system for long and know how it works!

It is here that one needs to devise innovative ways to approach them and get the work done and that too without disturbing the balance or encroaching on their seniority, in terms of years/experience or snob attitude! In simple layman's terms getting work done, without getting sidelined, by interfering in the office power games.

First of all be clear, what is it that you want them to do. Spell it out clearly, then figure out how much authority do you have over the people. If you are not their boss, don't worry, there still are ways! Once the task is clear, talk to them directly. Present the task in such a way that it looks like you are asking for their help. You can even go to the extent of showing your inability in doing it on your own. Then ask them if they could help in looking it over and giving their input. In most cases this approach works!

Simply because it doesn't look like you are bossing around ... and the other person feels important, nice that you are asking them for help ... that their opinion matters. It doesn't look like you are making

them work ... so they are happy and your work gets done. The reason is simple – there are a large number of people who don't want to work when asked ... but will work when work is not put across as work! (Just like small children) And don't forget that all the time you have to be nice and well meaning. At any point it should not look like you are being cunning ...or selfish ... which brings to the next point ...

Be genuine as much as possible. While practicing any of the above, the one thing that you have to ensure is that you should come across as a genuine person. In fact you should not just come out as that but also be a genuine person. Now I know it's not easy to be genuine while listening to someone's tails of treachery/cunning ways or someone's cribbing session! (I mean you will be genuine but in another direction!) So in that case, as have mentioned earlier also, don't speak your mind ... be silent ... which is still genuine ... for you neither agree nor disagree. Also be humane and more accepting of other people ... try and not to judge people and the result would be a more genuine/ empathetic you. It is a quality that will help always and it is only this that will bring you closer to people in any set up. So be naturally concerned and helpful without going overboard.

To change the system is not possible and not needed/necessary. Please understand and realize that systems are so because they were meant to be so ... and they are serving their reason and aim ... one person cannot change and should not aim to change the system. So rest your oars ... be true to yourself and your values and leave the organization if you find the system and its practices a burden on yourself. Easier said than done ... but there is no other way.

Have a lower benchmark. There is a limit to everything and then there is a

saturation point. So the moment the red light of your conscious starts glowing ... give it up ... there are other places to work. For if you continue cribbing and also continue working then the day is not far when the benchmark will cease to exist and you will join the bandwagon of people who have no self esteem and who just exist.

Learn to play Chess ... yes ... it's a mind game ... and fits in well with the office politics! If you know how to play chess you would know how to be prepared for at least the next two steps of your opponent and in your office everyone is your opponent unless you have won them over and even in that case you should be careful and never let your guard down! Chess helps in thinking and gauging what should be your next step and from where all/ who all you need to protect your assets/skills/information ... who is out to hit you etc. The game of Chess teaches this and much more ... take these as lessons for life and not just for the game!

Know when to speak, where to speak and with whom to speak. If only what you speak reaches wrong ears, the repercussions could be as fatal as losing your job. Need I say more? Well so the thing is that, choose your confidante carefully and refrain from making hard hitting comments against a colleague or organisation in front of people who may use it to their benefit. For most of the time people try to rise by pulling others down ... if only they would aim at rising at their own with their own skills/ competencies/ knowledge!

Practice patience. There is no alternative. The more patient you become the less is the stress and the happier your disposition.

Learn tact. It's a prerequisite in all that you do ... and it's an end result of all that's discussed in previous points. No one can

teach how to be tactful but everyone needs to learn it to be successful and happy!

CONCLUSION

Office politics were about networking long before the advent of social media. Politics are integral to any organization and efficient leaders know how to use it effectively for their own and the organization's benefit. People have a desire to get to the top of any company. They desire to do so not only because of money, but because of the desire to achieve power. Office politics often have a negative connotation because of the negative influential behaviors associated with a person trying achieving goals of getting to the top. There's a thin line between persuasion and manipulation, and the negative connotation exists because of the few bad eggs that use unethical tactics in their pursuits. Everyone engages in office politics. Even if you are an employee who keeps to your small group of co-workers and tries not to be noticed, you are attempting to remain in your position, and you therefore have an agenda.

Workplaces infected with excessive office politics are toxic and energy-zapping. Executive leadership might not encourage office politics, but has allowed it to flourish from a lack of clarity at the top. No workplace has perfect clarity and zero office politics. As long as humans run and work in businesses, unproductive behaviors will exist. Recognizing that office politics comes largely from the lack of clarity and transparency should be a major motivator to improve!

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Gender differences in buying behavior and brand preferences towards backpack

Dr.Arul Rajan
Associate Professor, PSGIM

Mr. Sachin Menon
PGDM II, PSGIM

Mr. Yuvaraaj Mahendran
PGDM II, PSGIM

Abstract

The purpose of this study is to understand the differences in buying behavior and preferences between men and women during the purchase of a backpack. In 2015, the retail sales value of the casual bag segment in India is expected to be about 687 million U.S. dollars. The total retail sales value of the Indian luggage market is forecasted to be about 1.87 billion U.S. dollars in 2015 (*Statista.com*). Luggage market is broadly divided into Travel, Casual and Business bags. Casual bags contribute about 35% (*www.analystassociation.com*) in the luggage market. Casual bag consists of Backpacks, shoulder bags, wheeled duffle bags, etc. The main focus of our study was Casual bags, more specifically backpacks.

A qualitative and a quantitative analysis were done. The quantitative analysis included a survey including respondents of about 236. To capture the functional value of the findings factors like price, durability, capacity, comfortableness while carrying, mode of purchase and additional accessories were considered while framing the questionnaire. For capturing the social value and emotional value behind the consumer's preferences brand was taken into consideration. For capturing the epistemic value factors like type of colors and design was taken into consideration. Qualitative research included an observational research and a focused group discussion. The observational research was also conducted that led to similar findings. The buying behavior of men and women in a well-known Bag retail was conducted for a day. The results indicated that men gave more importance to functionality, whereas women stressed on design, color and price of the bag. The focused group discussion also leads to similar results.

The findings of the analysis indicated that there were indeed a stark difference in the preferences while purchasing a backpack, between men and women. It showed that men give more importance to utilitarian factors like durability and quality of zip. On the other hand, it indicates that women give more importance to epistemic values such as design. It was also found that both the groups don't give much importance to color.

Keywords:

Buying behavior, Brand preference, gender differences, price sensitivity, design preference, utility, durability, color.

INTRODUCTION

The paper studies the behavioral differences between men and women while purchasing a backpack. It tries to understand the factors that influence the buying behavior at the point of purchase (through observational research) and general behavior (through quantitative analysis using survey responses).

The Indian luggage industry is growing at a steady speed. With more foreign brands coming into picture and more Indian

start-ups that target the youth, which constitutes around 1/5th of the population, the industry is getting highly competitive. Rise in personal disposable income has led to increase in the travel expenditure of the households, which has led to increased growth of the industry.

The industry is expected to grow about 18% in the FY'14-FY'18 (*www.kenresearch.com*). It is also expected that contribution of the casual luggage segment of the industry to grow

significantly. Hence it is on befitting that the backpacks, which come under the casual luggage segment, be considered for the study. The segment has been further classified into value, popular, and premium segment and each of these segments represent the type of attributes their buyers prefer.

The study has been done using a qualitative and a quantitative approach. The qualitative approach focused more on point of purchase observation. An observational research was conducted to study the buyer's behavior and their preferences while purchasing the handbag. A focused group discussion was also conducted to understand the reasoning behind their choices.

The quantitative approach involved analyzing the results of survey that included results from about 236 respondents. The respondents mainly constituted of students and working professionals between the ages of 16 – 25. The reason behind is that the main target if the industry for this segment are the youth between similar age groups. Statistical analysis was conducted on the results and findings were found conform to the quantitative research done. Attributes like usage, quality of the material, design, price, brand, were selected to represent each of the three segments of the industry, value, popular and premium. The study attempts to draw out the differences in the buying behaviors between men and women based on these analyses.

LITERATURE REVIEW

Impact of Gender based Selling on Consumer Buying Behaviour

Author: Arslan Ayub

The authors of the paper have done research on the influence of gender based selling and consumer buying behaviour. The paper also throws light on

advertisements for gender-based selling. Surveys were conducted with the population consisting of mainly the upper and the middle class people. According to the survey 65% of both the upper and middle class people surveyed were in support of the hypothesis. And also out of the 20 females who were interviewed 40% were in support with the gender based selling while 30% were neutral to it. The result of this paper shows that there is a positive influence on the consumer buying behaviour in result of the gender-based consumer targeting.

Gender attitude toward the ad: Gender marketing

Author: Eva Kujistermans

In this paper, two commercials are included in the survey, a Coca Cola commercial and a McDonalds commercial. The Coca-Cola commercial is expected to evoke a more positive attitude amongst women, the McDonalds commercial is expected to be more appealing to men. Remarkable is the fact that women have a more positive attitude towards both commercials and attitude differences are largest for the McDonalds commercial. Mean scores between the two genders significantly differ on twice as many items for the McDonalds commercial as they do for the Coca Cola commercial. In both cases, women rank all the positive items higher than by men and men than by women rank all the negative items higher. Even though the two genders significantly differ in their feelings, judgment and attitude toward advertisements it seems that for a marketing campaign to be successful, it should be adapted to women's preferences and will then appeal to men as well.

In the book Marketing to Women Barletta introduces the Gender Trends Marketing Model, which is based on gender differences between men and women

(Barletta, 2006, p.37). The Gender Trends Model is based on four-star points, which contain the main gender differences: focus strategies, communication keys, life/time factors and social values. According to Barletta, these star points should be aligned with the elements of the marketing mix in order to plan a successful marketing approach (Barletta, 2006, p.40) this paper talks about the gender attitude toward the ad and gender marketing.

Analyzing the relationship between consumption values and brand loyalty of young people: A study on personal care products

Authors: Burcu Candan, Sevtap Ünal, Aysel Erciç c

One of the most up to date models that explain consumers' purchase behavior is the consumption values model developed by Sheth (1991a) (Pope, 1998:125). By focusing on the consumption values, the theory explains why consumers buy a product or not, why they prefer one product to another and why they prefer a specific brand. This theory also includes a wide range of product categories such as physical and non-physical consumption goods, industrial goods and services (Sheth et al., 1991b:159) Five basic consumption values that affect consumers' preference behaviors are named as functional, emotional, conditional, social and epistemic values. Any or all of the consumption values may affect the consumer behavior.

According to Sheth et al. (1991), the five basic consumption values are described as the following:

Functional Value: Sheth (1991) claim that customers are initially affected by the functional value of a product in their preferences; "Price, quality and value" are the main determiners in consumers'

rational purchase behaviors and product preferences

Social Value: According to Sheth et al (1991), social value is "the benefit that is perceived and obtained in relation to one social group or several social groups". Social classes are generally determined according to "work, education and income status". Apart from that, classification of social classes can be made by prestige, status, adopted values etc. (Myers and Bishop 1971:8).

Emotional Value: In the framework of consumer behaviors, emotions can be described as feelings or emotional reactions against components like "situations, products, advertisements and brands" (Hawkins et al., 1992:19)

Epistemic Value: Epistemic value can be described as the curiosity that is perceived or obtained from the product and the benefit that meets the desire and need of innovation (Sheth, 1991a).

Conditional Value: Conditional value can be described as the benefit that arises as a result of a specific condition the person who is making a preference comes across and is perceived at that moment. The factors of "time, place and environment" are considered to be the main determiners in the identification of conditional factors (Hansen, 1972; Belk, 1974:428)

Age and factors influencing consumer behavior

Author: Catherine Hervine and Etienne Mullet

When evaluating a product or service, consumers seek out information to judge whether that specific product will meet certain criteria. The main concern of sales providers is how to increase their purchasers' willingness to buy a product. The authors studied the impact of age on the perceived importance and interaction of

three factors known to influence people when buying clothes: price, durability and suitability. A sample of 160 French adults aged 18–90 rated their likelihood of buying an item of clothing in 27 scenarios, in which three levels (low, moderate and high) of each of the above three factors were combined in an orthogonal factorial design. For younger participants, a low price was considered a sufficient reason to buy the item of clothing. For older participants suitability was a more important factor while for the youngest people, durability was the most important. With similarity to this study we are planning the study of gender difference and brand preferences in choosing backpacks.

OBJECTIVES OF THE RESEARCH

The Primary objective is:

To find out the Gender difference in buying behavior and brand preferences toward back pack

Secondary objectives are:

- Men prefer utility while buying a backpack
- Women prefer color while buying a backpack
- Women prefer design while buying a backpack

Research Design

The research was designed in both Qualitative as well as Quantitative mode in order to obtain the required data for the primary and secondary objectives.

Quantitative Phase Description

The Quantitative phase of study was conducted for primary data collection by an online questionnaire to understand the gender difference in buying behavior and brand preference while purchasing a backpack

METHODOLOGY OF DATA COLLECTION

Primary data collection: Primary data will be collected for the primary and secondary objective – through online survey

Sampling method: Non Probability purposive Sampling

Sample size: 236

Qualitative Phase Description

The Qualitative phase of study was conducted for primary data collection by focus group and an observational research method to understand the gender difference in buying behavior and brand preference while purchasing a backpack

Observational research:

The observation research was carried out in Roshan Bag Mall, Coimbatore where it was observed that the buying behaviour of men and women in an unobtrusive manner.

Following observations were made:

- *Men preferred functionality*
- *Women preferred design*
- *Women buy multicolored bags*
- *Women stress on price factor*

Focus Group Discussion

The study focuses on how men and women differ in terms of buying a unisex product, The study was focused on getting the common trends which men and women consider while buying a backpack. Thus a focus group discussion among men and women was conducted separately.

Group size: 4(boys) + 4(girls)

Group composition: Homogeneous

Physical setting: Relaxed, informal atmosphere

Time duration: 1-2 hours

Moderator: Sachin Menon

Key Findings

We found that there are certain factors which clearly differentiated men from women, They are

Interpretation

The above analysis is a graphical representation, which depicts that male and female use bags for school/college purpose more than for travel purpose. The backpack industry should focus more towards school/college going students. In this sample it is clearly seen that more male school/ college backpack users compared to female.

Male school/college to travel % = 54%-46%

Female school/college to travel % = 51%-49%

Factor Analysis:

Since there is a high amount of intercorrelation that exists among the variables, we are going for factor analysis. Factor analysis (Principal component analysis) reduces the variables into uncorrelated factors.

Rotation

The 11 independent variables undergo a factor analysis where the variables will fall under component categories. The factor loadings of the variables will occur if greater than 0.5 and they will fall under the respective factor categories. After checking through the fallen factors respective titles will be assigned to the components. Here the component 1 is utility component 2 is design and component 3 is color. In the following table the values are checked and the titles are assigned.

Variables, which have a high degree of correlation with factor 1 (Utility):

I think my bag is durable (1 being the least; 5 being the highest)

My backpack has pockets for specific items (1 being the least; 5 being the highest)

My backpack has easily usable handles (1 being the least; 5 being the highest)

My backpack has comfortable straps (1 being the least; 5 being the highest)

I think my bag is spacious (1 being the least; 5 being the highest)

Variables which have a high degree of correlation with factor 2 (Design):

I would like my bag design to be unique (1 being the least; 5 being the highest)

I think my bag is sporty (1 being the least; 5 being the highest)

I think my bag is trendy (1 being the least; 5 being the highest)

Variables which have a high degree of correlation with factor 3 (Color):

I prefer bright-colored bags (1 being the least; 5 being the highest)

I prefer dark-colored bags (1 being the least; 5 being the highest)

Interpretation for men:

ANOVA Table:

From the ANOVA table, the overall model is significant (.000).

From the Coefficients table, we find that the factor Design is significant for men at 0.001 and the Utility factor is significant for men at .000 levels whereas the significant level for color is 0.6 which is greater than 0.05 hence not significant. We find that men prefer utility and design, but they mostly do not prefer a backpack based on color as the acceptance ratio for color is at 33%. The Beta score, which represents the strength of the factors, is 0.332 for Utility and 0.186 for design and -.023 for color

The factors, which determine the likeability of men, are

1. Design

2. Utility

The standardized equation (Using Beta weights):

Likeability of bag = 0.251 (Design) + .418 (Utility) + -.032 (color)

The Un-standardized equation:

Likeability of bag = 4.170 (Constant) + 0.186 (Design) + .332(Utility) + -.023 (color)

Interpretation for women:

ANOVA Table:

From the ANOVA table, the overall model is significant (.000).

From the Coefficients table, we find that the factor Design is significant for women at 0.000 and the Utility factor is significant for men at .002 levels whereas the significant level for color is 0.298 which is greater than 0.05 hence not significant. We find that women prefer utility and design, but they mostly do not prefer a backpack based on color as the acceptance ratio for color is at 33%. The Beta score, which represents the strength of the factors, is 0.334 for Design and Utility and 0.200 for utility and -.076 for color.

The factors, which determine the likeability of women, are

3. Design

4. Utility

The standardized equation (Using Beta weights):

Likeability of bag = 0.423 (Design) + .272 (Utility) + -.091 (color)

The Un-standardized equation:

Likeability of bag = 4.058 (Constant) + 0.334 (Design) + .200 (Utility) + -.076 (color)

RESULT

Hypothesis 1: Men prefer utility while buying a backpack

Both men and women prefer utility while buying a backpack. But comparatively women's preference for utility is better than men's preference (from regression analysis). Hence we conclude that women prefer utility more than men.

Hypothesis 2: Women prefer color while buying a backpack

Color is not a significant factor for both men and women; hence we fail to reject this hypothesis.

Hypothesis 3: Women prefer design while buying a backpack

Both men and women prefer design while buying a backpack. But comparatively men's preference for design is better than men's preference (from regression analysis). Hence we conclude that women prefer design more than men.

FINDINGS

Men and women both have started using the backpacks on almost regular basis.

Men prefer more on utility of the backpacks and this was proved with regression analysis.

Women prefer on design of the bags as we find designs play a major role in their selection of backpacks.

Backpacks buying decision was not preferred on the colour basis for both men and women.

But we predicted that colour plays a differentiating factor between men and women as women are slightly inclined to choose the backpack on basis of colour also.

This backpack industry is expected to have a growth rate of 15% and per capita expenditure will be increased, the buying

power of both men and women will increase considerably.

This research clearly gave us the insight on the buying behaviour exhibited by men and women.

This helped us in bringing the marketing strategies that should be devised for both men and women.

CONCLUSION

To conclude the research study on Gender differences in buying behaviour and brand preferences towards backpack, the findings of the analysis indicated that there were indeed a stark difference in the preferences while purchasing a backpack, between men and women. It showed that men give more importance to utilitarian factors like durability and quality of zip. On the other hand, it indicates that women give more importance to epistemic values such as design. It was also found that both the groups don't give much importance to color based on the finding, we also suggest that branding companies can opt for a campaign based on functionality and design which makes the backpack appeals to both the gender.

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Men's factors	Women's factors
Laptop sleeve	Weight
Pockets	Colour
Weather proof	Style
Quality of zip	
Design	Invisible zip
Brand	Not brand specific
Looks	Quality
Comfort	Comfort
Mobility	Invisible zip
Security	Design
Headphone port	Compartments

Analysis Of Data

Total of 236 respondents out of which 133 were male and 103 were female filled the survey.

		Gender			What purpose do you buy a backpack for?		
		Male	Female	Total	School/College	Travel	Total
	Male	133	0	133	72	61	133
Gender	Female	0	103	103	52	51	103
	Total	133	103	236	124	112	236

Rotated Component Matrix^a

	Component		
	1	2	3
I would like my bag design to be unique	.199	.582	.321
I think my bag is sporty	.130	.815	-.070
I think my bag is trendy	.107	.795	-.003
I prefer bright-colored bags	.083	.282	.783
I prefer dark-colored bags	.255	.191	-.690
I prefer those colored bags which easy to maintain	.469	-.146	.064
I think my bag is durable	.670	.262	-.112
I think my bag is spacious	.786	.033	.006
My backpack has pockets for specific items	.631	.210	-.083
My backpack has easily usable handles	.662	.260	-.172
My backpack has comfortable straps	.758	.284	.012

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Component Transformation Matrix

Component	1	2	3
1	.828	.558	-.063
2	-.396	.660	.639
3	.398	-.504	.767

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Communalities

	Initial	Extraction
I would like my bag design to be unique	1.000	.482
I think my bag is sporty	1.000	.686
I think my bag is trendy	1.000	.643
I prefer bright-colored bags	1.000	.699
I prefer dark-colored bags	1.000	.577
I prefer those colored bags which easy to maintain	1.000	.245
I think my bag is durable	1.000	.530
I think my bag is spacious	1.000	.619
My backpack has pockets for specific items	1.000	.449
My backpack has easily usable handles	1.000	.536
My backpack has comfortable straps	1.000	.655

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.552	32.292	32.292	3.552	32.292	32.292	2.838	25.799	25.799
2	1.530	13.908	46.200	1.530	13.908	46.200	2.034	18.491	44.291
3	1.039	9.447	55.648	1.039	9.447	55.648	1.249	11.357	55.648
4	.991	9.009	64.657						
5	.801	7.278	71.935						
6	.667	6.062	77.996						
7	.600	5.457	83.453						
8	.561	5.097	88.550						
9	.505	4.591	93.141						
10	.391	3.557	96.698						
11	.363	3.302	100.000						

Extraction Method: Principal Component Analysis.

Component Matrix^a

	Component		
	1	2	3
I would like my bag design to be unique	.470	.510	.032
I think my bag is sporty	.567	.441	-.413
I think my bag is trendy	.532	.480	-.360
I prefer bright-colored bags	.176	.653	.491
I prefer dark-colored bags	.361	-.416	-.524
I prefer those colored bags which easy to maintain	.302	-.242	.309
I think my bag is durable	.708	-.164	.049
I think my bag is spacious	.669	-.286	.300
My backpack has pockets for specific items	.644	-.164	.082
My backpack has easily usable handles	.704	-.200	.000
My backpack has comfortable straps	.785	-.105	.167

Extraction Method: Principal Component Analysis.

a. 3 components extracted.

Regression

For both male and female

Variables Entered/Removed

Model	Variables Entered	Variables Removed	Method
1	COLOUR, DESIGN, UTILITY	.	Enter

a. Dependent Variable: LIKABILITY

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.482 ^a	.232	.222	.67378

a. Predictors: (Constant), COLOUR, DESIGN, UTILITY

Interpretation:

R square is 0.232, 23% of response variation can be explained by the explanatory variable.

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	31.813	3	10.604	23.359	.000 ^b
	Residual	105.322	232	.454		
	Total	137.136	235			

a. Dependent Variable: LIKABILITY

b. Predictors: (Constant), COLOUR, DESIGN, UTILITY

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.110	.044		93.713	.000
	UTILITY	.256	.044	.335	5.816	.000
	DESIGN	.260	.044	.341	5.919	.000
	COLOUR	-.048	.044	-.063	-1.098	.273

a. Dependent Variable: LIKABILITY

For men**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.503 ^a	.253	.236	.63817

a. Predictors: (Constant), COLOUR, DESIGN, UTILITY

Interpretation:

R square is 0.253, 25% of response variation can be explained by the explanatory variable.

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	17.824	3	5.941	14.589	.000 ^b
Residual	52.537	129	.407		
Total	70.361	132			

a. Dependent Variable: LIKABILITY

b. Predictors: (Constant), COLOUR, DESIGN, UTILITY

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	4.170	.056		74.742	.000
UTILITY	.332	.061	.418	5.482	.000
DESIGN	.186	.056	.251	3.289	.001
COLOUR	-.023	.055	-.032	-.416	.678

a. Dependent Variable: LIKABILITY

For women:**Variables Entered/Removed**

Model	Variables Entered	Variables Removed	Method
1	COLOUR, DESIGN, UTILITY ^b	.	Enter

a. Dependent Variable: LIKABILITY

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.497 ^a	.247	.224	.70778

a. Predictors: (Constant), COLOUR, DESIGN, UTILITY

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	16.251	3	5.417	10.813	.000 ^b
Residual	49.594	99	.501		
Total	65.845	102			

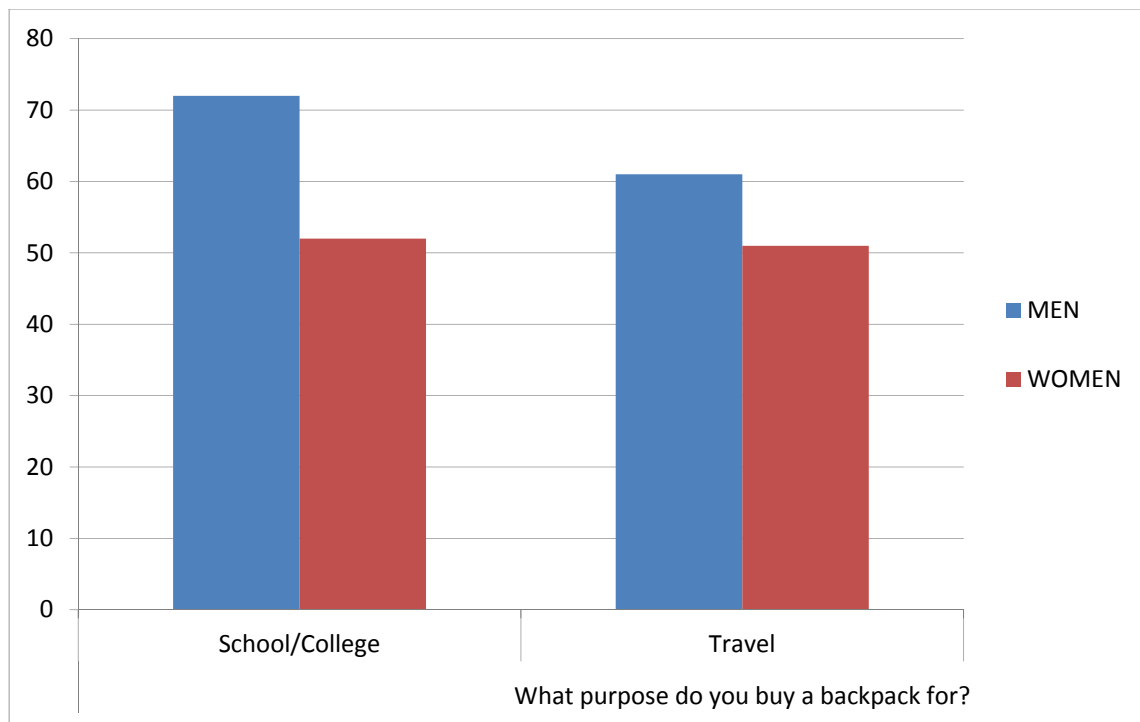
a. Dependent Variable: LIKABILITY

b. Predictors: (Constant), COLOUR, DESIGN, UTILITY

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	4.058	.071		57.373	.000
UTILITY	.200	.064	.272	3.108	.002
DESIGN	.334	.069	.423	4.841	.000
COLOUR	-.076	.072	-.091	-1.047	.298

a. Dependent Variable: LIKABILITY



The Business of Dental Practice- What the Dentists should know

Dr.S. Venkateswaran
Director, Venkatdental Clinic
Chennai, India
Email: venkatdental@yahoo.co.in

Abstract

Dentists often struggle with the challenges of running the business side of their practices. In dental schools, dentists are trained in technical skills, but are rarely taught about the business aspect of it and the factors which makes a dental office successful and profitable. Apart from delivering high quality dentistry, these include understanding the basic principles of good communication with the patients, consistently providing exceptional customer care and maintaining an esthetic and hygienic office. The role of leadership is also extremely important to ensure the team is committed to common vision and goals, so the practice is a fun place to work, is productive and profitable. With a better understanding of business aspects and having good systems in place, it is possible to redirect energies and create a successful practice while performing excellent dentistry.

Key words: Hospital, Dental, hospital management.

Financial Analysis and Cash Flow Estimation of American National Insurance Company

Kamal Oberoi,
MBA student, NYIT, Abu Dhabi, UAE
Email : kammalx@gmail.com

Dr. K. Ravichandran
Associate Professor,
NYIT, Abu Dhabi Campus, UAE

ABSTRACT

This research paper inspects the Annual Reports of American National Insurance Company (ANAT) so as to assess its financial performance for the past four years and thereby evaluating its financial health. The article covers various financial ratios such as profitability ratios, leverage ratios, liquidity ratios, and growth ratios and compares results for the FY2010 through FY2013. Additionally, corporate valuation ratios such as EVA, ROIC, and FCF are also covered to analyze the performance of the company. Lastly, a cash flow estimation is performed to find out the actual cash position by ANAT for the FY2013.

Key Words: *Financial Analysis, Ratio Analysis, Cash flow estimation.*

INTRODUCTION

In very simple words, a financial analysis of any company can be defined as the process of evaluating financial statements and analyzing them in order to determine where the company stands in terms of economic and profit levels. A financial analyst specifically examines the company's income statement, balance sheet, and cash flow statement to understand economic and profit levels of the company. By doing so, it can be inferred if it is suitable to invest in the company or not. Moreover, a cash flow statement is considered as one of the most important financial statements as it includes the flow of cash in and out of the company just like a checking account. By deducting the cash outflow from the cash inflow, the net cash flow can be determined at any point of time, therefore, uncovering how much cash an entity has truly generated. Moving on, a financial analysis not only helps determine a company's profitability level, but also helps in verifying how the company is employing resources and if those resources are being used efficiently. Moreover, a financial analysis

assists government consultants to verify if an entity is using the right legal accounting policies and procedures when conducting their business. Another important dimension of financial analysis includes evaluating a firm's past performance so as to assess the future performance of the firm.

Founded in 1905 by William L. Moody, the American National Insurance Company provides a variety of insurance products and services (American National Insurance Company). Such products and services include life insurance, retirement annuities, health insurance, credit insurance and much more. Headquartered in Galveston, Texas, the ANAT has numerous subsidiaries and operations in states such as Missouri, New York, and Texas. Therefore, in this research paper will perform a detailed financial analysis of American National Insurance Company (ANAT) by performing the corporate valuation ratios, financial ratios and preparing a cash flow estimation.

REVIEW OF LITERATURE

Evaluation of insurers (e.g., the financial condition) is a major goal of

regulators, investors, and insurer management. Each group was interested in different aspect; regulators must ascertain a company's ability to operate and meet its obligations, while investors and insurer management are interested in a company's long-term growth and profit potential (Grace and Barth, 1993).

Mohammad Omar Faruk (2014) made a comparative study on the Bangladeshi banks performance using Profitability Ratio, Liquidity Ratio, Risk Measurement Ratio and DuPont Analysis and concluded the results based on the same. A comparative analysis of commercial banking performance in Bangladesh was conducted by (Malek, 2005) who, for this purpose only, have taken Nationalized Commercial Bank, Local Private Commercial Banks and Foreign Commercial Banks operating during 1999 to 2002. Moreover, in their paper, (Bayraktar & Wang, 2004) investigated firstly the impact of foreign bank entry on the performance of domestic banks, and secondly how this relationship is affected by the sequence of financial liberalization. Furthermore, (Bayraktar & Wang, 2004) revealed that the sequence of financial liberalization matters for the performance of domestic banking sector.

Misir (1998) have used this ratio for measuring liquidity of a bank. According to Bangladesh Banking companies Ordinance 1962, subject to amended time to time, liquid assets of commercial banks consist of cash in hand, statutory reserves (with Bangladesh Bank), balance with other banks, money at call and short-notice and approved securities. This composition of liquid assets is known as structural allocation of liquid assets.

According to Grace and Barth (1993), the most systematic methods used have been to categorize insurers into two groups—those now insolvent or potentially

insolvent within a short period of time, and all others. They are interested in how much capital insurers have in order to buttress the risk inherent in their investments and operations. Monitoring the solvency of insurers is one of the prime concerns of insurance supervisors. For instance, European regulators initially created solvency requirements as quick and easy measures to identify undercapitalized companies, before they got into trouble. However, these standards were necessarily based on industry averages, and some companies ran the risk of wrongly appearing to hold inadequate capital, because the particular risk characteristics of their business meant that the standard factors were inappropriate. In addition, the required capital indicated by the calculations was unlikely to be appropriate for the risks borne by individual insurance companies, since it was based on premium written or claims incurred, not on claim reserves. Currently, regulators envisage Solvency II measures, which are much more sophisticated, dealing with capital requirements for each of the solvency risk sources (see, e.g., Collins et al., 2007; and Grace and Barth, 1993).

Moreover, Chen and Wong (2004) argue that the issues to be considered may be grouped into firm-specific and market/economic factors. They added that the firm specific factors, which is associated with general (non-life) insurers, mainly cover firm size, age of the company, premium growth, investment performance, underwriting results (operating margin), expense, loss reserves, realized and unrealized capital gains, growth rate of surplus, liquidity, and reinsurance recoveries. However, they concluded that the main areas of concern are liquidity, profitability, and capacity.

METHODOLOGY

The author has collected 4 years (2010-2013) annual report from ANAT website and the analysis were performed. The main objective of the study is to conduct a thorough financial analysis and find out the current (2013) financial condition of ANAT. Also an Cash flow estimate is performed to find out the current cash position of ANAT. The author has used Ratio Analysis, Corporate valuation ratios and cash flow estimate to analyze ANAT's financial performance.

EMPIRICAL ANALYSIS

a) Profitability:

ANAT recorded net profit margin of 8.6% during the financial year ended December 2013, an increase of 2.2% compared to FY2012 and an increase of 2.29% compared to FY2011. The operating margin recorded by the company was 9.09% during FY2013, an increase of 2.52% over FY2012 and an increase of 3.3% over FY2011. Additionally, the ROA and ROE was recorded to be 1.16% and 6.69% in FY 2013 respectively, with ROA witnessing an increase of 0.32% over FY2012 and an increase of 0.28% over FY2011; and ROE witnessing an increase of 1.58% and 1.45% over FY2012 and FY2011 respectively. Therefore, as all measures of profitability i.e. the net profit margin, operating margin, ROA, and ROE increased from FY2011 to FY2013, it can be said that ANAT is using its funds from shareholders and assets effectively in increasing profitability of the company.

insert table 1.

b) Growth:

ANAT recorded sales growth rate of 4.42% during the financial year ended December 2013, an increase of 5.61% and 6.1% over FY2012 and FY2011 respectively. The net income recorded by

ANAT was 40.48% during the FY2013, an increase of 40.33% and 8.03% compared to the net income growth recorded in FY2012 and FY2011 respectively. However, the DPS remained 0 for FY2011 through 2013. Hence, keeping in mind the substantial increase in the net income and the increase in sales growth rate, it can be said that ANAT is growing at a good pace.

Insert table 2

Insert table 3

c) Liquidity:

As the current assets and current liabilities recorded by ANAY for FY2011 through FY2013 remained 0, hence, neither quick ratio nor current ratio can be calculated and evaluated.

Insert table 4

d) Leverage:

ANAT recorded debt-to-asset ratio of 0.49 during the financial year ended December 2013, a decrease of 31% compared to the debt-to-asset ratio for the FY2012; and an increase of 86.3% over FY2011. Additionally, it also recorded debt-to-equity ratio of 2.71, a decrease of 36.3% compared to the debt-to-equity ratio in FY 2012, but an increase of 67.1% over FY2011.

Therefore, even though the overall debt-to-asset and debt-to-equity ratio increased from FY2011 through FY2013, however, as both debt-to-asset and debt-to-equity ratio decreased from 2012 to 2013 by a considerable percentage, this implies that the company has been aggressive in funding its debt with both its assets and shareholder equity. Hence, it should try to manage its debt carefully and reduce the risk of losing its investors in the future.

Insert table 5

e) Enterprise Valuation of ANAT:

In order to calculate the EVA of ANAT for the fiscal year ended December 2013, we use the following formula:

$EVA = NOPAT - (\text{Operating Capital} * \text{Cost of capital})$ Where,

$NOPAT = \text{Operating Income} * (1 - \text{taxrate})$

The operating income recorded by ANAT for FY2013 was \$262,829 and the tax rate was recorded to be 27.5%. Hence, NOPAT equalled to be \$190,551.025. Additionally, the cost of capital recorded by ANAT for FY2013 was \$25,583 with current assets and current liabilities being 0, implying that working capital equals 0. Therefore, the EVA of ANAT for FY2013 is \$190,551.025. Likewise, the operating income recorded by ANAT for FY2012 was \$191,452 and the tax rate was recorded to be 27.8%. Hence, NOPAT equalled to be \$141,629.686. Additionally, the cost of capital recorded by ANAT for FY2012 was \$30,838.

Insert table 6

However, working capital was equal to 0 as current assets and liabilities equal 0 for FY2012. Therefore, the EVA of ANAT for FY2012 is \$141,629.686. Similarly, the operating income recorded by ANAT for FY2011 was \$191,452 and the tax rate was recorded to be 23.9%. Hence, NOPAT equalled to be \$145,694.972. Again working capital is 0 as current assets and current liabilities equalled 0 for FY2011 as well. Therefore, EVA of ANAT for FY2011 is \$145,694.972. Consequently, even though, the EVA decreased by 34.5% from FY2012 to FY 2013, overall, EVA of ANAT increased by 30.8% from FY2011 through FY2013. As the amount of capital invested was not given in the financial statements, therefore, ROIC cannot be calculated for any of the fiscal years. Additionally, ANAT recorded

free cash flow of \$519.525 in FY2013, an increase of 23.1% and 16.5% compared to FY2011 and FY2012 respectively. All in all, overall, all the measures of corporate valuation witnessed an increase from the fiscal year ended December 2011 to fiscal year ended December 2013, therefore, concluding that the overall enterprise value of ANAT increased from 2011 to 2013

f) Cash Flow Estimation

Insert table 7

As it can be inferred from the figure above, the actual net profit of ANAT for the fiscal year ended December 2013 is \$225,834.722 which exceeds the net profit recorded in the income statement for FY2013. This indicates that the financial health of ANAT is very good.

CONCLUSION

All in all, this financial report analysis on ANAT for FY2013 helps determine that the ANAT is doing overall doing very well. ANAT recorded an increase in both ROA and ROE for FY2013 over FY2011, implying that it is using its assets and stockholder's equity efficiently. Moreover, it also verified an increase in its profit margin and net income for FY2013 over FY2011, hence, implying a positive improvement in the business performance of the company. ANAT recorded a decrease in the debt-to-asset and debt-to-equity ratio for FY2013 over FY2012 but an increase over FY2011. Hence, even if ANAT is able to manage its assets efficiently in meeting its short-term obligations, it should work on managing its assets and shareholder's equity when meeting its debt. However, overall both the ratios increased in FY2013 over FY2011, indicating a positive trend. Moreover, all the measures of corporate valuation i.e. EVA, ROIC, AND FCF increased in the fiscal year ended December 2013 compared to fiscal year

ended December 2011, therefore, concluding that the overall enterprise value of ANAT increased from 2011 to 2013. Lastly, the cash flow statement produced for the FY2013 reported that an actual amount of \$217865.722 was generated by ANAT. Therefore, even though, ANAT witnessed a dip in the EVA, debt-to-asset and debt-to-equity ratio from FY2011 to FY2012, it can be inferred that the overall financial performance of ANAT increased from FY2011 to FY2013 and if ANAT continues to manage its debt and liabilities and sustains its growth, ANAT will continue to increase its profitability in the future as well.

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Table – 1

In Millions of USD except Per Share	FY 2010	FY 2011	FY 2012	FY 2013
12 Months Ending	2010-12-31	2011-12-31	2012-12-31	2013-12-31
Returns				
Return on Common Equity	4.061	5.248	5.1182	6.6939
Return on Assets	0.6925	0.8683	0.838	1.156
Margins				
Operating Margin	6.5933	8.3172	9.0974	11.6206
Incremental Operating Margin	158.0089	--	--	68.653
Pretax Margin	6.4901	8.3288	8.9667	11.9244
Income before XO Margin	4.6937	6.3447	6.4364	8.7299
Net Income Margin	4.6865	6.3104	6.3956	8.6038
Net Income to Common Margin	4.6865	6.3104	6.3956	8.6038
Additional				
Effective Tax Rate	27.6796	23.8215	28.2191	26.7891
Dvd Payout Ratio	56.8523	43.3041	43.2682	30.8642
Sustainable Growth Rate	1.7522	2.9754	2.9037	4.6279

Table – 2

In Millions of USD except Per Share	FY 2010	FY 2011	FY 2012	FY 2013
12 Months Ending	2010-12-31	2011-12-31	2012-12-31	2013-12-31
1 Year Growth				
Revenue	4,5851	1,637	1,1898	4,4761
Operating Income	--	24,0876	8,0792	31,1861
Net Income	871,7864	37,2518	0,1447	40,4787
EPS Diluted	815,7547	37,7777	0,4707	40,775
EPS Diluted before XD	751,5625	31,0092	-0,4202	40,225
EPS Diluted before Abnormal	48,1319	35,1845	10,7658	20,7213
Dividend per Share	0	0	0	0
Fixed Assets	-17,0974	-0,0834	18,9756	15,5028
Total Assets	6,4453	4,3573	2,7438	0,9426
Employees	1,2857	-1,3534	-4,116	0,0976
Short-Term Debt	35,4947	2,6138	9,6945	91,7132
Total Debt	-18,5558	-2,0718	177,4305	-30,3181
Total Equity	4,7111	0,1275	5,1807	9,4809
Capital	4,2862	0,3327	7,915	7,8964
Book Value per Share	4,573	0,1266	5,1783	9,2381
Cash From Operations	-19,524	11,141	8,4715	14,1405
Capital Expenditures	-28,9831	87,9261	75,1355	-17,0407
Net Change In Cash			3089,6241	
Free Cash Flow	-19,2634	9,2797	5,6043	16,5308
5 Year Growth				
Revenue	0,1813	0,594	0,4358	4,37
Operating Income	--	--	--	--
Net Income to Common	9,3954	6,9334	4,5719	
EPS Diluted	9,4888	7,0121	4,8896	
EPS Diluted before XD	-9,8818	-7,0121	-5,0853	--
EPS Diluted before Abnormal	11,6675	8,8177	7,8807	20,4813
Dividend per Share	0,73	0,4608	0,195	0
Accounts Receivable	2,3791	0,4916	0,3624	1,767
Fixed Assets	-2,9376	-0,8839	1,8919	2,978
Total Assets	4,1809	4,5373	4,997	4,3817
Short-Term Debt	-19,2048	-17,8623	-16,5511	-50,8944
Total Debt	-15,4115	-11,8450	-4,877	0,147
Total Equity	1,4731	0,3807	0,5185	5,9915
Total Capital 5 Year Growth	0,9891	0,0183	0,676	5,8253
Book Value per Share	1,2045	0,0858	0,4891	5,9254
Cash From Operations	-2,4251	-2,6817	0,9904	25,9946
Free Cash Flow	-2,1071	-3,2123	-0,2471	26,7524

Table – 3

Sequential Growth				
Revenue	4,5051	-1,632	-1,8898	4,4241
Operating Income	--	74,087E	8,0798	11,3957
Net Income to Common	821,7664	32,4518	0,1447	40,4787
EPS Diluted	815,2542	32,2222	-0,4802	40,225
EPS Diluted before MO	751,9625	31,0092	0,4802	40,225
EPS Diluted before Abnormal	481,1189	35,1845	81,7638	25,7253
Dividend per Share	0	0	0	0
Accounts Receivable	-2,6827	7,9051	0,8804	-1,7392
Fixed Assets	17,0774	0,0834	18,9786	15,5078
Total Assets	6,4653	4,8573	2,7438	0,9426
Employees	1,2457	-1,3534	-4,116	0,0976
Short-Term Debt	35,4947	7,6138	9,6945	9,17132
Total Debt	-18,5598	-2,0718	177,4205	-30,1181
Total Equity	4,7311	0,3775	5,1807	9,4808
Capital	4,2462	0,3327	7,915	7,8964
Book Value per Share	4,973	0,1266	5,1783	9,2361
Capital Expenditures	-28,9831	87,9261	75,3355	-17,0407
Net Change in Cash	-152,9173	--	30809,6241	-192,1187
Free Cash Flow	-14,7634	9,7797	5,6843	16,5108

Table – 4

In Millions of USD except Per Share	FY 2010	FY 2011	FY 2012	FY 2013
12 Months Ending	2010-12-31	2011-12-31	2012-12-31	2013-12-31
Long-Term Debt/Equity	0.34	0.34	2.93	2.63
Long-Term Debt/Capital	0.34	0.34	2.81	2.56
Long-Term Debt/Total Assets	0.06	0.06	0.49	0.47
Total Debt/Equity	1.65	1.61	4.26	2.71
Growth (YoY)	-22.2	-3.0	165.2	-36.4
Total Debt/Capital	1.63	1.59	4.08	2.64
Total Debt/Total Assets	0.28	0.26	0.71	0.49
CFO/Total Liabilities	2.22	2.33	2.47	2.85
CFO/CapEx	42.25	24.99	15.46	21.31
Common Equity/Total Assets	16.94	16.17	16.57	17.97
Total Line of Credit	0.0	0.0	0.0	0.0
Total Available Line Of Credit	0.0	0.0	0.0	0.0
Total Credit Lines Drawn	0.0	0.0	0.0	0.0

Table – 5

In Millions of USD except Per Share	FY 2010	FY 2011	FY 2012	FY 2013
12 Months Ending	2010-12-31	2011-12-31	2012-12-31	2013-12-31
Total debt	60.14	58.894	163.384	113.849
Short-Term Debt	47.632	46.387	50.884	3.199
Long Term Debt	12.508	12.507	112.5	110.65
Total Debt/EBIT	0.2968	0.2342	0.6012	0.3141
Net Debt/EBIT	-0.2039	-0.1719	-0.5138	-0.0113
Cash Interest Paid	0	0	0	0
Common Equity/Total Assets	16.9369	16.1729	16.5656	17.9661
Long-Term Debt/Equity	0.3439	0.3426	2.9302	2.6324
Long-Term Debt/Capital	0.3383	0.3372	2.8106	2.563
Long-Term Debt/Total Assets	0.0583	0.0556	0.4869	0.4744
Total Debt/Equity	1.6537	1.6134	4.2555	2.7085
Total Debt/Capital	1.6268	1.5878	4.0818	2.6371
Total Debt/Total Assets	0.2804	0.2619	0.7071	0.4881
Net Debt/Equity	-1.1359	-1.184	-3.6367	-0.0975
Net Debt/Capital	-1.1174	-1.1652	-3.4882	-0.0949
EBIT	202.623	251.43	271.745	362.47
Product/Brand Segments	202.623	251.43	271.745	--
Annuity	63.109	69.776	96.501	--
Corporate and Other	91.859	115.524	77.522	--
Property and Casualty	-37.372	19.486	45.425	--
Life	70.194	29.511	34.251	--
Health	14.833	17.133	18.046	--
Geographic Segments	202.623	251.43	271.745	--
Worldwide	202.623	251.43	271.745	--

Table – 6

In Millions of USD except Per Share	FY 2011	FY 2012	FY 2013	Current
12 Months Ending	2011-12-31	2012-12-31	2013-12-31	2015-01-29
Market Capitalization	1958.7584	1832.6758	3080.5748	2825.584701
- Cash & Equivalents	102.114	303.008	117.946	136.142
+ Preferred Equity	0	0	0	0
+ Minority Interest	12.947	11.491	12.757	12.279
+ Total Debt	58.894	163.384	113.849	109.349
Enterprise Value	1928.4854	1704.5428	3089.2348	2811.070701
EV/Sales	0.6379	0.5706	0.9904	0.910204984
Price/Earnings per Share	14.8164	12.5081	16.1717	13.92521221
EV/Market Cap	0.9845	0.9301	1.0028	0.994863364
Total Debt/EV	0.0305	0.0959	0.0369	0.038899413
EV/Cash Flow	4.3878	3.5754	5.6672	4.975487273
EV/Free Cash Flow	4.5707	3.8227	5.9463	5.165510293
EV/Net Income	10.1092	8.9224	11.511	11.44377061
EV/Book Value	0.5302	0.4453	0.7372	0.639341484
Diluted Market Cap	1950.8663	1834.5327	3082.7973	2829.745002
Diluted Enterprise Value	1920.5933	1706.3997	3091.4573	2815.231002
EV/Shares Outstanding	71.9013	63.5154	114.862	111.8598827
Reference Items				
Trailing 12 Month Values for Ratios				
Sales	3023.027	2987.06	3119.21	3088.393
EPS	4.929	5.4596	7.0828	7.551052
Cash Flow	439.508	476.741	545.108	564.984
Free Cash Flow	421.92	445.903	519.525	544.2
Net Income	190.765	191.041	268.372	245.642
Book Value	3637.291	3827.836	4190.574	4396.822

Table – 7

Income Statement	Cash Flow Adjustment		Change	Cash Flow	
Sales	3,119,210	(-) change in A/R	-	2,545	3,121,755
COGS	1,827,587	(-) change in A/P		-	
		(+)change in Inv		-	1,827,587
Gross Profit	1,291,623		Gross cash margin		1,294,168
Operating Expenses	540,279	(-) change in Op Accruals	-	12,335	
		(-) change in Depreciation		2,183	550,431
Operating Profit	751,344		Cash operating margin		743,737
Interest	426,102	(-) change in Acc Interest		-	426,102
Taxes	99,641	(-) change in Def taxes		128	99,513
Net Profit	225,601				218,122