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WHISTLE BLOWER PROTECTION LAWS: REGULATORY FRAMEWORK-GLOBAL SCENARIO

Mrs. Sowmya S
Dr. H Rajashekar

ABSTRACT

The whistle blowing concept is gaining much importance in the present global scenario. US Academicians Miceli and Near (1984) defines Whistle blowing as “the disclosure by organizational members (former or current) of illegal, immoral, or illegitimate practices under the control of their employers, to persons or organizations that may be able to effect action”. The organizations having whistle blowing policy work and perform far better than those who don’t have. The purpose of this policy is to provide a framework to promote responsible and secure whistle blowing. It protects employees wishing to raise a concern about serious irregularities within the company. There may be formal whistle blowing procedure provided by the organization. But not all organizations provides for it. Therefore this study is an attempt to understand the regulatory framework on whistle blower protection at the global level. There is no single country which can be considered as a model to frame whistle blower policy/procedure for protection. The positive aspects from each country’s legislation must be taken and applied based on its cultural background and perception of people belonging to concerned country. Therefore the WBPPP model prescribed in this study can help to achieve the objective.

Keywords: Whistle blower protection, regulatory framework, global scenario, WBPPP model.

Introduction

The whistle blowing concept is gaining much importance in the present global scenario. US Academicians Miceli and Near (1984) defines Whistle blowing as “the disclosure by organizational members (former or current) of illegal, immoral, or illegitimate practices under the control of their employees, to persons or organizations that may be able to effect action”. International Labour Organization (ILO) also defines whistle blowing as “the reporting by employees or former employees of illegal, irregular, dangerous or unethical practices by employers”. According to John A. Grey (2004), the term “whistle-blower” refers primarily to an employee who, in good faith, attempts to have the employer stop conduct that the employee reasonably believes to be injurious to the public and a violation of the law either through internal efforts or by disclosing the illegal conduct externally to the press or law enforcement agencies. The organizations having whistle blowing policy work and perform far better than those who don’t have. The purpose of this policy is to provide a framework to promote responsible and secure whistle blowing. It protects employees wishing to raise a concern about serious irregularities within the company. The process of whistle blowing differs depending on the nature of wrong doing and type of organization. There is a systematic way of reporting wrong doing and investigation to be taken. There should be proper channel for effective whistle blowing which forms the best whistle blowing procedure. Sometimes the employee may be in confusion with respect to whom to report wrong doing, will it be considered seriously by them and affects serious
investigation and action. There may be formal whistle blowing procedure provided by the organization. But not all organizations provides for it.

Need and Importance of Whistle Blowing
Organizations contain many stakeholders such as share holders, directors, managers, employees, vendors; consumers. Each of these groups has a vested interest in the health and long term success of the corporation. Each group seeks to secure its own success through the activity of the corporation. Each group seeks to do this in a fair and equitable way. The only stakeholders that really know what is happening within a corporation are the employees. So it is in the hands of the employees to protect the interest of various stakeholders. Whistle blowing gives all stakeholders, but most importantly employees, the opportunity to keep the corporation ethical and also to keep fellow employees honest. The end of the evil practices in the organization is possible by the effective whistle blowing. If no one questions the bad behavior, it will continue and as a result cause even more damage to the organization itself and public.

On other side by encouraging a whistle blowing culture within the organization, the organization promotes transparent structure and effective clear communication. More importantly whistle blowing can protect the organization clients.

Need for the Study
The study on legal frame work helps in understanding the law. When the law is understood it helps to identify the gap that exists between the law and the perception of those on whom the law is applicable. The gap which is identified at the later stage helps in either amendment of law or to assess the need for training those people on whom the law is applicable in acceptance with the law. This study helps in filling the gap that exists between whistle blower protection law and the employee perception about concept expressed in law. Therefore this study is an attempt to understand the regulatory framework on whistle blower protection at the global level.

Literature Review
The literature review has been done keeping in mind to identify the correct research gap. The reports, articles, conference paper and books from websites were taken to review the literature relating to study on regulatory framework on whistle blowing legislation in global context. The literature review helped in identifying the proper research gap, methodology that can be applied for analyzing the data. Here are few works exhibited in this paper.

**DLA Piper’s Employment Group (2013)** in their study summarizes the whistleblowers protection in 10 countries across five continents. US, UK, Japan, China and South Africa are the countries which have been given three stars in remarking express protection to whistleblowers in their legal framework for whistle blowing. The whistle blower protection laws in these countries are comprehensive in nature. Germany, France, Netherland and Australia were the countries which have been given with two stars in remarking some protection to whistle blowers through general laws and Hong Kong have been given single star in remarking little or no protection for whistle blowers. The two stars and single star remarked countries signify piecemeal legal system for whistle blower protection. The study also analyzes the cultural and legal differences having impact on development of whistleblower protection law. The report says the European countries have slow development of whistle blower protection law than US countries. The reason for such a difference is the type of employment model for termination existing in those countries. The European countries follow “for cause” model, which means the employee is terminated only on valid legal grounds, whereas the US countries follow “at will”, which means the employee is terminated at the will of the employer who dominates the employees. The study also signifies the role of compensation system in whistle blowing law across different countries. The compensation rate varies in different countries.

**Peter Bowden (2005)** in his paper presented at the conference had compared the Australian legislation with that of US and UK legislation and within the states of Australia for whistle blower protection. The author feels the current best legislation in Australian states for whistle blower protection must be strengthened to achieve its objective. The author argues that the UK and US legislation is different but also ineffective.

The (TI) **Transparency International (2009)**, global civil society organization which is working to fight against corruption has recommended legal and effective measures to provide protection to whistle blowers against retaliation and full compensation for reprisals. It has recommended draft principles for whistle blowing legislation. The national research has been undertaken by this organization and comprehensive report is submitted on the same. The whistle blower protection in 10 European countries has been studied. The report includes the broad framework on cultural and political
context, legislation, policies and practice of whistle blower protection laws in Bulgaria, Czech Republic, Estonia, Hungary, Ireland, Italy, Latvia, Lithuania, Romania and Slovakia. The findings of the research revealed that whistleblowing legislation in these countries are fragmented and weakly enforced. Lewis & Vandekerckhove (2011), in their article opines that there is a need to provide ways for the people to raise concerns about suspected wrongdoing by promoting internal policies and procedures which offer proper safeguards to whistleblowers. The authors in this article review the 5 different documents providing guidelines and policy documents produced by authoritative bodies in Europe. The authors examine the principles upon which legislation might be based and their management practices. The documents considered in this study are the Council of Europe Resolution 1729 (COER); Transparency International ‘Recommended Principle for Whistle blowing Legislation’(TI); European Union Article 29 Data Protection Working Party Opinion (EUWP); International Chamber of Commerce ‘Guidelines on Whistle blowing’ (ICC), and the British Standards Institute ‘Whistle blowing arrangements code of practice 2008 (BSI). This paper compares and does not prescribe the best practice among the given guidelines. This article identifies the gap that exists among different guidelines. The authors have used structured content and documentary analysis techniques to critically review the selected 5 guidelines about how to manage whistle blowing. While discussing with issues relating to the institutional content of internal whistle blowing the authors suggests unions have the positive role to play in designing and implementing whistle blowing procedures. The comparison of relevant elements included for who the guidelines are applicable and about what the guidelines are applicable, whether there are several tiers to raise concerns, whether in-house or out-house reporting suggested, the reporting mode, the confidentiality / anonymity, recording reports, rights and duties, protection and reprisals, good faith and malicious reports, rewards, involving trade unions/ stakeholders, advice to employees regarding whistle blowing, roles and responsibilities of key players monitoring and review and about training.

Research Gap
The previous studies concentrate mainly towards analyzing the different countries laws, with different guidelines of whistle blower protection, but no study has suggested for the lack of effective and efficient law. This study fills the gap by identifying the existing lacunas in whistle blower protection law across different countries. Thereby suggest the model for effective and efficient whistle blower protection law.

Problem Statement
Employee’s practices are not in acceptance with the whistle blower protection law. The employees face retaliation by such practices which are not in acceptance with the law. The law must reach to whom the law is applicable.

Objectives
The main objective of this article is to study and examine the regulatory framework of whistle blower protection law in global scenario (across different countries). In the light of this primary objective the following sub objectives are considered.

1. To understand the purpose of whistle blower protection law across different countries.
2. To examine the type/nature of wrongdoing defined in whistle blower protection law across different countries.
3. To examine the applicability of the whistle blower protection laws across different countries based on the type of organization.
4. To examine the disclosure mechanism suggested/prescribed by the Whistle Blower protection Laws across different countries.
5. To examine the provision for rewards in whistle blower protection law for motivating the whistle blowers across different countries.
6. To examine the provision for compensation in whistle blower protection laws for damages and loss caused to whistle blowers.
7. To examine the provision for penalties and punishment for whistle blowers (for false and malicious intent in reporting) across different countries.
8. To suggest WBPPP model for effective and efficient whistle Blower Protection Law.

Research Methodology
The study is descriptive and exploratory in nature. The study considers the countries having specific and comprehensive whistle blower protection laws across the globe. 12 countries have been identified with specific whistle blower protection laws across the globe. Therefore the sample is 12 country’s laws relating to whistle blower protection. The countries include Romania (Europe), UK (Europe), Nigeria (Africa), Ghana (Africa), Canada (North America), United States.
(North America), Australia, New Zealand (Australia), Japan (Asia), Malaysia (Asia), Philippines (Asia) and India (Asia).

The secondary data published in different sources through websites is taken for the study purpose. The content analysis method has been used for analyzing the data.

**Data Analysis and Interpretation**

**Purpose of the Law**

There is a purpose and reason behind any law. The law makers identify such purpose and consider it as the primary objective of the Act. This part of the study clearly describes about the purpose of the Whistle Blower Protection Laws in different countries. The Table 1 describes the purpose of whistle blower protection laws.

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Country</th>
<th>Title</th>
<th>Purpose Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Romania (Europe)</td>
<td>Whistle Blower Protection Act (Law 571), 2004.</td>
<td>Protection of personnel within public authorities, public institutions and other establishments who report infringements.</td>
</tr>
<tr>
<td>2</td>
<td>UK (Europe)</td>
<td>The Public Interest Disclosure Act, 1998.</td>
<td>Protection of workers who disclose information about malpractice at their workplace, or former workplace.</td>
</tr>
<tr>
<td>3</td>
<td>Nigeria (Africa)</td>
<td>Whistle Blower Protection Bill, 2011.</td>
<td>Provides the mechanism to individuals who make public interest disclosure that relates to unlawful, illegal conduct and corrupt practices; protection against victimization of persons making such disclosures; rewarding the individuals who makes such disclosures.</td>
</tr>
<tr>
<td>4</td>
<td>Ghana (Africa)</td>
<td>Whistle Blower Protection (Act 720), 2006</td>
<td>Provides the mechanism to individuals who make public interest disclosure that relates to unlawful, illegal conduct and corrupt practices; protection against victimization of persons making such disclosures; rewarding the individuals who makes such disclosures.</td>
</tr>
<tr>
<td>6</td>
<td>United States (North America)</td>
<td>Whistle Blower Protection Act, 1989</td>
<td>Protection of federal employees who involve in whistle blowing; help to eliminate wrongdoing within the federal government.</td>
</tr>
<tr>
<td>7</td>
<td>Australia</td>
<td>Public Interest Disclosures Act, 2000</td>
<td>To promote integrity and accountability in the Australian Public Sector by encouraging the disclosure of information about suspected wrongdoing and protecting people who make such disclosures.</td>
</tr>
<tr>
<td></td>
<td><strong>Country</strong></td>
<td><strong>Act</strong></td>
<td>Objectives</td>
</tr>
<tr>
<td>---</td>
<td>---------------------------</td>
<td>----------------------------------------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>8</td>
<td>New Zealand (Australia)</td>
<td>Protected Disclosures Act, 2000</td>
<td>To promote the public interest by facilitating the disclosure and investigation of matters of serious wrongdoing in or by an organization; Protection of people who raise allegations of serious wrongdoing within their organizations.</td>
</tr>
<tr>
<td>9</td>
<td>Japan (Asia)</td>
<td>Whistle Blower Protection Act (Law, 122), 2004</td>
<td>Protection of persons who expose corporate or government misconduct from unfair treatment such as dismissal, demotion, salary cuts.</td>
</tr>
<tr>
<td>10</td>
<td>Malaysia (Asia)</td>
<td>Whistle Blower Protection Act, 2010</td>
<td>To combat corruption by encouraging and facilitating disclosure of improper conduct in both public and private sector; to protect such persons making such disclosures.</td>
</tr>
<tr>
<td>11</td>
<td>Philippines (Asia)</td>
<td>Whistle Blower Protection Act, 2011</td>
<td>To strengthen government and corporate accountability by supporting and protecting the right of employees to speak out about wrongdoing on the job.</td>
</tr>
<tr>
<td>12</td>
<td>India (Asia)</td>
<td>Whistle Blower Protection Act, 2011</td>
<td>To establish a mechanism to receive complaints relating to disclosure on any allegation of corruption or willful misuse of power or willful misuse of discretion against any public servant and to inquire or cause an inquiry into such disclosures and to provide adequate safeguards against victimization of the person making such complaint.</td>
</tr>
</tbody>
</table>

Based on the table, the following factors have been identified as the important objective of whistle blower Protection Laws across different countries:

1. To create transparency and accountability by eliminating wrongdoing.
2. To facilitate disclosure by suggesting the mechanism/procedure to report wrongdoing.
3. To protect the whistle blowers.
4. To provide for effective investigation system.
5. To motivate whistleblowers by rewarding their act.
6. To protect the right of the employees to speak. (right to speech)

From the above 6 statements, the countries are assigned with the stars based on the weights given to them. The weights are assigned to each country based on the identification of the above elements in their purpose of Whistle Blower Protection Law.
Table: 2 Showing Countrywise Elements Included in Purpose Of Whistle Blower Protection Law

<table>
<thead>
<tr>
<th>SL.NO</th>
<th>Country (Europe)</th>
<th>Elements</th>
<th>Weights</th>
<th>Stars</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Romania (Europe)</td>
<td>1 2 3 4 5 6</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>UK (Europe)</td>
<td>1 2 3 4 5 6</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Nigeria (Africa)</td>
<td>1 2 3 4 5 6</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Ghana (Africa)</td>
<td>1 2 3 4 5 6</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Canada (North America)</td>
<td>1 2 3 4 5 6</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>United States (North America)</td>
<td>1 2 3 4 5 6</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Australia</td>
<td>1 2 3 4 5 6</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>New Zealand (Australia)</td>
<td>1 2 3 4 5 6</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Japan (Asia)</td>
<td>1 2 3 4 5 6</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Malaysia (Asia)</td>
<td>1 2 3 4 5 6</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Philippines (Asia)</td>
<td>1 2 3 4 5 6</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>India (Asia)</td>
<td>1 2 3 4 5 6</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

The common purpose of whistle blower protection law across different countries is protection of whistle blowers. The African and Australian Countries stands in first place in having whistle blower protection law, since they have included most significant factors in their purpose of the Whistle Blower Protection Act. The African countries have given importance towards Disclosure mechanism, protection and motivation of whistle blowers, whereas the Australian countries have given importance towards eradicating corruption in public sector, disclosure mechanism and protection factors and even investigation procedures (in case of New Zealand). The North American countries stand in second place in having effective purpose for their whistle blower protection law. Canada gives importance to disclosure mechanism, while US considers eradicating of corruption and fraud in government. In Asia, there can be seen a mixed combination of the results depending upon the individual country. Malaysia stands first place by including the significant factors in the purpose of their whistle blower protection law. Malaysian Whistle Blower Protection law gives importance to eradicating corruption and fraud, disclosure mechanism and protection of whistle blowers. Whereas, in Japan there cannot be found any such factors included in their law apart from some protection factors of whistle blowers. In Philippines, the whistle blower protection law stands in second place along with Indian law for whistle blower protection, but there can be seen different purpose factors which are not common to each other. Indian Whistle blower protection law gives importance to the disclosure mechanism and the protection of whistle blowers. Indian whistle blower protection law does not include eradicating corruption as the primary objective and also it does not motivate the employees in this regard to speak and thereby protecting the right to speech of employees (as an individual). Though US whistle blower protection law does not motivate its employees to blow the whistle by rewarding them
and compensate them for the damages caused by whistle blowing. There can be identified a separate law for the given purpose i.e, False Claims Act (For Compensation), Dodd-Frank Act (For Rewards). By this one can observe even US stands first place for having different laws for whistle blowers with different purpose, though not included in single law.

**Table 3: Definitions of Wrongdoing and Applicability in Whistle Blower Protection Law**

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Country</th>
<th>Type/nature of wrongdoing</th>
<th>Applicability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Romania (Europe)</td>
<td>Any infringement of the law, of the professional ethics or of the principles of good administration, efficiency, effectiveness, economy, and transparency.</td>
<td>Broad Employees of Central and local Public authorities.</td>
</tr>
<tr>
<td>2</td>
<td>UK (Europe)</td>
<td>Malpractice at workplace or former workplace.</td>
<td>Narrow Any employee with public interest.</td>
</tr>
<tr>
<td>3</td>
<td>Nigeria (Africa)</td>
<td>Unlawful, illegal conduct and corrupt practices.</td>
<td>Broad Any individual with public interest.</td>
</tr>
<tr>
<td>4</td>
<td>Ghana (Africa)</td>
<td>Unlawful, illegal conduct and corrupt practices.</td>
<td>Broad Any individual with public interest.</td>
</tr>
<tr>
<td>5</td>
<td>Canada (North America)</td>
<td>Contravention of any Act of Parliament, misuse of public funds, Gross mismanagement in the public Sector, an act or omission that creates so the specific danger to the life, health or safety of persons, a serious breach of a code of conduct, Knowingly directing or counseling a person to commit a wrongdoing.</td>
<td>Broad Employees in Public Sector</td>
</tr>
<tr>
<td>6</td>
<td>United States (North America)</td>
<td>Violation of any law, rule or regulation, gross mismanagement, a gross waste of funds, an abuse of authority, a substantial danger to public health or safety.</td>
<td>Broad Federal employees in government.</td>
</tr>
<tr>
<td>7</td>
<td>Australia</td>
<td>Disclosable Conduct Contravention of a law of the common wealth perverts the course of justice or amounts to corruption, amounts of wastage of public funds or property, is an abuse of public trust or the public official's position, unreasonably endangers health and safety or the environment, misconduct relating to scientific research, analysis or advice, or is maladministration.</td>
<td>Broad Common wealth public officials with public interest.</td>
</tr>
<tr>
<td>8</td>
<td>New Zealand (Australia)</td>
<td>Serious Wrongdoing</td>
<td>Narrow Any Employee (Both private and public) with respect to their organization.</td>
</tr>
<tr>
<td>9</td>
<td>Japan (Asia)</td>
<td>Misconduct from unfair treatment of employees at workplace such as dismissal, demotion, salary cuts.</td>
<td>Narrow Any Employee (Both private and public) with respect to their organization.</td>
</tr>
<tr>
<td>10</td>
<td>Malaysia (Asia)</td>
<td>Improper conduct.</td>
<td>Narrow Any Employee (Both private and public) with respect to their organization.</td>
</tr>
<tr>
<td>11</td>
<td>Philippines (Asia)</td>
<td>Violation of a law, or a rule or regulation promulgated pursuant to law or any professional code of ethics, improper quality of patient care;</td>
<td>Narrow Any Employee (Both private and public) with respect to their organization.</td>
</tr>
<tr>
<td>12</td>
<td>India (Asia)</td>
<td>Corruption or willful misuse of power or willful misuse of discretion by any public servant</td>
<td>Narrow Any individual against Public authority (Both Central and State)</td>
</tr>
</tbody>
</table>

Romania, Nigeria, Ghana, Canada, US, and Australia have defined the type of wrongdoing in broader sense. While, the UK, Newzealand, Japan, Malaysia, Philippines and India have defined the type of wrongdoing in narrow sense.
Table 4: Disclosure Mechanism in Whistle Blower Protection Law Across Different Countries

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Country</th>
<th>Nature of Disclosure</th>
<th>Encouragement for Anonymous Disclosure</th>
<th>Disclosure Channel</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Romania (Europe)</td>
<td>Public interest in good faith.</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td>2</td>
<td>UK (Europe)</td>
<td>Protected and Qualifying Disclosures</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td>3</td>
<td>Nigeria (Africa)</td>
<td>Disclosure of Impropriety in good faith and reasonable cause</td>
<td>Not encouraged. Identity of the whistle blower is required</td>
<td>Writing or oral at initial stage. But preferred to be written in later stage. (Reduction of Disclosure into writing in case of oral disclosure) Sec 5</td>
</tr>
<tr>
<td>4</td>
<td>Ghana (Africa)</td>
<td>Disclosure of Impropriety in good faith and reasonable cause</td>
<td>Not encouraged. Identity of the whistle blower is required</td>
<td>Writing or oral at initial stage. But preferred to be written in later stage. (Reduction of Disclosure into writing in case of oral disclosure) Sec 5</td>
</tr>
<tr>
<td>5</td>
<td>Canada (North America)</td>
<td>Protected Disclosure</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td>6</td>
<td>United States (North America)</td>
<td>Any Disclosure</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td>7</td>
<td>Australia</td>
<td>Both internal and external disclosure</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td>8</td>
<td>New Zealand (Australia)</td>
<td>Protected internal Disclosure</td>
<td>Included</td>
<td>Nil</td>
</tr>
<tr>
<td>9</td>
<td>Japan (Asia)</td>
<td>Reportable fact.</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td>10</td>
<td>Malaysia (Asia)</td>
<td>Disclosure of improper conduct</td>
<td>Nil</td>
<td>Writing or oral at initial stage. But preferred to be written in later stage. (Reduction of Disclosure into writing in case of oral disclosure) Sec 6(3)</td>
</tr>
<tr>
<td>11</td>
<td>Philippines (Asia)</td>
<td>Disclosure with reasonable belief</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td>12</td>
<td>India (Asia)</td>
<td>Public interest in good faith with declaration</td>
<td>Not encouraged. (No action is taken against anonymous reporters)</td>
<td>Writing only (includes electronic mail)</td>
</tr>
</tbody>
</table>

The whistle blower protection laws across different countries have included the different nature of disclosure in their laws. The following nature has been identified.

1. **Public interest Disclosure**: The person is protected if he/she discloses in public interest. The public interest includes the health and safety of the general public and the environment.

2. **Qualifying Disclosure**: The person is protected if he/she makes qualifying disclosure. The disclosure is said to be qualified when the disclosure is made in accordance with the specifications in the law. The specifications may be related with what to be reported and to whom such reports must be made.

3. **Protected Disclosure**: The person is protected if he/she makes protected disclosure. The protected disclosure includes that disclosure which is not prohibited by the law. If the disclosure is prohibited by law and such disclosure will be unprotected disclosure.
4. **Disclosure in good faith**: The person is protected if he/she makes the disclosure in good faith.

5. **Disclosure for reasonable cause/belief**: The person will be protected, if he/she has 'reasonable cause/belief' that the information is true.

6. **Internal and external Disclosure**: The person is protected if he/she makes the specified disclosure internally or externally. Internal disclosure refers to disclosing within the organization and external disclosure refers to disclosing outside the organization, using the specified channel and authority.

7. **Reportable Fact**: the reportable fact is the term used in Japan's Whistle Blower Protection Law. It is concerned with the protection of interests such as the protection of individuals' lives and bodies, the protection of interest of the consumers, the conservation of the environment, the protection of fair competition, and the protection of citizen's lives, bodies, property and other interests

8. **Disclosure with Declaration**: The person is protected if he/she discloses the information in writing with his/her identity along with declaration. This nature of disclosure is included by Indian Whistle Blower Protection Law.

Nigeria, Ghana, Canada, Australia, Newzealand, Malaysia and India have included the Disclosure Mechanism in their purpose of Whistle Blower Protection Law. Among these 7 countries Nigeria, Ghana, Newzealand, Malaysia and India have stated the nature of Disclosure and about the Disclosure Mechanism. Remaining countries namely Canada, Australia have not specified about Disclosure Mechanism, though they have included in their purpose of law. The Newzealand and Malaysia have partially specified about the disclosure mechanism. The partial specification about disclosure mechanism leads to unclear picture about disclosure mechanism.

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Country</th>
<th>Provision for Financial rewards to Whistle Blowers</th>
<th>Provision for compensation for damages to Whistle Blowers</th>
<th>Provision for penalties and punishment of Whistle Blowers for false complaints</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Romania (Europe)</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>UK (Europe)</td>
<td>No</td>
<td>Yes (Sec 3.5) (when the act is with good faith)</td>
<td>No (Reduction of compensation when the act is not made in good faith)</td>
</tr>
<tr>
<td>3</td>
<td>Nigeria (Africa)</td>
<td>Yes (Sec 20 to 27)</td>
<td>Yes (Sec 15)</td>
<td>No (No protection for those who make false reporting) Application of civil and criminal proceedings when the act is proved to be false.</td>
</tr>
<tr>
<td>4</td>
<td>Ghana (Africa)</td>
<td>Yes (Sec 20 to 27)</td>
<td>Yes (Sec 15)</td>
<td>No (No protection for those who make false reporting) Application of civil and criminal proceedings when the act is proved to be false.</td>
</tr>
<tr>
<td>5</td>
<td>Canada (North America)</td>
<td>No</td>
<td>Yes (Sec 21.7)</td>
<td>No</td>
</tr>
<tr>
<td>6</td>
<td>United States (North America)</td>
<td>No</td>
<td>Yes (Sec 6)</td>
<td>No</td>
</tr>
<tr>
<td>7</td>
<td>Australia</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>8</td>
<td>New Zealand (Australia)</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>Japan (Asia)</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>10</td>
<td>Malaysia (Asia)</td>
<td>Yes (Part VII Sec 26)</td>
<td>Yes Sec 15(1)A</td>
<td>Yes (Sec 21)</td>
</tr>
<tr>
<td>11</td>
<td>Philippines (Asia)</td>
<td>No</td>
<td>Yes Sec 6 (D)</td>
<td>No</td>
</tr>
<tr>
<td>12</td>
<td>India (Asia)</td>
<td>No</td>
<td>Yes (Sec 17)</td>
<td></td>
</tr>
</tbody>
</table>
The countries having included the provisions relating to reward system, compensation for whistle blowers in their Whistle Blower Protection Law considers the law in positive sense. While those countries having not included the provisions relating to reward system, compensation for whistle blowers but included the provision relating to punishment and penalty for whistle blower in their Whistle Blower Protection Law considers the law in negative sense. But for effective and efficient whistle blower protection law there is a need to include all these provisions and thereby encouraging the good and discouraging the bad. Those countries who consider the whistle blower protection law in negative sense, sees whistle blowing as a threat rather than opportunity to build good governance system.

The above matrices shows 8 combinations of policy, procedure and protection factors of whistle blowing indicating A-H combinations represented by a single row.

The ‘A’ combination of the matrix represents the presence of effective policy, procedure and protection factors in the whistle blower protection law.

The ‘B’ combination of the matrix represents the absence of whistle blower protection law.

The ‘C’ combination of the matrix represents presence of whistle blower protection law and procedure but lack of effective protection measures included in the law. In this case there is a need to assess the nature of protection measures adopted by the law and perception of employees about the protection measures included in the law. This helps in identifying the gap that exists between law and perception. Thereby necessary provisions can be incorporated based on perception of employees.

The ‘D’ combination of the matrix represents the absence of policy and law, absence of procedure but presence of protection. In this case the protection factors are considered by the whistle blower himself/herself. The whistle blower plays a safe game while blowing the whistle by considering precautionary measures. There can be two types of whistle blowers in this case. Firstly, the person who observe wrongdoing and keep silent. So he assumes himself to keep quiet. Keeping quiet is a precautionary measure taken by non-whistleblower. Non-whistleblower is a person who observe wrongdoing in his/her organization, but who intends not to report. Secondly, active and cautious whistle blower. This type of whistle blower actively participates in whistle blowing by taking self precautionary measures. The nature of such type of whistleblower will be cautious, courage and act independently and with artificial and emotional intelligence.

The ‘E’ combination of the matrix represents presence of whistle blower protection law, absence of whistle blowing procedure and presence of protection. In this case the law does not include about disclosure mechanism and procedure for investigation, but still there can be protection to whistle blowers. Here, the informal procedure may influence the protection of the whistle blower. Again similar to case ‘D’. The nature of whistle blower influences the protection of himself/herself.

The ‘F’ combination of the matrix represents absence of whistle blower protection policy/law, presence of procedure for disclosure mechanism, but still lack of protection for whistle blowers. In this case the informal
procedures in absence of whistle blowing policy leads to unprotected whistle blowers. The procedures practiced for disclosure may harm the whistle blowers. The ‘G’ combination of the matrix represents lack of whistle blowing policy, but still can find procedure for disclosure and protection of whistle blowers. In this case though the whistle blower use the informal procedures for disclosure, the nature of whistleblower using that informal system for disclosure influences the protection of whistleblower. This case is similar to ‘D’ and ‘E’ where the nature of whistleblower plays an important role for protection of himself/herself.

The ‘H’ combination of the matrix represents presence of whistle blower protection law but lack of procedure for disclosure mechanism and protection measures for protection of whistle blowers. In this case though the law exists with intention of protecting the whistleblowers, there is lack of procedure for disclosure and thereby not protecting the whistle blowers. Here, there is a need to incorporate effective procedure for whistle blower mechanism and required protection measures by understanding the perception of employees on whom such law is applicable. The ‘H’ combination of the matrix is similar to ‘C’ combination of the matrix.

At the later stage the 8 combinations of the matrix can be reduced to 5 combinations. The common combinations results in the following identifications.

1. Existence of effective and efficient whistle blower protection law. (‘A’ combination)
2. Need for whistle blower protection Law. (‘B’ combination)
3. Need for Whistle blower policy and effective Disclosure mechanism. (‘F’ combination)
4. Need to understand the nature of whistle blower. (‘DEG’ combination)
5. Need for training of whistle Blowers. (‘HC’ combination)

Based on the above combinations the following suggestions could be given.

1. Need for whistle blower protection law.
2. Need for effective disclosure mechanism.
3. Need for training of whistle blowers.

When the whistle blower protection law has all the above 3 factors then such law will be considered as an effective and efficient whistle blower protection law.

Conclusion

The WBPPP model is an approach for those who want to frame and implement effective and efficient whistle blower protection law or policy. This approach or model is suitable for all type of organizations including public and private. This model also helps to understand the present situation of legal framework in their respective countries. This model helps to understand the lacunas existing in the present practices in law as well as in organizations. This model ultimately realizes the need for policy, procedure and thereby protection.

Across the globe, the US, African countries and Australian countries have comprehensive whistle blower protection laws. The US regulatory framework on whistle blowing is different and specific in nature. Whereas, in Asia there is mixture of different level of importance given to whistle blowing legislation in different countries. The cultural background and perception of the employees have impact on the regulatory framework on whistle blowing. The future study can consider in understanding the cultural impact on whistle blowing legislation with whistle blowing culture. One can clearly understand by reading the above analysis, there is no single country which can be considered as a model to frame whistle blower policy/procedure for protection. The positive aspects from each country’s legislation must be taken and applied based on its cultural background and perception of people belonging to concerned country. Therefore the WBPPP model prescribed in this study can help to achieve the objective.

**FOOTNOTES**


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EMOTIONAL INTELLIGENCE AND SOCIO-ECONOMIC STATUS AS PREDICTORS OF PSYCHOLOGICAL WELL-BEING OF THE ADOLESCENTS WITH HEARING IMPAIRMENT IN SOUTHWEST IN NIGERIA

ABSTRACT
The need to provide social and emotional supports to people with impairments propelled the rationale to examine the relationships that existed between emotional intelligence and socio-economic status on the psychological well-being of adolescents with hearing impairment in southwest, Nigeria. The study adopted survey research design of ex-post facto type. Purposive sampling was used to select eight senior secondary schools and 491 adolescents with hearing impairment using a battery operated audiometer. Three validated instruments were used to gather data for the study. Two research questions were answered. Data were analysed using multiple regression analysis. The two studied independent variables (Socio-Economic Status- B= -.214; t = 1.076; p>.05 and Emotional Intelligence- B= 0.003; t = .065; p>.05) could not predict the dependent variable (psychological well-being). This implied that the duo of the variables did not have affinities with the dependent variable to the extent of not predicting it. But despite the non significant predictions of the two, socio-economic status still thrived comparatively better to emotional intelligence. Counselling psychologists and related experts can therefore help these adolescents, through varying therapeutic interventions, broaden how they can derive and strengthen their weak sources with the view to uplifting these factors.

Key words: Psychological well-being, Adolescents, Hearing impairment, Emotional intelligence, Socio-economic status.

Introduction
Adolescents have been regarded as a unique group with a wide range of difficulties and problems in their transition to adulthood. Teaching adolescents about their emotions and how they deal with others as well as their own actions can be very helpful in their daily struggles. Also, in order to encourage a smooth transition from adolescence to adulthood, a good understanding of emotions for adolescents is important in determining their psychological well-being. Although many view adolescence as a time of struggle and turmoil, some researchers are looking at the period of adolescence from a more moderate perspective whereby it is felt that most adolescents handle the period well (Arnett, 1999; Offer & Schonert-reichl, 2002). However, the period of adolescence can definitely be looked upon as a time of more struggle and turmoil than during childhood. It is a time of development where they are striving to find their personal identity as they venture toward independence from their parents. In looking at these struggles, there is much concern about school violence, drug abuse, bullying, and other destructive forms of behavior. It could be argued that these destructive forms of behavior could be related to both a lack of emotional intelligence and moral competency in some adolescents. As a result, many schools have developed programs around the factors of emotional intelligence so as to counter destructive forms of behavior.

Unlike other developing families, families with chronically impaired children often progress through the family life cycle at a slower pace (Rousey, Wild & Blacher, 2002), resulting in critical situations that may potentially obscure a healthy family environment and/
or result in increased levels of stress (Hanline, 2001; Keller & Honig, 2004). Beginning with the time of diagnosis, such families often experience feelings of shock, grief, self-blame, and/or denial, resulting in significant stress, anger, depression, withdrawal, and/or rejection (Whaley & Wong, 2002; Ziolko, 2001). To this end, parents and their impaired children have reported significantly higher levels of stress, and poorer psychological well-being compared to families with non-impairment (Friedrich & Friedrich, 2001).

Cognizant of the above, Nwuga, (2006) highlights that the World Health Organization (WHO) has estimated that throughout the world 900-950 million people are disabled, representing a prevalence ratio of one in twenty persons. Also, in Nigeria, WHO estimates put the number of people with disability at 19 million or approximately 20% of the country's population (Lang & Upah, 2008). The inferences that could be drawn from these statistics portend that the segment of these global and national populations are from time to time subjected to the attendant psychological effects which could be debilitating in form of social alienation, self-pity and rejection, emotional damage and withdrawal symptoms (Bakare, 2010). These therefore, could cumulatively affect the psychological well-being of adolescents, mostly, those with hearing impairment (Bakare, 2010).

**Literature Review**

**Nature of Impairment**

Traditionally, people with impairments have been isolated, separated and alienated from larger segments of society through institutionalization and shunning; for a belief that they are members of the victimized minority, who are prevented by the attitudes of society from enjoying the quality of life that they deserve (Nagler, 2002). When a person suddenly becomes impaired, the whole family including the friends will be affected by the sudden change in the affected person's life. This is as a result of the need to provide social, physical and emotional support to the affected person. This viewpoint is supported by Rogers (2006) posits that close relatives, wives, husbands, mothers, fathers, and significant others are those most likely to suffer the brunt of abuse, from the general public occasioned by the sudden ill-health of a family member.

Therefore, research on families with disabled children has previously shifted from focusing on the negative pathology of the disability, to focusing on stress and coping patterns of families as they adapt to the child's disability (Hodapp, 2008).Beginning with the time of diagnosis, families of chronically disabled children often experience feelings of shock, grief, self-blame, and/or denial, resulting in significant stress, anger, depression, withdrawal, and/or rejection (Whaley & Wong, 2002; Ziolko, 2001). In addition, critical situations involving chronically disabled child (e.g. the need for constant supervision, frequent hospitalizations, assistance in developing self-care skills, and transitioning to educational or vocational programming), further enhance the level of stress in the family (Rousey, et al., 2002; Simmerman, Blacher & Baker, 2001).

**Psychological Well-being**

In looking at psychological well-being, it is important to establish an operational definition of what psychological well-being is in adolescents. Wilkinson and Walford (1998) point to the two factor definition of psychological health in adolescents. The duo point out that psychological distress is usually operationalized by measures of anxiety and negative affect (i.e. measures of self-deprecation, irritability, anxiety, depression, and social disengagement) while psychological wellbeing is usually operationalized by measures of life satisfaction, happiness and positive affect (i.e. measures of control of self and events, happiness, social involvement, self-esteem, mental balance, and sociability). They also point out that depression may be present in both psychological distress and psychological well-being. In addition to defining psychological well-being, it is important to explore what factors or influences can contribute to an adolescent's sense of psychological well-being.

However, various studies have shown that there are a variety of factors that can contribute to either an increase or decrease in an adolescent's level of psychological well-being. Such several studies have shown that the quality of relationships within families, especially parents is a major determining factor of psychological well-being in adolescents (e.g., Shek, 1997; Sastre & Ferriere, 2000; van Wel, Linssen & Abma, 2000). For instance, Siddique and D’Arcy (2004) find that stress in family, school and peer situations are all related to psychological well-being. Furthermore, they find that stress in family had the strongest negative impact on an adolescent’s psychological well-being. Having established an understanding of what constitutes psychological well-being and the various factors that may contribute to an adolescent sense of psychological wellbeing, it is important to finally look at the state of adolescent psychological well-being. In terms of the adolescents’ psychological wellbeing, it is found that the quality of family relationships, a positive evaluation of school environment, a satisfactory peer group life, and their emotional satisfaction, happiness and positive affect (i.e. measures of life satisfaction, happiness and positive affect (i.e. measures of control of self and events, happiness, social involvement, self-esteem, mental balance, and sociability). They also point out that depression may be present in both psychological distress and psychological well-being. In addition to defining psychological well-being, it is important to explore what factors or influences can contribute to an adolescent's sense of psychological well-being.
intelligence orientation all had a positive influence on their psychological well-being (Bakare, 2010).

Emotional Intelligence

“Emotional Intelligence” (EI) refers to “the capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and in our relationships” (Goleman, 1998, p. 317). As Ciarrochi, Chan and Caputi (2001) point out, although definitions within the field of EI vary, they tend to be complementary rather than contradictory. All theories within the EI paradigm seek to understand how individuals perceive, understand, utilize and manage emotions in an effort to predict and foster personal effectiveness. For instance, Bar-On (2000) defines his model in terms of an array of traits and abilities related to emotional and social knowledge that influence our overall ability to effectively cope with environmental demands. As such, it can be viewed as a model of psychological well-being and adaptation. The five main domains in this model are intrapersonal skills (self-esteem, emotional self-awareness, assertiveness, independence and self-realisation), interpersonal skills (empathy, social responsibility and interpersonal relationships), adaptability (reality testing, compliancy and problem solving), stress management (stress tolerance and impulse control) and general mood (optimism and happiness) (Bar-On, 1997).

Socio-Economic Status

It is generally accepted that the family is one of the main agents of socialization that influence a person’s functioning in society (de Visser & le Roux, 1996; Fako, 1996; Mboya, 1998). It is therefore understandable that the family is considered essential in raising adolescents who are socially and emotionally well-adapted (Andrews & Morrison, 1997; Lopez & Thurman, 1993). A potent factor, therefore, affecting psychological well-being is family socioeconomic status (SES). Numerous studies demonstrate the negative consequences of low income/SES on major areas of child development such as lower academic achievement, poor physical health, and problematic behaviors/delinquency, holding race constant (Duncan & Brooks-Gunn, 2000). For instance, Felner, Brand, Dubois, Adan, Mulhall, and Evans, (2005) provide evidence that socioeconomic disadvantage affected the level of school performance/achievement and socioemotional stress for adolescence. McLoyd (1998) provides a review regarding the effect of socioeconomic disadvantage and child development. She argues that the main areas of the impacts on children’s developmental outcomes are cognitive functioning, academic achievement, and socioemotional functioning. Recently, it was confirmed again that family income was associated with the level of externalizing and internalizing problems such as disobedience, impulsivity, anxiety, depression, etc. in adolescence (Dearing, McCartney, & Taylor, 2006). This influence of poverty is longitudinal: McLeod and Shanahan (1993) show that persistent poverty had a stronger impact on children’s problems more than current poverty. Moreover, McLeod and Owens (2004) reveal that poverty history in early childhood was negatively associated with academic achievement and self-esteem in later adolescence. The influential power of SES is consistent in adulthood’s well-being. Adler and Ostrove (1999) examine the relationship between SES and the overall health of adults, in that individuals who reported higher SES had better health.

Research Questions

1. What are the relative contributions of each of the independent or explanatory variables (emotional intelligence and socio-economic status) to the prediction of psychological well-being of the hearing impaired adolescents?
2. Which of the two independent variables would predict the psychological well being of the hearing impaired adolescents?

Methodology

Research Design

This study adopted ex-post facto research design. It is a type of design that seeks to establish cause-effect relationships but the researcher usually has no control over the variables of interest and therefore cannot manipulate them. Usually, data are collected after the event or phenomenon under investigation has taken place, hence the name ex-post facto.

Population

The target population for this study consisted of all hearing impaired adolescents in Ekiti, Lagos, Ogun, Ondo, Osun and Oyo states of Nigeria. These states are in the south western part of Nigeria.

Sampling Procedure and Samples

The purposive sampling technique was used to select participants for the study. Four hundred and ninety-one (491) hearing impaired adolescents were sampled using a battery operated audiometer (as identification instrument); from Senior Secondary I to Senior
Secondary II in eight schools for the disabled in Ekiti, Lagos, Ogun, Ondo, and Oyo States of Nigeria. Osun state earlier slated for study was precluded owing to non-existence of the senior secondary school for the handicapped in the state as at the time of this research.

Instrumentation
Three validated instruments adapted were used in the study. These instruments comprised three sections – sections A to C. Section A sought Hearing Impaired Adolescents’ Socio-Demographic Scale \( (r = 0.90) \), Section B comprised items on Emotional Intelligence scale \( (r = 0.90) \) and section C, Well-being Manifestation Measure Scale \( (=0.89) \).

Procedure for Administration
The administration of the questionnaire lasted for five weeks. Participants were informed about the study and their rights regarding participation. The researcher then administered the questionnaire packet. The researcher sought the permission from the parents or sponsors, and school authorities of the participants for the administration of the questionnaire. To facilitate the administration, research assistants were trained and used for the study. Specifically, in order to resolve the problem of communication between the researcher and the participants who were hearing impaired, Sign Language Interpreters were utilized that doubled as research assistants and communication facilitator. During the period of administration of instruments in each state, the samples complained that the items on the questionnaires were too many. In order to nip this problem in the bud, students were provided with incentives to motivate and sustain their interests while completing the instruments. Also, on completing each section of the questionnaire, participants were asked to rest at intervals since their attention span was short.

Data Analysis
The data collected were analyzed using multiple regressions. Multiple regression analysis was used to determine the relative contributions of the two independent variables \( (X1———X2) \) in predicting hearing impaired adolescents’ psychological well-being \( (X3) \). The criterion variable was therefore regressed on each of the two explanatory variables \( (X1——— — X2) \).

Results

Research Question 1
What are the relative contributions of each of the independent or explanatory variables (emotional intelligence and socio-economic status) to the prediction of psychological well being of the hearing impaired adolescents?

The parameter estimate of the contributions of each of the selected variables to the prediction of psychological well being of the hearing impaired adolescents in Southwest Nigeria.

Table 1: Relative Contributions of the Two Independent Variables on Psychological Well Being of the Hearing Impaired Adolescents

<table>
<thead>
<tr>
<th>Factors</th>
<th>B</th>
<th>Std. Error</th>
<th>Beta</th>
<th>Rank</th>
<th>T</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>-37.004</td>
<td>12.483</td>
<td></td>
<td></td>
<td>-2.964</td>
<td>.003</td>
</tr>
<tr>
<td>1. Socio-economic status</td>
<td>-214</td>
<td>.199</td>
<td>.045</td>
<td>1st</td>
<td>-1.076</td>
<td>.283</td>
</tr>
<tr>
<td>2. Emotional Intelligence</td>
<td>3.188E-03</td>
<td>.049</td>
<td>.003</td>
<td>2nd</td>
<td>.065</td>
<td>.948</td>
</tr>
</tbody>
</table>

* Significant at p< .05
Table 1 reveals that the beta ($\beta$) weights of the paths (path coefficients) give the estimates of the strengths of the causation. The psycho-sociological variables were found to contribute differentially to psychological well being of the hearing impaired adolescents. Generally speaking, in terms of magnitude, socio-economic status with Beta weights ($\beta= .045; p>.05$) and emotional intelligence ($\beta=.003; p>.05$) made non-significant contributions.

**Research Question 2**

Which of the two independent variables would predict the psychological well being of the hearing impaired adolescents?

From Table 1 it could be inferred that Socio-Economic Status ($\beta= -.214; t = 1.076; p>.05$) and Emotional Intelligence ($\beta= 0.003; t = .065; p>.05$) could not predict the dependent variable.

**Discussions of Findings**

**Research Question 1**

The first research question stated what are the relative contributions of each of independent or explanatory variables to the prediction of psychological well being of the hearing impaired adolescents in Southwest Nigeria?

The two studied explanatory variables’ contributions in terms of magnitude are those made by socio-economic status ($\beta= .045; p>.05$) and emotional intelligence ($\beta=.003; p>.05$). These are also non significant contributions. The low contribution of socio-economic status to the dependent variable contradicts earlier studies (Marmot & Wilkinson, 2006; Meleod & Owens, 2004; Adler & Ostrove, 1999) which initially, lent support to harmonious relationships between socio-economic status and psychological well being. Moreover, with the abysmal contributions as evident in this study, of socio economic status on psychological well-being, it may not after all, be a major determinant of psychological well being as supported by Bakare (2010) which is explicable owing to individuation in moral, financial, emotional and psychological supports that could be gotten differentially from home environments. For instance, a home could be more supportive, permissive, inclement and strict than the other; all these, cumulatively promote or distort psychological well-being (Bakare, 2010). In furtherance to lending credence to disharmony between the two, the families with hearing impaired adolescents often progress through the family life cycle at a slower pace (Rousey et al., 2002); resulting in critical situations that may potentially obscure a healthy family environment and/or result in increased levels of stress, anger, depression, withdrawal and/or rejection (Rousey et al., 2002). Also, emotional intelligence, a psychological construct, made the least contribution to the dependent variable. Thus, studies by Bellamy, Gore and Sturgis, (2008) and Murphy, (2006) are contradictory of the findings.

**Research Question 2**

The second research question stated which of the two independent variables would predict the psychological well-being of the hearing impaired adolescents in southwest Nigeria?

It is disheartening to note that the two factors which could not predict the psychological well-being of the hearing impaired adolescents include socio-economic status and emotional intelligence. This implies that socio-economic status and emotional intelligence do not have affinities with the dependent variable to the extent of not predicting it. Thus, their disharmony is evidenced as a result of their abysmal contribution towards the psychological well-being. These, therefore failed to be in tandem with the earlier research evidences which hitherto corroborated and confirmed the harmonious relationships between the explanatory variables (socio-economic status and emotional intelligence) and the criterion variable (psychological well-being). For instance, of the two studied variables emotional intelligence made the least prediction to the dependent variable. Also, it made the least in total causal effect on adolescents’ psychological well being. Thus, studies by Bellamy, Gore and Sturgis, (2008) and Murphy, (2006) are contradictory of the findings. However, the first in the magnitude of prediction on the dependent variable was socio-economic status. Its total effect in percentage predicted by the criterion variable was also non significant prediction. The low prediction of socio-economic status to the dependent variable contradicts earlier studies (Marmot & Wilkinson, 2006; Meleod & Owens, 2004; Adler & Ostrove, 1999) which initially, lent support to harmonious relationship between socio-economic status and psychological well-being.

**Conclusion**

Variables, though, had been seen as more important than others in determining adolescents’ psychological well being in southwest Nigeria, taken cognizance of the fact that both emotional intelligence and socio-economic status being studied made non-significant predictions toward the criterion variable. But in spite of the non significant predictions of the two, socio-
economic status still thrived comparatively better to emotional intelligence.

**Limitations**

The completion of the present study is not without its challenges which were expected, especially of a study of this nature. The study was conducted in the six states (Ekiti, Lagos, Ogun, Ondo, Osun and Oyo) of Southwestern part of Nigeria; even though a state (Osun) out of these did not have the required and appropriate participants. Thus, this is one of the reasons why generalizability of this study may be limited in its scope.

The original sample size of 750 participants could not be realized. This was occasioned by the peculiar nature of the study that involved individuals with hearing impairment. This, notwithstanding, the sample used was representative enough. Lack of financial aid in the form of grant, was one of the major constraints of this study. Also, the study involved only a limited number of predictors presumed to influence psychological well being; there are other variables which could have interfered with this study.

**Recommendations**

Counselling psychologists should gather information from their clients in each of these areas (emotional intelligence and socio-economic status) so as to have a rounder vision of their clients and their social, emotional and psychological background. This is with the view to injecting intervention programmes on the aforesaid deficient areas, and to correct the associated abysmal functioning of hearing impaired adolescents’ psychological well being.

Counselling techniques may be used to help adolescents explore how and why their sources of emotional intelligence and socio-economic status are weak. Through this exploration, the counselling psychologist can help the client to broaden how they can derive, enhance and to strengthen their weak sources with the view to sustaining these factors. In doing so, one would hope that the hearing impaired adolescents’ sense of psychological well-being would increase along with the strengthening of aforementioned factors in life.

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GOVERNMENT WEBSITES IN SAUDI ARABIA: AN INVESTIGATION FROM ACTUAL USERS

Abdulrahman N. Alasem

ABSTRACT

The present paper contributes to the area of government website design and its impact on the eGovernment users. Today, the issue is not just to have a website, but how effective the site is in terms of content availability and findability. Questionnaire based-research methodology was adopted and 158 participated in answering the questionnaire. The interesting finding of the study is that all participants used well-known web-based search engines to search for government information/services. Also, no relationships were found between the way in which they searched for online government content and independent variables of age, education and Internet experience. Moreover, the website soft-technical elements were found to be very effective in using government websites in the case of Saudi Arabia. The study had developed a new model to test the impact of the two main areas of website soft-technical, which are: content and findability, and the results overall show that the weakness of these two areas has a negative impact on government websites usage in Saudi Arabia.

Key words: eGovernment, eGovernment in Saudi Arabia, website soft-technical, website design.

I. Introduction

A precise definition of eGovernment remains elusive. The reason could be linked to the fact that since the term eGovernment was established in the late 1990s, it has been developed over time from focusing only on technological aspects to be broader to covering related areas including social, political, economical and managerial. This is true because information technologies (IT) have been used in the public sector since the 1950s [1, 2]. However, the actual use of the term of eGovernment started in the late 1990s. It is believed that eGovernment is about government, people, technology and procedures communicating together to make government information and services easy to access and use over the Internet.

eGovernment for the context and the present study’s aim and objectives is defined as a collection of government digital objects that can be searched and browsed remotely over the Internet. This reflects the interactive natural of the Internet addressed by Dennis Stevenson who had added the letter C, which stands for communication, to the term of Information Technology in 1997 [3]. By doing so, eGovernment as a field has become a multidisciplinary domain and has been studied from different perspectives. This supports what has been reported in the literature that only 15% of eGovernment projects globally are successful, whereas the rest were found to be failures due to non-technology reasons [4]. In developing countries, the Arab Knowledge report published in 2009 indicated that infrastructure, cognitive and behavioural factors including: user skills, political system, and the commitment of leaders in the relevant administrations have more influence on eGovernment initiatives than ICT do [5]. Generally, by reviewing the literature, these factors can be classified under two broader terms, which are: soft-technical and non-technical barriers. The factors of non-technical barriers are concerned about the end users’ ability and beliefs, including: cultural, social, trust, skills as well as the organizational issues including: organizations’ culture, structure, support and management. On the other hand, the soft-technical barrier refers to the issues associated with websites design. This area in fact is huge, and is associated with many sub-web design disciplines, for example, usability, accessibility, information architecture and findability [6, 7 and 8].
The factor of soft-technical barriers is significant, especially in the case of Saudi Arabia, and this is because eGovernment is the first online application Saudi people would use to conduct online transaction. In many cases around the world, in particular in developed countries, the implementation of eCommerce occurred prior to the implementation of eGovernment, so they have good experience in website design, as well as content management, and this can be seen clearly in the amount of publications addressing government websites design. Also, the users in those countries have the minimum required skills to search, locate and use government online information/services as a result of their previous experience in using other Internet applications, which is not the case of Saudi Arabia. Therefore, this study aims to identify the most soft-technical barriers facing the actual eGovernment users in Saudi Arabia when using Saudi government websites.

II. Egovernment in Saudi Arabia

The eGovernment project was launched in 2005 to facilitate interactions in government agencies, between the public sector and citizens, and between the public sector and private sector. The vision of the program is that “by the end of 2010, people in Saudi Arabia will be able to use world class government services offered in a seamless, user friendly and secure way by utilizing a variety of electronic means” [9]. Since that time, many projects have been developed, and now almost all Saudi government agencies have their own website offering different kinds of one and two way communication electronic services. Moreover, many national and international reports show that Saudi Arabia has made considerable progress in developing their project. The UN report on eGovernment survey shows a significant improvement in eGovernment readiness in Saudi Arabia ranking, from 105 in 2003 to 36 in 2014 [10].

III. Literature Review

As government websites become larger and more complex, a great deal of work is needed to understand how stakeholders are searching and using online government information and services. Since the government websites became available online, many studies have been written that aim to explore how visitors interact with government websites; for example, the way in which users search, locate and use available online content, either by applying existing models or developing a new way of conducting research or by developing new search methods that serve the study’s aim and objectives. As a result, many government websites, especially in developed countries, have made good progress in meeting their users’ needs by providing a powerful search facility and browsing capabilities. Here is a review of the methods most used by researchers to study the users of eGovernment websites.

First, studying the user of eGovernment from an information behavior perspective shows that, in fact, information behavior research has quite a long history of data back to 1940s. It is concerned with the conscious effort to obtain, use and gain access to information in response to a need or gap of knowledge [11]. It is an umbrella term that has several subfields used by researchers to study how humans interact with information, including: Information Behavior (IB), Information Seeking Behavior (ISB), Information Searching Behavior (ISB), Information Use Behavior (IUB) and Human-Information Interaction (HII) which is a field of knowledge that emerged as a result of the development of Information Communication Technologies (ICT) [12, 13], to examine the psychology, social and environment variables that can affect their usage [14]. For example, Svarre and Marianne used a questionnaire and a focus group to identify current seeking behavior of eGovernment professionals in Denmark. The main finding of the study shows that employees’ experience in searching for information was unsatisfactory, and this is because of some soft-technical issues such as interpretation of the topics of documents, and irrelevant search results [15]. These problems can be solved by considering soft-technical elements, such as the use of metadata to describe online resources and the use of controlled vocabularies to tag the resources.

In the area of government websites, much attention has been given to these two tools to increase and organize the content and increase the findability. Metadata is data that describes digitized and non-digitized resources located in a distributed system in a network environment, whereas controlled vocabularies is a list of words that can take several forms, such as synonym rings, thesauri and taxonomy [16, 17]. The experience of developed countries showed that developing a standard metadata and a controlled vocabulary were at the top of their priorities. For example, the UK has developed the UK eGovernment Metadata Standard in 2001 to describe government online content with the development of a controlled vocabulary to be used in tagging metadata’s subject element. This has been done to increase findability, as well as manage online content [18], and similarly in the case of Australia, the U.S., and New Zealand. Farhan and Sanderson used a questionnaire to assess...
how Kuwaiti citizens are satisfied with their information seeking experience when using the Kuwait eGovernment portal. The result shows that a good understanding of the aim of the portal among participants was confirmed. Also, the majority believed that the portal is easy to use, as well as rich in content [19]. Yet, this study was not concerned about how easy it was to locate and use available information and services, and this is natural because this study was designed to measure how the users view the system rather than the quality of it. The limitations of using information behavior and its subfields are that it cannot measure real intentions and motivations of the users to use the system. Also, in many cases there is no link between the users’ perspective and the design elements of a website.

Second, different Technologies Acceptance Models, which were developed in the 1980s, have been adopted to find out how people come to accept and interact with technologies within the organisations’ staff, such as the Technology Acceptance Model (TAM) developed by Davis in 1986 or within consumers, such as the Unified Theory of Acceptance and Use of Technology (UTAUT) model developed by Venkatesh, Davis, Morris and Davis in 2003 [20]. This method was found to be the most used to study the users of eGovernment systems. It is mainly focused on users’ intention to use the government websites, as well as the level of satisfaction. Wangpipatwong, et al., adopted the TAM developed by Davis to understand elements that would influence citizens’ intention to use eGovernment websites in Thailand. The results of the study show that ease of use of eGovernment websites, as well as computer self-efficacy influence citizens’ continued intention to use eGovernment websites [21]. Likewise, Zafirropoulos, et al., developed a new model based on the Technology Acceptance Model (TAM), the extended TAM, and the Diffusion of Innovations (DOI) theory to describe teachers’ behavioral intensions to adopt e-Government services. The study finding reveals that cognitive and intrinsic factors have significant effects on intentions to use eGovernment websites [22]. Alshehri, et al., adopted the Unified Theory of Acceptance and Use of Technology (UTAUT) alongside a website quality factor, which refers to the quality of the website in terms of design, function, security, and information quality. The result shows that the factor of website quality significantly influences citizens adopting eGovernment services in Saudi Arabia [23]. The use of Technology Acceptance Models would help to understand the factors that lead to accept and use government websites from users’ perspective. However, it will not help to understand the soft-technical issues facing the users as it only indicates the general concept of perceived ease of use.

Therefore, based on the previous studies that focused on the users and on what has been reported in the literature in relation to government websites design, a set of seven items grouped in two axes of content and findability (figure: 1) have been developed, which aims to look in depth at soft-technical barriers from the users’ perspective. This study is not usability or web assessment study as conducting such these studies can be done by using well-known methods of usability testing including: heuristic evaluation, questionnaire based usability test, card sorting and so forth.

Soft-technical

<table>
<thead>
<tr>
<th>Content</th>
<th>Findability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliability of info</td>
<td>Use of organisations schemes</td>
</tr>
<tr>
<td>Completeness of Info</td>
<td>Search system</td>
</tr>
<tr>
<td>Relevance of info</td>
<td>Supplemental navigation tools</td>
</tr>
<tr>
<td>Updating of info</td>
<td></td>
</tr>
</tbody>
</table>

Figure 1: website soft-technical factors

Reviewing the government website design indicates that the availability and quality of content are more important than the design of the websites [24]. Content refers not only to the text format, but also video, audio, image and animations, etc. Therefore, much attention should be given to the creation of online content, taking into consideration the nature of digital content. Having good content will increase the usage of the website, as well as increase the chance of the website to be ranked among the top search engines’ results when users search using known web based search engines [25]. Lack of website content was identified as one of the main reasons for dissatisfaction among Australian eGovernment users [26].

On the other hand, findability refers to the degree of how easy it is to locate information/services either by searching or browsing [27]. It is about using available tools to make searching and browsing work perfectly. Organization schemes basically refer to categorize the content of a website, either exact or subjective organization schemes aims to facilitate access to the content [17]. On the other side, having a search system within a website is not the end of the story. It has been argued that an effective search system is more than IT. It is about how to make the search system work effectively and help the users to find what they are looking for by applying supporting tools as mentioned before, such as the use of metadata and controlled vocabularies. Finally, supplemental navigation tools refer to any sort of tools, techniques used to
support content findability, such as frequently asked questions (FAQ), sitemap and labeling system [28].

IV. Research Methodology

The main aim of the study is to identify the most soft-technical barriers facing the actual users of eGovernemnt in Saudi Arabia. A questionnaire was developed to examine the soft-technical elements listed in figure 1. The questionnaire is divided into three sections: section one is about general information about participants contains three multiple choice questions. Section two is about the experience in using the Internet and eGovernment application and contains three multiple choice questions. Section three contains one question with seven items recorded using Likert scales with end points of (1) strongly disagree to (5) strongly agree. Items were developed around the two axes of content and findability. The internal reliability of this section was examined using Cronbach’s Alpha (±) to determine the consistency of the items listed, and the statistics showed that the value was (0.645) for the four items of content and (0.688) for the three items of findability. The following table shows the two axes with their items.

<table>
<thead>
<tr>
<th>Axis</th>
<th>Item code</th>
<th>Items indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content</td>
<td>C-1</td>
<td>Reliability of information.</td>
</tr>
<tr>
<td></td>
<td>C-2</td>
<td>Completeness of information.</td>
</tr>
<tr>
<td></td>
<td>C-3</td>
<td>Relevance of information.</td>
</tr>
<tr>
<td></td>
<td>C-4</td>
<td>Updating of information.</td>
</tr>
<tr>
<td>Findability</td>
<td>F-1</td>
<td>Good use of organisations schemes.</td>
</tr>
<tr>
<td></td>
<td>F-2</td>
<td>Affective Search System.</td>
</tr>
<tr>
<td></td>
<td>F-3</td>
<td>Good use of supplemental navigation tools.</td>
</tr>
</tbody>
</table>

The questionnaire was distributed electronically using web-based questionnaire means and the data were collected August 1-20, 2014. Descriptive statistics of frequency, percentage and mean, as well as cross tabulation were investigated. Tables were used to display the findings. The following table shows the demographic characteristic of the participants.

<table>
<thead>
<tr>
<th>N</th>
<th>%</th>
</tr>
</thead>
</table>
| Gender:
| Male | 89  | 56.3% |
| Female | 69  | 43.7% |
| Age:
| 20-30 | 85  | 53.8% |
| 30-40 | 58  | 36.7% |
| Over 40 | 15  | 9.5%  |
| Education level:
| General Edu | 36  | 22.8% |
| Undergraduate | 122 | 77.2% |
| Internet experience | 158 | 100% |
V. Result and Discussion

For the purpose of the study, which was to collect data from actual eGovernemnt users, 32 completed questionnaires were excluded as they have not used any government websites. The result shows that all the participants have three years’ experience or more in using the Internet. Also, the first place they used to search for government information/services was via well-known web-based search engines. Regarding looking for information/services within a government website, the study revealed that the majority (76.6%) prefer to use the available search facility to locate what they are looking for, compared to (23.4%) who prefer to browse the website to locate the information/services they need. Regarding this, further analysis was conducted using a crosstabulation technique in order to determine whether there were any connections between independent variables of gender, age and education and the way of locating government information/services. The results revealed that there was no significant relation; for instance, out of 89 males 76 (85.3%) prefer using search facility compared to 13 (14.7%). For female participants, 45 out of 69 (65%) prefer using search facility compared to 24 (35%).

Regarding the two axes of best practices in government websites design that would encourage the public to use them, the following table shows the results:

<table>
<thead>
<tr>
<th>Measurement item</th>
<th>Strongly Disagree, n (%)</th>
<th>Disagree, n (%)</th>
<th>Natural, n (%)</th>
<th>Agree, n (%)</th>
<th>Strongly Agree, n (%)</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-1</td>
<td>1 (0.6%)</td>
<td>9 (5.7%)</td>
<td>28 (17.7%)</td>
<td>66 (41.8%)</td>
<td>54 (34.2%)</td>
<td>4.03</td>
<td>.899</td>
</tr>
<tr>
<td>C-2</td>
<td>13 (8.2%)</td>
<td>27 (17.1%)</td>
<td>51 (32.3%)</td>
<td>42 (26.6%)</td>
<td>25 (15.8%)</td>
<td>3.25</td>
<td>1.160</td>
</tr>
<tr>
<td>C-3</td>
<td>40 (25.3%)</td>
<td>18 (11.4%)</td>
<td>16 (10.1%)</td>
<td>52 (32.9%)</td>
<td>32 (20.3%)</td>
<td>3.11</td>
<td>1.506</td>
</tr>
<tr>
<td>C-4</td>
<td>30 (19%)</td>
<td>43 (27.2%)</td>
<td>40 (8.2%)</td>
<td>31 (25.3%)</td>
<td>14 (8.2%)</td>
<td>2.72</td>
<td>1.231</td>
</tr>
<tr>
<td>F-1</td>
<td>38 (24.1%)</td>
<td>63 (39.9%)</td>
<td>26 (16.5%)</td>
<td>16 (10.1%)</td>
<td>15 (9.5%)</td>
<td>2.41</td>
<td>1.227</td>
</tr>
<tr>
<td>F-2</td>
<td>35 (22.2%)</td>
<td>56 (35.4%)</td>
<td>42 (26.6%)</td>
<td>19 (12%)</td>
<td>6 (3.8%)</td>
<td>2.40</td>
<td>1.076</td>
</tr>
<tr>
<td>F-3</td>
<td>25 (15.8%)</td>
<td>43 (27.2%)</td>
<td>35 (22.2%)</td>
<td>38 (24.1%)</td>
<td>17 (10.8%)</td>
<td>2.87</td>
<td>1.252</td>
</tr>
</tbody>
</table>

The above table shows the results of analyzing the main section of the questionnaire, which was to understand the actual eGovernemnt users regarding the website’s soft-technical elements in order to identify which areas need to be improved. Overall, the result was dissatisfaction. The mean value for the four items indicator of the content was 3.28: 4.03, 3.25, 3.11 and 2.72 for reliability of information, completeness of information, relevance of information and updating of information, respectively. Although few studies have addressed the lack of content within Saudi government websites [29, 30] none of them looked for the content with its sub-elements as in this study. Here, content updating remains the weakness indicator among the content indicators. Regarding findability axes the result in general was disappointing; the mean value for the three findability indicators was 2.56: 2.41, 240 and 2.87 for good use of organization schemes, effective search system and good use of supplemental navigation tools, respectively. Again, several studies have examined the Saudi government websites in the last few years, yet the majority just considers the front-function of the websites, such as aesthetic appearance, not the back-function, including the use of metadata, controlled vocabularies and content management tools (Eidaroos, 2007). The use of some kinds of organizations schemes would help to increase findability, and in some cases there is no need for search systems to be available, in particular if the website is small. An effective organization scheme can be a better alternative. Similarly, there are different kinds of search systems software available, yet having a search system without considering related issues such as which pages to be searchable or how to present the results. It is believed that no search system is better than an ineffective search system. Finally, the use of supplemental navigation tools can be another way to increase findability; it should be understood that some supplemental navigation tools are needed, not only to increase the findability within a website, but also to increase the findability with web-based search engines, such as the sitemap. Also, having a list of most asked questions and their answers is very useful and can save the time of users, as well as the providers. Without any doubt, the weakness in these two components had a negative impact on the actual users of Saudi government websites; 48% revealed that they do not rely on government websites to get the information they need, 24% would prefer to visit a government agency.
for more information, and the rest, 28%, use their relatives to find more about the information they need. For more information, and the rest, 28%, use their personal relationship to find more about the information they need.

**VI. Conclusion**

eGovernment websites are the front door of any eGovernment project, thus much attention has been given to government websites design in developed countries. This paper focuses on the website content and findability from the point of view of actual users of government websites in Saudi Arabia, and the results in general were disappointing. The literature of studying the users of eGovernment still needs to be developed, and the study has suggested a starting point to develop a new model focusing on the website soft-technical. This model should include all related areas of these two components and be used with actual users rather than those who intend to use the government websites.

**VII. Acknowledgement**

I would like to thank King Abdulaziz City for Science and Technology (KACST) for the generous grant extended for this project.

**VIII. References**


MEASURING ECONOMIC CAPITAL FOR OPERATIONAL RISK UNDER SOLVENCY II: APPLYING THE LOSS DISTRIBUTION APPROACH

Maha Kacem
François Pannequin
Nejib Hachicha

ABSTRACT

Following Solvency II relevant regulation, insurance companies have been requested are to develop their proper measuring method of operational risk Capital. In this respect, the present paper undertake to study the Operational Risk advanced measurement approach within the capital-reduction context regarding a diversity of multiple operational risk settings: clients, products, and business practice; business disruption and system failures; execution, delivery, and process management; external fraud. Indeed, our aim behind such a work lies in to exploring the Loss Distribution Approach (LDA) as an actuarial method whereby to model the loss distribution for the purpose of computing the insurance companies’ capital charge.

In this regard, the present paper is intended to provide certain analytic solutions pertaining to the distribution of the loss and claims distribution processes in an LDA based structure under Solvency II. Noteworthy, the achieved results show that the Loss-Distribution Approach has turned out to fit more appropriately yielded than the Standard Approach. In fact, applying the LDA method contributes highly in satisfying the operational risk control requirement and ensuring efficiency of the necessary funds.

Keywords: Operational risk, Loss Distribution Approach, Insurance, Solvency II.

I. Introduction

It is worth highlighting that both insurance agencies as well as financial institutions are under obligation to apply a continued analysis for the sake of determining their risk profile and quantifying their exposure to different risk factors and potential loss events. It is, actually, according to the conducted analyses results that they implement risk management policies and control mechanisms (Chapelle, Grama, Hubner (2008)). Besides, these institutions are required, by regulation, to hold a certain amount of capital so as to meet their obligations, insure themselves against potential loss events and secure their financial systems’ viability and stability (Alexander (2007)). In this respect, financial risks can be classified according to their origin. Actually, three risk types are identified in the relevant regulation namely market, credit and operational risks. In this regard, the CEIOPS has defined operational risk as “the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events”. Noteworthy, however, the market and credit-risk analysis procedures are fairly well-established and the operational risk-modeling strategy is still subject to a number of uncertainties.

Hence, referring to Panjer and Wiseman elaborated work (Loss Models From Data to Decisions (1998))
as well as that of Frachot, Georges and Roncalli (Loss Distribution Approach for operational risk (2001)), we consider dealing with the four steps relevant to the Loss Distribution Approach (LDA) as part of the present work, namely: Estimating the severity distribution, The frequency distribution estimate, Constructing the annual-loss distribution and Calculating the capital at risk (CaR or VaR).

As a measure, the VaR approach has often been criticized for not being subadditive, thus violating the coherency axioms (see Artzner, Delbaen, & Heath, 1999), and, alternatively, some coherent risk measures, such as the expected shortfall, have been proposed.

II. The Loss Distribution Approach

This paper is dedicated to highlight the operational-risk modeling methodology. More precisely, an insurance database has been applied in a bid to show how the LDA method can be applied and the threshold collection problem be managed. We will also provide a demonstration on how the extreme-value theory can be undertaken to model extreme losses.

It is worth recalling that an insurance historical background has been objective as part of the French insurance history for more than four years (from 2006 to 2009). The company reported loss has been followed up since the first euro in order to model its frequency with a considerable accuracy.

The pertinent database includes the following variables: the loss number, the loss trigger start (date on which the loss occurred), the loss end (loss closing date), the loss impairment (loss reporting date), risk category (benchmark level 1) and actual losses (loss amount paid). The amounts are expressed in Euros.

1. Definition of the Loss Distribution Approach method

A major innovation brought about by solvency II with respect to insurance companies lies in the obligation of mobilizing a portion of their own funds for the take of avoiding exposure to operational risk. To calculate this amount of capital (CaR), the regulator suggests two approaches: a standard approach along with an advanced one. While the former is simplified and calculated as a percentage of premiums or dispositions, the latter is an internal model whereby the risk is really linked to the company actual state.

The Committee of European Insurance and Occupational Pensions Supervisors (CEIOPS) encourages companies to opt for the internal model. Indeed, the standard approach consumes a great deal of equity capital as has been the case with the Quantitative Impact Studies (QIS5). Thus, the CEIOPS proposes an approach that distinguishes frequency risks from gravity ones.

Frequency risks are defined as the potential loss amounts that are not necessarily high but frequent; they are modeled by the Loss Distribution Approach (LDA).

To note, the Loss Distribution Approach consists in adjusting the statistical laws to the loss data. Above all, it undertakes to model the operational incidents’ frequency and their severity which will be combined in such away as to obtain the total-loss distribution. In fact, insurers have long used this approach to model the total amount of claims within the framework of pricing, provisioning, and reinsurance optimization. The essential condition in applying this method consists in historical loss data availability as a prerequisite to calibrate the model.

As a first step, one has to select and calibrate the frequency and severity laws. Thus, it will be possible to obtain a good approximation of the loss-distribution allocation function $S_k$ using the Monte Carlo simulation method.

So the loss distribution modeling procedure relevant to each risk $k$ will look as follows:

$$S_k = \sum_{j=1}^{N_k} X_k^j$$

Where: $N_k$ is the random variable representing the number of risk pertaining losses.

$X_k^j$ is the random variable representing loss $j$ cost with respect to risk $k$,

$s_k$ stands for risk $k$ losses’ sum

2. Definition of Capital at Risk

The Capital-at-Risk is the capital share intended to preserve the financial institution and protect it against insolvency in case of exceptional losses. Whatever the approach used, the measurement of operational risk must nevertheless correspond to a holding period of one year and a confidence level of 99.9. The aim lying behind resorting to this method consists in calculating the Capital at Risk in respect of operational risk in regard of the French insurance company.

The capital charge CaR (VaR) of $\alpha$ level is obtained following the distribution of the annual loss by calculating its alpha quantile at the $\alpha$ level:

$$\text{VaR} (\alpha) = \inf \{ \alpha | F(\alpha \geq \alpha) \} = F^{-1} (\alpha)$$
With $\mathcal{F}(x) = \begin{cases} \sum_{j=1}^{\infty} p(j)H^n(x) & \text{for } x > 0 \\ p(0) & \text{for } x = 0 \end{cases}$

Figure 1 provides an idea of distributions achieved at different stages of the model for a given risk category, and the resulting $\alpha$-based capital at risk.

With respect to every risk category, this calculation is performed via Monte Carlo simulations so as to obtain the empirical aggregate annual distribution and to take the $\alpha$ level quantile set at 99.9% under the pillar 1 capital requirement.

An aggregation is then performed to calculate the operational risk total CaR, more specifically, to cater for the correlations prevailing among the relevant categories. This will make subject of the thesis ultimate section.

3. The LDA method hypothesis

It is worth highlighting that the LDA method is based on the assumption that the individual cost variables are independent and identically distributed, i.e. each loss occurs regardless of the previous ones and respects the same rule. Moreover, this method assumes that frequency and cost are independent. Before using the data, it seems reasonable to check that the “iid” hypothesis is not roughly wrong. For such a goal, we can either just visually check the results of individual costs-results or use statistical tests. Outing to the fact that independence tests between frequency and
individual cost are not very robust due to the small number of annual observations, we consider it necessary to go back to the monthly frequency observations and the claims average cost.

Noteworthy, however, through this data base shows the risk class at a single level, it does not provide any detail of its different sub-categories. This will imply some heterogeneity in our data. The ideal scenario would be to have a finer level to model homogeneous risks. All the level 1 risks types do not appear in this database. In fact, there are only 4 among the 7 risks of solvency II benchmark, do figure, namely: customer risk, activity and system disfunction, process management risk and external fraud risk. Risks have also been broken down by business line for the sake of being in order to uniformly modeled. Here again, we have no information is provided at this level.

This study was conducted using the R software packages “vcd” for classical LDA, “truncgof” for LDA with threshold collection, “evir” for the extreme values theory and “copula” for the copulas.

III. Operational Risk Diversification and Aggregation: Economic Capital Determination

1. Data descriptive statistics

It is worth noting in this respect that the amount of relevant to each risk type is very variable. Indeed, as shown by Table 3-1, only 28 events of external fraud have been registered over a four-year period, while 487 process type events have been recorded. As for the average loss per event, one might well note that the highest averages are related to the kind of customers, products, business practices and system risk. In fact, these losses are most often due to legal proceeding suits by customers, which can attain a very high level. Noteworthy, however, another type of risk classified and characterized as a low-frequency and high impact hazard does also prevail. Indeed, such losses are usually due to prosecutions made respectively by customers and employees. Should the data be considered in their entirety, the average loss process turns out to reach the order of 2,494€. Thus, it can be noticed that the risk process is generally characterized with a high frequency and low severity, unlike the client risk in which the number of losses attains just 45, while the average cost amounts to 30,266€. This confirms well the fact that the amounts of losses by risk type have different characteristics, justifying the breakdown by type of risk.

Noteworthy, also, one can observe that the data losses are far from presenting a symmetrical distribution. Indeed, a simple comparison between the mean and median indicates that with respect to the entirety of case, the median proves to be much lower than the mean, thus highlighting asymmetrical distributions. This finding can be confirmed by calculating the skewness coefficient which appears to be positive with respect to all cases, promoting thicker tails. In addition, certain very high kurtosis coefficients do prevail, indicating the persistence of leptokurtic distribution with thick tails. One can also quote the process risk example where the kurtosis is of an order of 437 and the skewness coefficient is measured at 20.

Unlike the market risk, regarding which one might well accept to assume that variations in rates and prices are normal, operational losses may by no means be modeled by normal distributions, as indicated by these statistics. Hence, trying other more flexible distributions seems rather imposed in this respect.

<table>
<thead>
<tr>
<th></th>
<th>Client risk</th>
<th>Process Risk</th>
<th>Systemic risk</th>
<th>Risk of external fraud</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>1st quartile</td>
<td>71</td>
<td>32</td>
<td>29.5</td>
<td>965</td>
</tr>
<tr>
<td>Median</td>
<td>673</td>
<td>191</td>
<td>305</td>
<td>1520</td>
</tr>
<tr>
<td>3rd quartile</td>
<td>3455</td>
<td>861</td>
<td>612.5</td>
<td>2632</td>
</tr>
<tr>
<td>Maximum</td>
<td>1000000</td>
<td>576620</td>
<td>261223</td>
<td>27852</td>
</tr>
<tr>
<td>Average</td>
<td>30266</td>
<td>2494.28</td>
<td>9781.9</td>
<td>2642</td>
</tr>
<tr>
<td>Standard deviation</td>
<td>149220.6</td>
<td>26783.11</td>
<td>45187.27</td>
<td>5131.6</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>43.25</td>
<td>437.66</td>
<td>30.45</td>
<td>23.61</td>
</tr>
<tr>
<td>Skewness</td>
<td>6.52</td>
<td>20.54</td>
<td>5.43</td>
<td>4.69</td>
</tr>
<tr>
<td>Total losses</td>
<td>42</td>
<td>487</td>
<td>35</td>
<td>28</td>
</tr>
<tr>
<td>Jarque-Bera</td>
<td>3826.28</td>
<td>3921117.4</td>
<td>1524.4</td>
<td>753.17</td>
</tr>
</tbody>
</table>
Table 1 shows the descriptive statistics of frequency losses by type of risk per year and month. As might be noted, the highest average of 30,266€ is the risk threshold corresponding to customers with an average frequency of 10 annual losses. Yet, the risk process lowest average loss is of the order of 2,494€ with an average frequency of more than 121 annual losses. Thus, the risk process turns out to be a high frequency and low severity one.

This confirms that the risk type loss amounts have different characteristics justifying appropriate risk modeling type. Indeed, risk type would subdivide modelization into certain categories.

As shown by these statistics, operational losses cannot be modeled by normal distributions and should be able to test other distributions more appropriately.

Thus, our focus of interest is centered frequencies per month. Our choice of a monthly-basis period can be justified by the intention to have more possible observations as regard, the four-year history. Indeed, it is important to have a large amount of data for robust distribution estimates. One might well note that the monthly average frequency appears to be less than a single event for all risk types except for the management performance and delivery processes, in which the number of losses appears to be quite important. Noteworthy, also, the maximum monthly frequency relating to this type of risk is 212. Besides, a comparison between the means and variances shows that the variance appears to exceed the average with respect to all risk types. This observation leads to the belief that a distribution favoring the over-dispersion frequency models turns out to be more appropriate and fit than the Poisson distribution.

**Table 2: Descriptive statistics of annual and monthly frequency losses occurrence by risk type over a four year period**

<table>
<thead>
<tr>
<th></th>
<th>Client risk</th>
<th>Process Risk</th>
<th>Systemic risk</th>
<th>Risk of external fraud</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Average / year</strong></td>
<td>10.5</td>
<td>121.75</td>
<td>8.75</td>
<td>7</td>
</tr>
<tr>
<td><strong>Average / month</strong></td>
<td>0,875</td>
<td>10,146</td>
<td>0,729</td>
<td>0,583</td>
</tr>
<tr>
<td><strong>Median / year</strong></td>
<td>10</td>
<td>115</td>
<td>7,5</td>
<td>6,5</td>
</tr>
<tr>
<td><strong>Median / month</strong></td>
<td>1</td>
<td>8</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Variance / year</strong></td>
<td>35.67</td>
<td>4 858,92</td>
<td>27.58</td>
<td>8.67</td>
</tr>
<tr>
<td><strong>Variance / month</strong></td>
<td>1.133</td>
<td>51.957</td>
<td>1.095</td>
<td>1.014</td>
</tr>
<tr>
<td><strong>Minimum / year</strong></td>
<td>4</td>
<td>45</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td><strong>Minimum / month</strong></td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Maximum / year</strong></td>
<td>43.25</td>
<td>437.66</td>
<td>30.45</td>
<td>23.61</td>
</tr>
<tr>
<td><strong>Maximum / month</strong></td>
<td>18</td>
<td>212</td>
<td>16</td>
<td>11</td>
</tr>
</tbody>
</table>

2. **Assessing the severity distribution**

The first step in implementing the LDA method for the capital calculation consists in retrieving the parametric distributions that best fit the loss amounts’ historical data. In fact, the distribution parameters unbiased estimation will greatly affect the operating capital pertinent results. In this section, we will explore several distribution-estimation methods will be explored such a way as to reach a better fit adjustment of the entire historical data.

Prior to that, we undertake to conduct the distribution assessment on the basis of data losses in their entirety. Noteworthy, however, once the implemented adjustment tests appear to reject these distributions, adopting another method would seem a necessary prerequisite. In such a case, it would be possible to cut the distribution, if the sample size allows and, therefore, adjust an appropriate distribution pertaining to each part of the empirical distribution.

Worth highlighting, also, the loss behavior and data size, already considered for the severity distributions’ adjustment method selection, should underline the critical importance of the data gathering process. Indeed, with respect to operational risk, most financial institutions have opted for choosing a loss level whereby the operational risks can be gathered, a level which varies from an insurance company to another. Actually, most French insurance companies have fixed this level around the threshold of 10000 Euros. As a matter of fact, having truncated data is likely to alter the
usually-pursued estimation method. As a result, this threshold should remain into consideration throughout the estimation parameter.

To note, several methods have been proposed in literature dedicated to estimate the relevant parameters. Most common among them, one might well recall the Maximum Likelihood Estimation (MLE) as well as the Generalized Method of Moment (GMM) among others. Noteworthy, however, the second method turnout to be difficult to apply and fit to the truncated data case, owing to the fact that identifying the truncated distribution moments is discovered to be more intricate in respect of the distribution parameters estimation in which data are not truncated. Yet, it is still possible to estimate the surplus-loss related distribution parameters in respect of the data collecting threshold (Dutta and Perry, 2006). Actually, such a procedure would certainly lead us to the usual distribution parameters estimation but ignores the losses below the collection threshold as the distribution has not been taken into account. Consequently, surplus losses could not by any means be generated via the selected distribution. Indeed, this method underlies a problem of capital overestimation or underestimation especially in those cases where the threshold is quite high and the volume of small losses is important. Hence, a correction of this bias seems imposed should this method be applied.

Thus, the present work is structured into three major stages; the first of which is dedicated to identify the distributions to be tested. Then, we undertake to describe the different estimation methods depending on the nature of data. Finally, every risk type estimation results will be presented along with those pertaining to the four tested distributions.

**a. Tested distributions**

For the sake of achieving a convenient empirical distribution adjustment by means of parameters, it appears necessary for us to test several distributions among which the most appropriate would be selected. For this purpose, we consider being limited inclusively to the exponential, the lognormal and the Weibull distributions, respectively.

Furthermore, in certain particular cases, we suggest undertaking the Pareto distribution of tail estimation, whose density function $f$ of parameter $\alpha > 0$ provided by the following expression:

$$f(x, \alpha) = \frac{\alpha}{x^{\alpha+1}} \text{ for } x \geq 1$$

and cumulative function is given as follows:

$$F(x, \alpha) = 1 - \frac{1}{x^\alpha} \text{ for } x \geq 1$$

It is also worth noting that the density function decreases for any $\alpha \geq 1$, and that, this decrease proves to be more rapid whenever $\alpha$ tends to increases. In fact, applying such a function is suitable for modeling asymmetric heavy-tailed distributions. Moreover, the mean, variance along with other moments are finite only for quite high values of parameter $\alpha$. Pareto can be generalized by introducing a scale parameter $\beta$. Let us assume that $Z$ follows a Pareto distribution of parameter $\alpha$, the random variable $X = \beta Z$ follows a Pareto distribution of shape parameter of $\alpha$ and a scaling parameter of $\alpha$. The density functions $f$ and $F$ are distributed as follows:

$$f(x, \alpha, \beta) = \frac{\alpha \beta^\alpha}{x^{\alpha+1}} \text{ for } x \geq \beta$$

$$F(z, \alpha, \beta) = 1 - \left(\frac{\beta}{x}\right)^\alpha \text{ for } x \geq \beta$$

**b. Modeling the data set**

As already described, the collection of operational losses is generally implemented starting from cases higher than a certain threshold. To account for the non-collected losses, a conditional parameters’ estimation is applied where losses higher than the collection are exclusively observed. $s$: threshold of data gathering, $y$: the observed amounts of losses, with $y \geq s$, $n$: the amount of gathered losses, $D$: a continuous severity distribution of which parameters are defined by vector.

The density function corresponding to the conditional distribution $D$ where only $y$ exceeding threshold $s$ cases are considered is written as follows:

$$f(y, \theta / y \geq s) = \frac{f(y, \theta)}{1 - F(s, \theta)} \text{ for } y \geq s$$

The retained method corresponding to the parameters’ estimation is the maximum likelihood optimization which is easier to implement with regard to this case.
than the other methods seeing the fact that distributions are truncated. The optimal solution $\theta_{\text{MLE}}$ solves:

$$\theta_{\text{MLE}} = \arg \max_{\theta} L(y_i, \theta) = \max_{\theta} \left( \sum_{i=1}^{n} \log f(y_i, \theta) - n \log(1 - F(s, \theta)) \right)$$

With $L(y_i, \theta) = \sum_{i=1}^{n} \log \left[ f(y_i, \theta / y_i \geq s) \right] = \sum_{i=1}^{n} \log \left[ f(y_i, \theta) \right] - n \log(1 - F(s, \theta)) = \sum_{i=1}^{n} \log \left( f(y_i, \theta) \right) - n \log(1 - F(s, \theta))$

###c. Distribution assessment

In the relevant literature, several articles have dealt with the issue of distribution tails’ adjustment mainly through an extreme value theory perspective. Nevertheless, adjusting only the distribution tail implies a neglect of the distribution body, which should be included while calculating the capital and might well have a significant impact. Noteworthy, however, there is not one single and unique distribution cutting available; what really matters is to meeting a convenient adjustment.

In what follows, a special modeling of the empirical distributions’ tails is proposed. Several $s_q$ loss thresholds have been selected in advance, which correspond to different high quantiles (0.75, 0.8, 0.85 ...). Then, the Pareto distribution parameter is estimated for each sample of losses above the different thresholds. Finally, the threshold is considered for which Pareto provides a better adjustment and, thereafter, the distribution whereby the adjustment test p-value proves to be the highest.

In fact, high quantiles have been chosen so that exclusively tail-related adjustments would be retained. Yet, it is important to keep a sufficient number of observations for the estimation to be implemented. We believe that a minimum of 48 observations need be retained for each single parameter of a form of Pareto law to be estimated for each type of risk.

Suppose that:

- $s_q$: the loss threshold corresponding to quantile $q$; this threshold corresponds to the scale parameter of generalized Pareto. Indeed, we will consider the scale parameter whenever it is equal to threshold $s_q$, and we estimate the unique parameter $\alpha$.
- $z$: the loss amounts above threshold $s_q$.
- $n_q$: The number of observations $z$ in the sample defined by $(z_i / z_i \geq s_q, i = 1, 2 ... n_q)$.

**P:** The Pareto distribution to be tested

So, the $P$ distribution density function is thus:

$$f(z, \alpha, s_q) = \frac{as_q^\alpha}{z^{\alpha+1}} \quad \text{with} \quad z \geq s_q$$

Concerning maximum likelihood, it is to find $\alpha$ parameter which maximizes the following function for the various thresholds $s_q$:

$$\alpha_{\text{MLE}} = \arg \max_{\alpha} \sum_{i=1}^{n_q} \log \left( f(x_i, \alpha / s_q) \right)$$

$$\alpha_{\text{MLE}} = \frac{n_q}{\sum_{i=1}^{n_q} \log \left( x_i / s_q \right)}$$

We, therefore, proceed by estimating parameter corresponding to each threshold $s_q$ and this with regard to for each of the three risk types mentioned earlier. In this context, the adjustment tests would help us choose the appropriate threshold likely to make us reach the best tail adjustment.

Once the distribution tail is modeled, it would seem necessary to estimate the distribution that best fits its body represented by all or a part of the losses sited below the previously selected quantile threshold, and then resume multiple exponential, log-normal and Weibull distributions regarding the entire loss sample. Let:

- $s$: the collection threshold
- $s_q$: the selected loss tail threshold corresponding to quantile $q$
- $z'$: the loss amounts below threshold $s_q$
- $n_q'$: the number of $z'$ observations: it is the number of $f \left( z / s \leq z' < s_q, i = 1, 2 ... n_q \right)$
- $D$: the distribution to be tested

The density function $f$ corresponding to the loss distribution ranging between threshold $s$ and the selected tail threshold $s_q$ is the following:

$$f(z', \theta / s \leq z' \leq s_q) = \frac{f(z', \theta)}{F(s_q, \theta) - F(s, \theta)}$$

The cumulative function of the loss distribution $D$ ranging between threshold $s$ and the selected tail threshold $s_q$ is written as:
The parameter-estimation results relevant to the three considered distributions are depicted in Table 1-1. It is important that each model validity should be tested through the graphic as well as formal tests such as the above-defined KS test.

Informal tests are presented in graphs 2-1, 2-2, 2-3 for the respective data adjustment pertaining to the exponential, lognormal and Weibull distributions. Based on these graphs, one might well note that the exponential distribution is discovered to be adjusted to the empirical one. Visually, plots of quantiles appear to be non linear and far away from the straight line by 45 degrees. In addition, the distributions of the empirical and parametric distributions are not close to each other. At this level, the hypothesis good adjustment hypothesis relevant to of these data distributions seems to be rejected.

Visually, parametric distributions do not adjust well to the empirical distributions’ tail while the related graphics seem to be more linear in the case of lognormal and Weibull distributions. Indeed, we note that the curve deviates at a 45 degree angle from the straight when losses turn out to be greater than 50,000 Euros. It is important to validate these findings through formal tests based robust statistics calculation. Therefore, graphic tests appear to give an overview of the adjustments quality which need to be supported by the KS test.

Concerning the KS pertaining test results, they are presented in Tables 3, 4, 5, 6. The value of the p-value will stand as the model acceptability and selection criterion. Indeed, the higher p-value is (exceeding the threshold of 5% confidence), the better adjustment will be.

Actually, the estimated distributions results, presented in tables 1.1 and 3.1 for the customer risk and system risk, show that the Lognormal and Weibull distributions do appropriately suit set our data. Noteworthy, however, the system risk relevant to the Lognormal and Weibull distributions appear to undergo the Kolmogorov-Smirnov test but not the Anderson-Darling. As a matter of fact, we particularly turn to apply the Log-normal distribution as a severity law pertaining to these risks.

The estimated distributions results, presented in tables 2.1 and 4.1 regarding process risks types and external fraud, show that only the Lognormal and Weibull distributions do actually undergo the test at a 5% threshold. Noteworthy, also, and concerning the external fraud risk, only the Kolmogorov-Smirnov seems to undergo the tests. More particularly, the Weibull distribution is used as the severity law pertaining to these risks.

\[
F(z', \theta / s \leq z' < s_q) = \frac{F(z', \theta) - F(s, \theta)}{F(s_q, \theta) - F(s, \theta)}
\]  

Concerning the maximum likelihood, it consists in finding the \( \theta \) parameters likely to maximize the following function:

\[
\theta_{MLE} = \arg_{\theta} \max L(z', \theta)
\]

where:

\[
L(z', \theta) = \sum_{i=1}^{n} \log f(z', \theta / s \leq z' < s_q)
\]

\[
= \sum_{i=1}^{n} \log \left[ \frac{f(z', \theta)}{F(s_q, \theta) - F(s, \theta)} \right]
\]

\[
= \sum_{i=1}^{n} \log \left( f(z', \theta) \right) - n' \log \left( F(s_q, \theta) - F(s, \theta) \right)
\]

d. Good adjustment tests

It is worth noting that any positive-definition domain related parametric distribution might well be estimated. Nevertheless, only a few distributions may be discovered to provide a good adjustment. In this respects, one might well assess the distributions’ adjustment degree through graphic methods and formal tests. In this context, several formal tests have been developed in literature such as the Chi-squared, Anderson Darling, Kolmogorov-Smirnov, etc. as well as graphical tests such as the (QQ plot) quantile graph or the cumulative function graph versus the empirical one.

Actually, we have initially applied these graphical tests for the sake of getting a preliminary idea about the adjustment level. Such tests’ results should be confirmed by formal tests based on the calculation of a statistic. Yet, should the graphs demonstrate well that the empirical distribution from can by no means be extracted derived from the tested parametric distribution, it would therefore turnout that formal tests would unlikely yield different results.

In a next stage, we turn to implement the Kolmogorov-Smirnov and Anderson tests.

e. The parameters estimation results

The estimated distributions results relevant to the three considered distributions are depicted in Table 1-1. It is important that each model validity should be tested through the graphic as well as formal tests such as the above-defined KS test.
Table 3: The estimation results relevant to 3 parametric distributions tested by type of risks

<table>
<thead>
<tr>
<th></th>
<th>Exponential distribution</th>
<th>Log normal distribution</th>
<th>Weibull distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>customer risk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parameters</td>
<td>Rate = 0,000034</td>
<td>Meanlog = 5,946</td>
<td>Scale = 1727,41</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sdlog = 3,126</td>
<td>Shape = 0,315</td>
</tr>
<tr>
<td>Kolmogorov-Smirnov test</td>
<td>KS = 1</td>
<td>KS = 0,087</td>
<td>KS = 0,116</td>
</tr>
<tr>
<td></td>
<td>p-value &lt; 2,2e-16</td>
<td>p-value = 0,907</td>
<td>p-value = 0,623</td>
</tr>
<tr>
<td>Anderson-Darling test</td>
<td>AD = Inf</td>
<td>AD = 0,280</td>
<td>AD = 0,656</td>
</tr>
<tr>
<td></td>
<td>p-value = 1,429e-05</td>
<td>p-value = 0,952</td>
<td>p-value = 0,596</td>
</tr>
<tr>
<td>process risk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parameters</td>
<td>Rate = 0,0004</td>
<td>Meanlog = 5,019</td>
<td>Scale = 482,505</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sdlog = 2,432</td>
<td>Shape = 0,435</td>
</tr>
<tr>
<td>Kolmogorov-Smirnov test</td>
<td>KS = 0,969</td>
<td>KS = 0,059</td>
<td>KS = 0,041</td>
</tr>
<tr>
<td></td>
<td>p-value &lt; 2,2e-16</td>
<td>p-value = 0,068</td>
<td>p-value = 0,397</td>
</tr>
<tr>
<td>Anderson-Darling test</td>
<td>AD = Inf</td>
<td>AD = 1,984</td>
<td>AD = 2,037</td>
</tr>
<tr>
<td></td>
<td>p-value = 1,232e-06</td>
<td>p-value = 0,094</td>
<td>p-value = 0,088</td>
</tr>
<tr>
<td>system risk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parameters</td>
<td>Rate = 0,0001</td>
<td>Meanlog = 5,055</td>
<td>Scale = 569,214</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sdlog = 2,665</td>
<td>Shape = 0,336</td>
</tr>
<tr>
<td>Kolmogorov-Smirnov test</td>
<td>KS = 0,971</td>
<td>KS = 0,140</td>
<td>KS = 0,183</td>
</tr>
<tr>
<td></td>
<td>p-value &lt; 2,2e-16</td>
<td>p-value = 0,497</td>
<td>p-value = 0,190</td>
</tr>
<tr>
<td>Anderson-Darling test</td>
<td>AD = Inf</td>
<td>AD = 2,603</td>
<td>AD = 13,583</td>
</tr>
<tr>
<td></td>
<td>p-value = 1,232e-06</td>
<td>p-value = 0,044</td>
<td>p-value = 1,232e-06</td>
</tr>
<tr>
<td>external fraud risk</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parameters</td>
<td>Rate = 0,00038</td>
<td>Meanlog = 6,661</td>
<td>Scale = 2 130,157</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sdlog = 2,065</td>
<td>Shape = 0,661</td>
</tr>
<tr>
<td>Kolmogorov-Smirnov test</td>
<td>KS = 1</td>
<td>KS = 0,297</td>
<td>KS = 0,208</td>
</tr>
<tr>
<td></td>
<td>p-value &lt; 2,2e-16</td>
<td>p-value = 0,014</td>
<td>p-value = 0,1757</td>
</tr>
<tr>
<td>Anderson-Darling test</td>
<td>AD = Inf</td>
<td>AD = 131,4956</td>
<td>AD = Inf</td>
</tr>
<tr>
<td></td>
<td>p-value = 1,232e-06</td>
<td>p-value = 1,232e-06</td>
<td>p-value = 1,232e-06</td>
</tr>
</tbody>
</table>

Table 4: The retained severity laws

<table>
<thead>
<tr>
<th>The law retained for the frequency</th>
<th>Customer risk</th>
<th>Process risk</th>
<th>System risk</th>
<th>External fraud risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>LN (3,29 ; 3,92)</td>
<td>W (0,25 ; 17,6)</td>
<td>W (0,14 ; 0,006)</td>
<td>LN (2 ; 2)</td>
<td></td>
</tr>
</tbody>
</table>
4. Estimated frequency distribution

At this work junction, the targeted aim consists in modeling the operational losses number over a given period. Actually, as indicated above, the operational VaR highly depends on the losses’ severity and frequency. Actually, a good frequency-distribution estimation, would certainly lead to a better estimation of the operating capital.

In what follows, two distributions are put forward, while testing the adjustment level pertaining to for each of them. To note, the Poisson and Negative Binomial distributions are submitted in a bid to estimate the number of operational losses. Let $Y$ be a positive discrete random variable:

- $Y \sim \text{Poisson}(\lambda)$ hence $P(Y = y_i) = \frac{e^{-\lambda} \lambda^y}{y_i!}$ (11)
- $Y \sim \text{Negative binomial}(\alpha, \beta)$ hence $p(Y = y_i) = \frac{\Gamma(\alpha + y_i) \beta^\alpha}{\Gamma(\alpha) y_i! (1 + \beta)} \left( \frac{1}{1 + \beta} \right)^\alpha$

Then, we turn to estimate both distributions pertinent parameters by means of maximum likelihood, with respect to the four risk types.

It is worth recalling that regarding some risk types, of risks, losses can only be collected from a certain threshold. Actually, this truncation level has been considered while estimating the severity distribution and the same procedure has to be applied with frequency modeling. It is worth noting, however, that, at this level, we are not dealing with truncated frequency distributions. Indeed, we have the number of losses exceeding the data gathering threshold. Hence, the estimated parameters should be adjusted in such a way as to reflect the number of losses below the truncation.

a. Parameters adjusting

i. Poisson distribution

Regarding the Poisson distribution, parameter $\lambda$, adjustment has already been proposed by Frachot et al. (2003), to account for the number of uncollected operating losses. We undertake to explore the case where parameter $\lambda$ is a random one.

Let:
- $y_{obs}$ : number losses gathered
- $\lambda_{real}$ : number of actual losses
- $X$ : losses amount
- $s$ : data-gathering threshold
- $F$ : Cumulative severity-distribution function, with

\[
F(s) = \Pr[X \leq s]
\]

\[
\bar{F}(s) = 1 - F(s)
\]

Assume that the entirety of losses’ frequency distribution is Poisson with real random parameter $\lambda$. So, the observed frequencies’ distribution will have to be identified. The probability of observing operational losses having an amount superior to turns out to be (see proof in the Appendix):

\[
P(y_{obs} = i) = E\left\{ \sum_{j=0}^{\infty} P[y_{real} = k \text{ et nombre } (X \geq s) = i] \right\} = E\left\{ e^{-\lambda} \frac{\lambda^y}{y!} \right\} \text{ with } \sum_{j=0}^{\infty} F(s)^j \frac{\lambda_{real}^j}{j!} = e^{\lambda \bar{F}(s)} (12)
\]

Regarding the special case where $\lambda$ is not random, it has been discovered that the loss frequency distribution above the threshold is Poisson with parameter estimated $\lambda$. Thus, one might well, therefore, assess estimated $\lambda$ on the basis of the observed frequency data and, subsequently, identify the distribution real parameter $\lambda$, such as:

\[
\lambda_{real} = \frac{\lambda_{est}}{\bar{F}(s)} (13)
\]

This equation is used to help adjust the estimated parameter $\lambda_{est}$ to account for the number of losses comprised below the data-gathering set threshold.

ii. Negative binomial distribution

Regarding the case where $\lambda \sim \Gamma(\alpha, \beta)$ corresponds to the case where $y$ negative binomial $\left( \alpha, \frac{1}{1 + \beta} \right)$ is a negative binomial, the parameters being estimated from the observed data are estimated $\lambda_{real} \sim \Gamma(\alpha, \beta \bar{F}(s))$.

Hence, the number of gathered losses tends to follow a negative binomial distribution of parameters $\left( \alpha_{real}, \frac{1}{1 + \beta \bar{F}(s)} \right)$. So, once the negative binomial model parameters have been estimated, they will be adjusted so as to account for the unobserved frequency losses below the data-gathering determined threshold. The actual parameters $(\alpha_{real}, \delta_{real})$ are therefore:

\[
\begin{align*}
\alpha_{real} &= \alpha_{est} \\
\delta_{real} &= \frac{\delta_{est} \bar{F}(s)}{1 - \delta_{est} F(s)} \text{ such us } \delta = \frac{1}{1 + \beta} (14)
\end{align*}
\]
b. Good adjustment test
At this stage, it appears critically important to test the estimated distributions’ adjustment level in respect of the selected periods and each risk type. As we are faced with discrete data, a Chi-square test seems most appropriate. The latter requires that data be put in classes or groups, and its statistics is calculated as follows (Klugman, Panjer et Willmot, 1998):

\[
Q = \sum_{j=1}^{k} \left( \frac{n_j - E_j}{E_j} \right)^2
\]

\(n_j\): Number of observations in group \(j\), with \(E_j\): Number of expected observations in each group given the model is correct and the parameters have their estimated values, calculated as:

\[E_j = n \times \text{Pr}(X \in j^{\text{ème}} \text{groupe}; \theta)\]

for \(j = 1, \ldots, k\).

\(Q\) is the sample size.

c. Parameters’ estimation results
Table 7 presents the estimation results of Poisson and Negative Binomial distributions relevant to each risk type. It is worth noting that in most cases, the Poisson distribution is rejected by the \(\chi^2\) test. This confirms that data exhibit an overdispersion which need be modeled by another distribution. This finding involves the entirety of dealing with estimating operational risk capital that prevalent on based on the Poisson model to estimate losses frequency. The Negative Binomial distribution provides an appropriate adjustment to the frequency of monthly losses.

As highlighted by tables 7, 8 and 9, the Negative Binomial can be retained as it proves to be the most appropriate. Noteworthy, however, the results figuring on Table 10 turn out to confirm that the Poisson distribution proves to be the most appropriate in such a case.

<table>
<thead>
<tr>
<th>Table 5: Frequency modeling of</th>
<th>Poisson</th>
<th>Negative Binomial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer risk Parameters</td>
<td>Lambda = 1,96</td>
<td>size = 0,10</td>
</tr>
<tr>
<td>Chi-square test</td>
<td>X-squared = 6,7</td>
<td>prob = 0,049</td>
</tr>
<tr>
<td>p-value = 0,68</td>
<td>X-squared = 17,48</td>
<td></td>
</tr>
<tr>
<td>Process risk Parameters</td>
<td>Lambda = 34,69</td>
<td>p-value = 0,011</td>
</tr>
<tr>
<td>Chi-square test</td>
<td>X-squared = 96,45</td>
<td></td>
</tr>
<tr>
<td>p-value = 0,765</td>
<td>X-squared = 103,168</td>
<td></td>
</tr>
<tr>
<td>Systemic risk Parameters</td>
<td>Lambda = 0,633</td>
<td>p-value = 0,886</td>
</tr>
<tr>
<td>Chi-square test</td>
<td>X-squared = 6,591</td>
<td></td>
</tr>
<tr>
<td>p-value = 0,223</td>
<td>X-squared = 2,813</td>
<td></td>
</tr>
<tr>
<td>Fraud risk Parameters</td>
<td>Lambda = 82,63</td>
<td>size = 0,056</td>
</tr>
<tr>
<td>Chi-square test</td>
<td>X-squared = 78,24</td>
<td></td>
</tr>
<tr>
<td>p-value = 0,125</td>
<td>X-squared = 5,86</td>
<td></td>
</tr>
<tr>
<td>The law retained for the frequency</td>
<td></td>
<td>prob = 0,0007</td>
</tr>
</tbody>
</table>

Table 6: Modeling a retained frequency laws

<table>
<thead>
<tr>
<th>Customer risk</th>
<th>Process risk</th>
<th>System risk</th>
<th>External fraud risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>P (1,96)</td>
<td>BN (0,4 ; 0,01)</td>
<td>BN (0,018 ; 0,027)</td>
<td>BN (0,056 ; 0,0007)</td>
</tr>
</tbody>
</table>

5. Total loss simulation Scenarios
It is worth recalling that our purpose lies in estimating the annual risk within a confidence level of 99.9%, as recommended by the regulatory authorities. Having identified the operational losses’ severity and frequency distributions regarding each type risk, on the overall, along with the truncated data, it appears appropriate, at this stage of analysis, to combine both distributions for the sake of identifying the annual losses’ aggregate distribution. As already mentioned, there exist several aggregation methods, among which we opt for selecting the simulation Monte Carlo method as most suitable to determine the overall annual losses distribution concerning each risk. To note, this method has already been thoroughly described by Cruz (2002) within an operational risk context. Indeed, it consists in:
1. Generating an n daily or weekly number of losses in respect of the estimated frequency distribution.

2. Generating n amounts of losses $X_i$ according to the estimated severity distribution.

3. Repeating steps 1 and 2 for $N=365$ (daily losses) or $N=56$ (weekly losses) Summing up all the generated $X_i$ amounts to get the annual loss amount.

4. Repeating steps 1, 2 and 3 several n times (e.g.100 000 times) will reaching the annual loss distribution.

5. The VaR can then be said to be the quantile of the order 99.9% ; It is indeed defined as:

$$VAR = F_{\text{aggregate}}^{-1}(\alpha)$$

where $F_{\text{aggregate}}^{-1}$ is the aggregate cumulative distribution.

a. The Value at Risk

As a matter effect, a risk measurement must be able to check a number of hypotheses so as to be useful for use in applications, namely:

- **Sub-additivity:**
  
  For both risks $X_1$ and $X_2$, the measurement $\xi$ is called to be sub-additive if:

  $$\xi(X_1) \leq \xi(X_2) \quad \xi(X_1 + X_2) \leq \xi(X_1) + \xi(X_2)$$

  This property is synonymous with reducing risk by diversification, whose effect is then measured by the quantity $\xi(X_1) + \xi(X_2) - \xi(X_1 + X_2) \geq 0$, representing capital economy as implemented to cover the $X_1$ and $X_2$ risks.

- **Homogeneity:**
  
  For a risk $X$ and a positive scalar $\alpha$, the measure $\xi$ is called homogeneous if:

  $$\xi(\alpha X) = \alpha \xi(X)$$

  This property may be considered as an invariance with respect to monetary units.

- **Monotonicity:**
  
  $X_1$ and $X_2$ are too risks such that $P(X_1 \leq X_2)=1$, the measure $\xi$ is monotone if:

  $$\xi(X_1) \leq \xi(X_2)$$

  This property help ensure that the needed capital amount is an increasing function of risk severity level.

- **Non-negative risk margin:**
  
  For a given risk $X$, we must have: $\xi(X) \geq E[X]$

  The required capital must exceed the expected losses (under an insurance company ruining penalty).

Table 7: The operational VaR by type of risk

<table>
<thead>
<tr>
<th>Risk</th>
<th>Annual VaR 99%</th>
<th>Annual VaR 99.5%</th>
<th>Annual VaR 99.9%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer</td>
<td>6 654 501</td>
<td>12 171 741</td>
<td>50 357 163</td>
</tr>
<tr>
<td>Process</td>
<td>292 762</td>
<td>317 708</td>
<td>359 160</td>
</tr>
<tr>
<td>System</td>
<td>563 295</td>
<td>951 215</td>
<td>2 497 366</td>
</tr>
<tr>
<td>External fraud</td>
<td>65 931</td>
<td>75 635</td>
<td>96 297</td>
</tr>
</tbody>
</table>

Table 7 shows the results of average annual losses and the VaR calculated at confidence levels of 95%, 99% and 99.9%. We present the results by type of risk and show that the type of customer risk presents the greater operational value at risk. This confirms the results found by Dutta and Perry (2006) in a study based on information obtained from seven banks. Types of system, process and fraud risk coming in second and third position in terms of magnitude of

the VaR. It should be noted that this classification of the types of risk is not respected when we observe the values of average annual losses. Indeed, as the Poisson distribution is characterized by the equi-dispersion, frequencies are then generated around the average. Whereas for the negative binomial distribution, the frequencies generated are actually more dispersed which explains the higher values of VaR at confidence level of 99.9%.
III. Annexes

1. Tests graphiques de la distribution Exponentielle

a. Test graphique des fonctions de répartition empirique et théorique

b. Test graphique des quantiles (Q-Qplot)

1. Tests graphiques de la distribution Lognormale
   a. Test graphique des fonctions de répartition empirique et théorique
b. Test graphique des quantiles (Q-Qplot)

2. Tests graphiques de la distribution Weibull
a. Test graphique des fonctions de répartition empirique et théorique
b. Test graphique des quantiles (Q-Qplot)

Fonction de Répartition Système & Weibull

Fonction de Répartition Fraude externe & Weibull

QQ-plot distr. weibull

QQ-plot loi Weibull pour le risque client

QQ-plot distr. weibull

QQ-plot distr. weibull

Fonction de Répartition Système & Weibull

Fonction de Répartition Fraude externe & Weibull

QQ-plot distr. weibull

QQ-plot loi Weibull pour le risque client

QQ-plot distr. weibull

QQ-plot distr. weibull
\[P(y_{\text{obs}} = i) = E \left\{ \sum_{k=i}^{\infty} P[y_{\text{real}} = k] \times \left( \frac{k}{i} \right) F(s)^i F(s)^{k-i} \right\}\]
\[= E \left\{ \sum_{k=i}^{\infty} \frac{e^{-\lambda_{\text{real}}}}{k!} \times \left( \frac{k}{i} \right) F(s)^i F(s)^{k-i} \right\}\]
\[= E \left\{ \sum_{k=i}^{\infty} \frac{k!}{i!(k-i)!} F(s)^i F(s)^{k-i} E \left( e^{-\lambda_{\text{real}} \lambda_{\text{real}}} \right) \right\} \quad \text{whith} \quad j = k - i\]
\[= E \left\{ \frac{F(s)^i e^{-\lambda_{\text{real}}}}{i!} \lambda_{\text{real}}^i \sum_{j=0}^{\infty} \frac{F(s)^j \lambda_{\text{real}}^j}{j!} \right\}\]
\[= E \left\{ e^{-\lambda_{\text{real}}} \lambda_{\text{real}}^i \frac{1}{i!} \right\}\]

IV. References


RELATIONSHIP BETWEEN INTERNET USAGE AND SOCIAL ISOLATION: STUDY OF SECONDARY SCHOOL STUDENTS IN PAKISTAN

Bintul Khurshid
Fariha Gul

ABSTRACT

Information and communication technologies brought drastic changes in human society and also in education system. It seems that the changes brought by ICT provided better chances for students regarding their learning in acquiring up to date knowledge. It helps in communication and social relations. But there is another aspect of the technology is the excessive use of internet and computer oriented activities causes some negative effects also. The impact of these changes on behavior of students cannot be ignored. This research aims to investigate the impact of ICT on the behavior of young generation. Keeping in view the past studies that excessive use of internet causes social isolation; researcher has tried to find the relationship between ICT and social behavior among young students in Pakistan. A random sample of 200 students of O, levels will be selected from three schools. UCLA Loneliness Scale (Russell, 1996) and Young Scale for Internet addiction (Young, 1998) will be used to collect data. Statistical analysis of data will be performed by using ANOVA and T test techniques. The results of study will proved that there is negative relationship between use of ICT and social isolation.

Keywords: Internet addiction, social isolation, effects of ICT.

Introduction

Science and technology affected human life definitely. It seems that the changes brought by ICT provided better opportunities for students regarding their learning in acquiring up to date knowledge. It helps in communication and self-improvement. But there is another aspect of the technology is the excessive use of internet and computer oriented activities causes some negative effects also. The overuse of internet effects on social behavior may be seen in the youth as they get isolated and have weak social relationships. Apparently it seems that through internet, chat room or Facebook like website help in developing relationships within and also out of country and youth consider it valuable relationships but in fact these relationships are not strong are not strong as their bases are unrealistic and temporary. This study has tried to find the relationship between internet usage and the social isolation among the secondary class students. It also recommended that on how can make the use of ICT better to prevent its harms of social isolation.

The Internet has brought revolution communication system. Due to internet it is possible to have communication all over the world. Effects of Internet on social behavior have been under observation closely since it getting a part of human life. This aim of this research is to find out the impact of the Internet usage on human relations.

No doubt computer-oriented communication helps more connectivity to resources of knowledge and information, some researchers have opinion that life on the net, contribute to an incomplete lifestyle regarding human relationship.

In this era of science and technology there is a great attraction for internet among young generation. E mail, short message, online games, chat rooms, weblogs, and all create social relationship between peoples. Every
day more than millions of people are using internet social network in the world. But reports indicate that communication by the internet place in the weak level. May be the main defect of the internet communication is that it is essentially based on text, and basically it is not using face to face interaction by hearing and eying felling (see: Saied and others, 2005).

The Internet usage impact on social relations was explained in the publication of Rheingold’s (1993) “influential book on virtual communities” where the Internet was described as a source of bringing strangers close to each other to form unlimited online relationships.

There are contradictions about online links is at the expense of offline relationships. Some studies proved that Internet use boost the creation of online relationships, which in turn decrease face-to-face interaction. There is another research based on a longitudinal quasi-experiment study of 169 people in 73 households over a 2-year period in which they were each given a free computer and free access to the Internet, Kraut et al (1998) found that Internet use was detrimental to offline interpersonal relationships. According to their findings “greater use of the Internet was associated with declines in participant’s communication with family members in the household, declines in the size of their social circle and increase in their depression and loneliness”. Kraut et al (1998) have presented theory with two main explanations for the negative impacts observed. The first involves displacement of social activities, because the time spent online is unavailable for other activities. The second explanation advanced by Kraut is that Internet users replace strong face-to-face ties with weak online ties. In a sense, depth of social relationship is traded for breadth. Kraut and his associates dubbed the findings as “Internet paradox” because use of the Internet, a technology for social contact, actually led to reduction of offline social ties. This paradox argument received further support from “Nie and Erbring” report by the Stanford Institute for the Quantitative Study of Society (Nie and Erbring, 2000). It shows that on average, the more time spent on the Internet, the less time spent with friends, family and colleagues.

However, there are researches with opposite results. Kraut et al (2001) themselves discovered the exact opposite of what had previously been reported. Participants who used the Internet more, had larger size of their social relationships and face to face contacts and better interaction with friends and family.

There is another research that analyzed Netville wired suburb. Netville is a newly-built development of approximately 109 medium-priced detached homes in a rapidly growing, outer suburb of Toronto. Hampton and Wellman surveyed residents moving into and living in Netville. In 1997, Hampton moved into Netville and conducted an ethnography for two years. Of the 109 homes that comprised Netville, 64 were connected to the local network while 45 remained unconnected. The key finding is that living in a wired neighborhood encourages greater community involvement, extended local relationships with neighbors and family, and strongly related with friends and relatives.

Netville study showed that, Internet does not replace existing means of communications but adds on more contacts. Another survey study was conduct 1998, on the National Geographic Society website. It was the first large-scale web surveys on 39,211 visitors. “Findings proved that Internet use supplements — rather than increases — in-person and telephone contact with friends and relatives, both near and far (Wellman et al, 2001)”.

According to Kiesler and others (2000) answering to the question: “does the social effects of the internet is negative or positive?” Is related to the kind of internet using and what are the lost to people when they get on the net. One of the important traits of the internet, which has made it attractive, is that you can be an unknown user when you are online. On the internet, people could express themselves freely without feeling fear, and in the online conversation anybody can change himself to become more desirable by the counter person. Adolescents are able to reconstruct their identity on the net more easily which is not possible in the real world. The application of many and different internet identities have cause addiction to the internet in the recent year.

By review of some of the surveys, social communication by internet indicates it is very weak compare to face to face interaction and in the long run, it makes the over users to becomes more lonely (Shojaiee and others, 2008). This finding has been verified by some other studies in which they came up similar results (Kraut and others, 1998; Sanders and others, 2000).

Ghasemi and others (2007), In the study about internet addiction, social isolation and self esteem in the Iranian secondary education students, shows that, the dispread of internet addiction between Iranian students is up to 8.3 percent and also student who they are addicted to the net are more alone.

Now let us try to understand concept of social isolation. “Social isolation is conceptually close to
alienation, loneliness and is in the opposite side of social involvement, social capital and social integration. It has been considered as a dimension of alienation (Seaman, 1975)
. In this research social isolation was considered as contrary to social involvement. “Social involvement is mainly related to the size of person’s social network and also embedded support within the person’s social network (Kraut, 1998)”. Social isolation is a situation when a person has not enough social relations in society.

Although computer-mediated communication provide greater connectivity to resources and information, some critics have the view “that life on the net, contribute to an incomplete lifestyle that withdraws people from the full range of in-person contact and by getting them so engulfed in a simulacrum virtual reality, disconnects them from their families, friends and communities (Kraut, Lundmark, Patterson, Kiesler, Mukopadhyay and Scherlis 1998; Nie and Erbring 2000)”. There have been fears in society, the Internet would weaken face-to-face community and relationships.

**Objective of Study**

This study was conducted about the relationship between using of the internet and social isolation of students.

**Delimitation of the Study**

The study has two major delimitation, one is that the data were collected from students of O’ levels only. The other delimitation is that small sample was selected on convenient basis.

**Methodology**

**Research questions**

Following research questions were designed for the study;

1. Is there any meaningful difference between three groups of normal users, at risk users and addicted users of the internet about social isolation?
2. Is there any difference between girls and boys about social isolation?

**Research Questions**

A random sample of 150 students studying in O, levels was selected from three schools. It was made sure that the student must have internet access at home.

**Data Collection**

Survey method of research is used and data was collected with help of ‘standards’ scale.

**Instruments**

Young Internet addiction scale (Young, K.S.1998) was used to collect information regarding internet usage frequency. It was used Young scale because of its good validity and reliability as reported in previous researches. For instance in Korea, Yoo and his coworkers (2004), Kim and et al (2006) reported $\lambda$=0.9 for this scale. In Iran Ghasemi and others (2007) reported validity of = .88 for this tool. This scale is comprised of 20 items. The extent of grades is between 0 and 100. Grade of 0 to 39 indicates: normal user, grade of 40 to 69: at risk user and grade of 70 to 100: addicted user (Young, K.S.1998).

Information regarding social isolation was collected by using The UCLA Loneliness Scale (Russell, 1996). This tool is well known (Hartshorne, 1993). In this study its validity reported = .80. This scale is including of 10 items which are based on self-reporting four-point Likert scale. The grades are between 20 and 80 and higher grades represent more loneliness of the person (Russell, 1996).

**Results**

<table>
<thead>
<tr>
<th>SD</th>
<th>Meanin</th>
<th>Percent</th>
<th>N</th>
<th>Source of change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Social Isolation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.7</td>
<td>35.10</td>
<td>48.9</td>
<td>69</td>
<td>Group1 (danger zone)</td>
</tr>
<tr>
<td>5.03</td>
<td>36.25</td>
<td>5.7</td>
<td>8</td>
<td>Group2 (not addicted)</td>
</tr>
<tr>
<td>6.01</td>
<td>35.96</td>
<td>44.7</td>
<td>63</td>
<td>Group (Addicted)</td>
</tr>
<tr>
<td>5.80</td>
<td>35.55</td>
<td>99.3</td>
<td>140</td>
<td>Total</td>
</tr>
</tbody>
</table>

It is explicit from table that the students percentage of students who were addicted to internet usage is relatively high (44.7 %), while the majority of the student fall in danger zone is high (48.9 %). However percentage of students who are not addicted to internet usage is very low (5.7 %). The table also shows mean and standard deviation of these three groups. In order to find out there difference between these groups about social isolation ANOVA was carried out.
Table 2: Difference between three groups about social isolation

<table>
<thead>
<tr>
<th>Sig</th>
<th>F</th>
<th>Mean square</th>
<th>df</th>
<th>Sum of squares</th>
<th>Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>.665</td>
<td>.424</td>
<td>14.408</td>
<td>2</td>
<td>28.816</td>
<td>Between groups</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>137</td>
<td>4657.726</td>
<td>Within groups</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>139</td>
<td>Total</td>
</tr>
</tbody>
</table>

One way ANOVA between groups analysis of variance was conducted to explore the difference between frequent internet users about social isolation. The students were divided in three groups according to their scores on internet usage scale (Group 1: danger zone; Group 2: not addicted; group 3: addicted). There was no significant difference at p< .05 level in internet usage scale for three groups: F(2, 137) = 0.424, p= 0.665.

Table 3: Difference between social isolation and gender

<table>
<thead>
<tr>
<th>Sig</th>
<th>t</th>
<th>SD</th>
<th>M</th>
<th>N</th>
<th>Factors</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.003*</td>
<td>-2.97</td>
<td>6.2920</td>
<td>25.56</td>
<td>115</td>
<td>Social isolation</td>
<td>Female</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.001</td>
<td>29.53</td>
<td>25</td>
<td></td>
<td>Male</td>
</tr>
</tbody>
</table>

p<0.05

Independent sample t-test was conducted to compare social isolation scores for male and female students. There was a significant difference in scores of male (M= 25.56, SD= 6.2920) and female (M= 29.53, SD= 6.001); t (138)= -2.97, p=0.003 (two-tailed).

Conclusion and Discussion

The results show that there was no significant difference between groups of internet users about social isolation. These results also indicate that that internet addiction solely can not be considered sole cause of isolation. Although many other studies supported the notion that excess use of internet cause social isolation among individuals (Kraut et al, 2001; Kraut, Lundmark, Patterson, Kiesler, Mukopadhyay and Schehris, 1998; Nie and Erbring 2000; Shojaiee , et al, 2008). However our results are opposite, showing that there was no difference in internet usage between three groups regarding social isolation. There are many factors that might have effected in getting opposite results. One major delimitation is using a self-reported questionnaire, in which the responses cannot be cross checked and the researcher has to rely on respondents’ report. Mostly the people respond according to accepted norms of the society, this behavior may have affected our results. The students might have given responses according to socially accepted norms, and refused to expose themselves as socially isolated. Their behavior is justified because in our cultural context social isolation is punishment and is not taken as positive, so these teen agers have not shown real picture of their feelings. The second reason of these opposite results from popular literature include social norms and values of the society. Our society is closely knitted, family ties are very strong helping individual to be more connected and involved. This can also be concluded from results that instead of high ratio of internet users, social isolation is not caused, the use of internet has made people more social and connected. This idea is supported by the study of Hampton and Wellman (2003) who reported that use of internet helped the people to stay connected thus making social bond strong.

Although there is no difference between groups of internet users regarding social isolation, but study portrait an alarming situation that a large number of people are either addicted to internet or are prone to do that. At this time they might not be socially isolated but with rapid change of world towards technological advancement and modifying values it is important to give attention to this aspect of technology usage.

In spite of the fact that results are not in accordance to popular literature but this study motivate us to go further, do deep analysis on large population with different backgrounds, levels and subjects.

Withdraws people from the full range of in-person contact and by getting them so engulfed in a simulacrum virtual reality, disconnects them from their families, friends and communities (Kraut, Lundmark, Patterson, Kiesler, Mukopadhyay and Schehris 1998; Nie and Erbring 2000). There have been fears among researchers that the Internet would weaken face-to-face communication and relationship.

On the other side of the there have also been hopes that the Internet would help in creating new relationships on basis common interests and sharing of knowledge and increase face-to-face contacts. Kraut et al (1998) found that Internet use was detrimental to offline interpersonal relationships. According to him “greater use of the Internet was associated with declines in participants’ communication with family members in the household, declines in the size of their social circle and increase in their depression and loneliness”. Kraut et al (1998) have laid out a tentative theory that offers two main explanations for the negative consequences observed. The first involves displacement of social activities,
because the time spent online is unavailable for other activities. The second explanation advanced by Kraut is that Internet users replace strong face-to-face ties with weak online ties. In a sense, depth of social relationship is traded for breadth. Kraut and his associates dubbed the findings as “Internet paradox” because use of the Internet, a technology for social contact, actually led to reduction of offline social ties. This paradox argument received further support from “Nie and Erbring” report by the Stanford Institute for the Quantitative Study of Society (Nie and Erbring, 2000). It shows that on average, the more time spent on the Internet, the less time spent with friends, family and colleagues.

Now let’s clarify the social isolation concept. Social isolation is conceptually close to alienation, loneliness and is in the opposite side of social involvement, social capital and social integration. It has been considered as a dimension of alienation (Seaman, 1975). Also it has widely been studied in urban sociology literature (Klinenberg, 2001; Fischer, 1973). In this research we take social isolation into account as contrary to social involvement. Social involvement is mainly related to the size of person’s social network and also embedded support within the person’s social network (Kraut, 1998). Hence, social isolation is a situation wherein a person lacks enough social ties to get the needed social support. So to answer the question of Internet’s impact on social isolation, we ought to know that what Internet does to the people’s social networks. Does it provide a new resource of social support with people?

Many of Internet ties are weak ties. Weak ties are not free of support, but they are important resources to gain information, spending leisure time, communication, civic engagement and enjoyment (Castells, 2001: 128). By contrast, new information is more apt to come through weaker ties better connected with other, more diverse social circles. The lack of status or situational cues can also encourage contact between weak ties review of some of the surveys, social communication by internet indicates it is very weak compare to face to face interaction and in the long run, it makes the over users to becomes more lonely (Shojaiiee and others, 2008). This finding has been verified by some other studies in which they came up similar results (Kraut and others, 1998; Sanders and others, 2000).

Ghasemi and others (2007). In the study about internet addiction, social isolation and self-esteem in the Iranian Secondary education students, shows that, the dispread of internet addiction between Iranian students is up to 8.3 percent and also student who they are addicted to the net are more alone and their self-esteem are lower than the normal users.

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A MODIFIED AFI FRAMEWORK FOR STRATEGY MAKING: ADAPTING TO SPECIFICITY, HIERARCHY, AND URGENCY BY MODIFYING COMPLEXITY AND FEEDBACK

Firasat Khan

ABSTRACT

There are literally hundreds of approaches to strategy-making in the literature and how one goes about it is undoubtedly influenced by many intrinsic and extrinsic factors. This work attempts to overview the major strategy models selected from a review of management literature with the goal of deciphering commonalities and differences in them. As it turns out the various models and approaches do indeed have a dominant theme but also significant differences. The paper provides a brief summary of the key approaches prevalent in management today highlighting the dominant theme throughout with comments about what is different or unique. A broad model is then developed and presented based on the common theme and a new approach to handle the particular circumstances (specificity), the organizational level at which the strategy-making is being attempted (hierarchy), and the relative time available for strategy development (urgency). This simple new framework – a modified the analysis, formulation, and implementation approach that, takes into account the complexity and includes appropriate feedback loops, is expected to be robust and nimble enough to be adaptable to most strategy-making scenarios.

Introduction

Strategy-making is one of those endeavors that continues to pose a continuing challenge to leaders and managers alike. There have been countless books, articles and presentations trying to arrive at the secret to effective strategy-making. Mintzberg and Lampel (1999) provide a thorough overview of the motivation behind the array of models that is quite a valuable prism through which one could look at each model. The following list excerpted from Mintzberg and Lampel (1999) lists the 10 schools of thought, arguably, that are behind strategy-making models:

- The cognitive school resides in the mind of the strategist located at the center.
- The positioning school looks behind at established data that is analyzed and fed into the black box of strategy making.
- The planning school looks slightly ahead, to program the strategies created in other ways.
- The design school looks farther ahead to a strategic perspective.
- The entrepreneurial school looks beyond to a unique vision of the future.
- The learning and power schools look below, enmeshed in details. Learning looks into the grass roots, whereas power looks under the rocks — to places that organizations may not want to expose.
- The cultural school looks down, enshrouded in clouds of beliefs.
- Above the cultural school, the environmental school looks on, so to speak.
- The configuration school, looks at the process, or, we might say, all around it, in contrast to...
the cognitive school that tries to look inside the process.

While it is beyond the scope of this paper, the reader is encouraged to keep the above ‘schools’ in mind as each of the models and approaches is presented in this paper.

Methods
The following top strategy-making models have been selected through a combination of sources, primarily major strategy and management textbooks used by business schools today. In addition the author found additional models from historical books (e.g. Sun Tzu) or which have been put into practice in certain professions (e.g. OODA loop). The selection of the models was done without regard to the model components itself in order to objectively derive commonalities or a common theme without selection bias. Once the models were selected the common features were identified and highlighted across models to more clearly discern what is common and what is unique or special about a particular model. Subsequently the models and approaches were synthesized to expose a new modified model that has simplicity while retaining the ability to comprehensively address varying circumstances and external constraints.

Traditional Strategy-Making Models: An Overview
A review of selected literature related to traditional strategy-making reveals a mostly parallel three-phase structure with some significant variations as noted in the following summary.

The AFI strategy framework (Rothaemel, 2013) – Three-phase model that essentially divides the formulation phase into analysis and formulation; followed by the implementation phase.

1. Analysis: SWOT analysis and analysis of competition.
2. Formulation: Develop business strategy and then corporate strategy
3. Implementation:
   a. Put into place organizational structure, culture and control.
   b. Implement corporate governance, ethics and strategic leadership

![Figure 1: Rothaemel's three-phase AFI model (Rothaemel, 2013)](image)

● **Strategy crafting process** (deKluyver & Pearce, 2012) – Three phase model with overlapping phases:

   1. Where are we? [Analysis]
      a. Review stated mission/goals, and current strategies.

   2. Where should we go? [Formulation]
      a. Use results from SWOT and industry analysis to develop strategic choices.
      b. Conduct a SWOT analysis and analyze competitive position in the industry.
3. How do we get there? [Implementation]
   a. Operationalize strategic choices.
   b. Assess risk
   c. Allocate resources and implement.

- **Strategy formulation and implementation process** (Hill, & Jones, 2008) – Two phase model with a feedback loop within the formulation phase:
  1. Strategy formulation:
     a. Assess current business model vis-à-vis stated mission/goals.
     b. Conduct SWOT analysis to develop strategic choices.
     c. Create strategies for hierarchical levels (functional, business, global and corporate). Utilize feedback from all levels to refine strategies.
  2. Strategy implementation:
     a. Address governance and ethical issues.
     b. Design and implement organizational structure, culture, and controls.

- **Comprehensive strategic-management model** (David, 1988) – Three-phase model with a feedback loop to all previous phases/components after the final evaluation phase.
  1. Strategy formulation:
     a. Develop mission/goals.
     b. Conduct internal and external audits (SWOT analysis).
     c. Develop alternate strategies, then evaluate and choose strategies to apply.
  2. Strategy implementation:
     a. Implement management-level strategies
     b. Implement strategies in 5 areas (marketing, finance, accounting, R&D, MIS)
  3. Strategy evaluation:
     a. Measure and evaluate performance.
     b. Provide feedback to all components of above phases.

- **Strategic management process** (Dess, 2007) – Three phase model with interacting components within each phase:
  1. Strategic analysis: Analyze goals/objectives; conduct SWOT; assess intellectual capital.
  2. Strategic formulation: Develop business, corporate, and global strategies; develop entrepreneurial strategy and assess competitive dynamics.
  3. Strategic implementation: develop controls and corporate governance approach; create organizational designs; ensure leadership excellence/ethics, manage change; and promote corporate entrepreneurship.

- **Strategy-making, strategy-executing process** (Thompson, 2010) – Five phase model with a feedback loop to all previous phases/components that considers performance, and changing conditions/opportunities/ideas:
  1. Develop mission, vision and values [based on Analysis].
  2. Set goals.
  3. Craft strategy. [Formulation]
  4. Execute strategy. [Implementation]

- **Strategy change cycle** (Bryson & Alston, 1996) – A complex ten-step model that acknowledges drivers within the internal and external environments with a feedback loop from the final reassessment to all previous steps (that would trigger incremental changes and eventually another comprehensive strategy change):
  1. Organization decides to embark on strategy change [based on prior assessment].
  2. to 5. Conduct SWOT, assess all aspects related to external and internal environment, and identify strategic issues. [Analysis]
  6. to 7. Strategy formulation and adoption [Formulation], followed by optional visioning step.
  10. Reassessment.
• **Strategy process themes** (strategies/forces/contexts) model (Mintzberg, 2003) – This model distinguishes between formulation of strategy, analysis, and formation of strategy. It recognizes six forces that drive strategy (cognition, organization, technology, collaboration, globalization, and values). It then combines above concepts as suited for one of five particular organizational contexts (startup, maturity, expertise, innovation, and diversity).

• **Boyd’s OODA Loop** (Coram, 2002) – The Observe, Orient, Decide, and Act model provides an ever-dynamic strategizing tool to respond to highly complex, fast moving business environments to military landscapes alike. Very unlike a traditional loop, the OODA loop is highly inter-related series of loops where in what you observe changes once you adopt an orientation, and the orientation influences decisions, actions and in turn the new observations. From the AFI perspective, the observe and orient portions could be placed under the analysis phase, while decide
would be akin to formulation, and act would be the implementation phase.

In summary, the traditional three-phase AFI-based models provide a good general roadmap for considered strategy making, is adoptable and customizable by a variety of organizations, and at its core (analyze, plan, act) is quite intuitive and natural. Some of the weaknesses include its ready usability as a template with too much structure and very little buy-in. It also does not seem to give enough importance to leadership and vision setting, and fails to acknowledge the need for nimbleness and tackling unexpected results.

The Rumelt model

If the traditional model seemingly places equal importance on both external and internal analysis, Richard Rumelt's model, in his book Good Strategy/ Bad Strategy (Rumelt, 2011), leans more on how a firm internally manages and implements its strategic choices and policies. Rumelt outlines how firms engage in poor strategy making by blindly implementing the traditional model, going through the goal setting process without clear outcome expectations, adopting an impractical vision and unattainable values, and failing to face challenges. He encourages organizations avoid these pitfalls, and focus on a few actions that would result in good strategy making: focusing on critical issues and challenges, development of coherent response to major challenge that includes a ‘kernel’: effective diagnosis, guiding policy, and coherent actions. He also encourages development of strategies that are “entrepreneurial, innovative, risk taking,” and of actionable objectives.

Rumelt describes strategy-making as a core skill of a leader, and argues that good strategy comes from gaining insight into the “hidden power” of any situation. Using examples from various public and private sector organizations, he illustrates how good strategy can be arrived at using three guiding steps: 1. Figure out the nature of the challenge and look for opportunities for competitive advantage [Analyze], 2. Design a strategy that produces an advantage [Formulate strategy], and 3. Create a coordinated action plan to implement the strategy [Formulate action plan]. One approach that leaders could use to hone their skills, Rumelt argues, is to approach the challenges from their customers’ perspective. A particularly good example of a company that implemented good strategy after the failure of two major products was NVIDIA: the company analyzed the challenges, strategically changed product focus, and established development roadmap to act on the new direction with aggressive 6-month product upgrade cycles.

Rumelt’s approach is not entirely new, but it has a fresh focus on being very responsive to challenges, and taking necessary risks coupled with aggressive coordinated action.

Arriving at a new ‘model’: Responsive AFI

Despite having in place a strong strategy-making process, most organizations fail, often invisibly and sometimes in plain sight, for a number of reasons including lack of teamwork stemming from lack of buy-in (Lincoln, 2010), and from structural rigidity (Chussil, 2005). Despite putting together a rigorous and well-considered strategy-making process, if organizations do not foster buy-in at all levels, and build in flexibility, are prone to large failures, but also to small failures such as routinely failing to meet short-term targets, incremental loss of market share and missed profit opportunities. However both buy-in and flexibility have to be managed well. Unless there is a strong vision at the top, the goals and objectives will not be guided in a desired direction, and unless managers and leaders are willing to think out of the box and take adequate risks, the strategy-making process is likely to lead to mediocre performance. In line with Jim Collins in Good to Great (Collins, 2001), organizations need to put together a strategy-making process that is authentic (aligned with a genuine vision put forth by the leadership), credible (achieve wide buy-in at all levels), and accountable. This last one, accountability is tricky. Employees need to be expected to perform at a desired level and have the freedom to risk and fail, with the right performance incentives. Many organizations fail to reward the right behavior, and this leads to the failure of the organizational strategy as the rubber meets the road.

Strategy making as a construct appears to be informed and driven by three concepts according to Pretorius & Maritz (2011): performance consensus (desired outcomes), ends and means specificity (particular outcomes defined) as well as ends and means flexibility (general outcomes defined). Specificity was found to be associated more with the deliberate strategy approach while ends and means flexibility was associated more with the emerging strategy approach; performance consensus was neutral and therefore relevant to both approaches. Other findings in the same study showed risk preference, comfort with stability and predictability, and individual autonomy preference to be factors in how firms approach strategy making.

Taking into account the traditional AFI-like model, Rumelt’s emphasis on coordinated action, the importance of visionary leadership, and the above study, I seem to have arrived at a modified AFI model:

Figure 4. Modified AFI model with increasing
While firms ought to adopt and adapt an AFI-type model of their choosing, they should be cognizant of the context of the strategy-making process as shown in Figure 1. Three contexts – hierarchy level, specificity of needs/issues, and relative urgency – would drive how involved and complex each phase of the AFI framework would be. At the enterprise level, AFI would have to be very thorough compared to department level or functional level. If the firm is responding to a particular externality, the strategy making process can be relatively streamlined and direct, compared to a general or periodic strategy-making which ought to be more thorough. Lastly, if a firm needs to respond to an urgent issue, a strategy making process that is simpler, speedy and nimble must be applied, in contrast to a more considered, complex approach given enough available time and resources. In other words, the context would drive AFI complexity, and enable a more dynamic and responsive approach.

Furthermore, despite using an appropriately complex, context-sensitive model, the firm is vulnerable to strategy making failures if the vision is not appropriate or if the proper performance incentives and motivators are not in place. For instance, it is quite common to see disruptive solutions and alternatives emerge in the technology sector within months, or unforeseen events overtake any strategic response. MySpace still does very well what it did in mid to late 2000s as a social network, but Facebook nonetheless overtook it as customer preference changed rapidly. The iPhone’s innovative touchscreen models have stalwart companies like Nokia and Samsung scrambling for a response. The sudden onset of the financial crisis of 2008 brought down a large number of well-managed firms. It is therefore important to recognize and learn from failures that may occur in spite of being diligent to a fault. Sometimes good strategy could still lead to poor results due to circumstances beyond the firm’s control, and good results should not be the sole litmus test for good strategy. However, applying and acting well on good, context-sensitive strategy-making processes reduces the likelihood of failure and enables sound response to failures as they happen.

REFERENCES


UNDERSTANDING EMPLOYEE PERSONALITY TRAITS AND MOTIVATIONAL NEEDS FOR PREDICTING, PREVENTING AND MODIFYING COUNTERPRODUCTIVE WORK BEHAVIORS

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Mahreen Irfan

ABSTRACT

This study examined the process of development of employee counterproductive work behaviors by taking a within individual approach and focusing on the interrelationships of core self-evaluations, acquired motivational needs and counterproductive work behaviors of employees. It tested the direct as well as indirect effects of core self-evaluations on counterproductive work behaviors. Simple random sampling was used by administering standardized questionnaires personally to 650 university teachers in five major cities of Pakistan. Out of 650 a total of 590 questionnaires were of use. The motivational framework of acquired needs is applied for the first time to study the core self-evaluations influence on employee counterproductive work behaviors. Structural Equation Modeling is applied for data analysis. The quantitative data from questionnaire survey has been analyzed using Structural Equation Modeling. This study validated the previous findings that core self-evaluation traits influence employee job performance behaviors including Counterproductive work behavior. It also extended the existing body of knowledge with regard to the employees’ motivational needs as mediating mechanism for explaining the relationship between Core self-evaluations and Counterproductive work behavior. The findings support the incorporation of Core self-evaluations within the need-based framework of acquired needs. This knowledge can be useful for individual employees to evaluate and improve their own negative job behaviors and also for managers in identifying problematic and harmful employee behaviors and for introducing appropriate preventions and interventions for the behavioral modification.

Keywords: Core self-evaluations (CSE), Acquired motivational needs (MN), Counterproductive work behavior (CWB).

Introduction to the Study

The notion of employee job performance has been greatly revolutionized in past few decades. Therefore new performance model (Rotundo & Sackett, 2002) presents an integrated view of employees’ workplace behaviors. The new model incorporates the critical component of non-task performance in addition to task performance (Borman and Motowidlo, 1993). The non-task performance also termed as deviant behaviors consist of positive and negative employee behaviors that are most commonly known as organizational citizenship behavior (OCB) and counterproductive work behavior (CWB) respectively. The research indicates that non-task performance or deviant
behaviors have profound and direct effects on the organizational efficiency and performance (Podsakoff, Mackenzie, Paine and Bachrach, 2000). Research also indicates that traits and motivation are instrumental in developing and shaping employee non-task performance behaviors (Kanfer, 1991; McClelland, 1978). The focus of this study is the negative non-task performance commonly referred as counterproductive work behaviors, and due to their voluntary /discretionary nature the study used a within individual perspective.

Counterproductive work behaviors are crucial regarding their detrimental effects on individual and organizational performance. These are intentional, volitional, and voluntary employee behaviors which impede progress and effect negatively on individual and organizational well-being and performance (Mount et al, 2006). Due to the alarming escalation, pervasiveness and costs of counterproductive work behaviors and the resultant destructive effects on organizational performance, this dimension of employee job performance has emerged as a major concern and challenge for Industrial Organizational scholars and practitioners alike (Spector and Fox, 2005). These behaviors range from minor to major deviance including theft, low performance, absenteeism, abuse of property and information, harassment, physical aggression and even murders.

The pervasiveness and costs of Counterproductive work behaviors can be assessed by incidents of harassment experienced by 58% and sexual harassment by 24% female employees at workplaces (Ilies et al., 2003). Almost 95% organizations report employees theft and fraud (Case, 2000) costing around $50 billion annually, 25% of the failed business accounts for counterproductive work behaviors (Coffin, 2003), and inappropriate use of internet resulted in termination from jobs by 25% of American companies (American Management Association, 2005). Additionally negative psychological consequences include low morale, high absenteeism and turnover, and decreased performance (Hoe, Einarson, and Cooper, 2003; Keashly and Jagatic, 2003).

These facts call for further inquiry into different predictors and mediators of counterproductive work behaviors especially through a within individual perspective.

Background of the Study
The rapidly changing nature of jobs and organizational structures with dominance of service industry paved the way for acknowledging the important influences of employees’ non-task performance. Such non-task performance calls for more reliance on voluntary and discretionary employees' inputs that are above and beyond their assigned job roles. The leaner and flatter organizational structures necessitate more flexible and autonomous job roles with greater independence and autonomy of employees. On one hand it empowers employees to perform beyond their job roles with greater independence and autonomy, while on other it creates more probability for abuse of power and autonomy in form of employees counterproductive work behaviors. It threatens an organizational wellbeing with employees' fraud, theft, aggression, property and information exploitation, disloyalty, absenteeism and turnover (Levinson, 2010; Taylor, 2007).

This implies that employee job-performance cannot be fully understood without equal emphasis on understanding the dynamics of task as well as non-task performance behaviors of employees. More importantly the enormous magnitude of benefits and costs attached to positive and negative non-task behaviors calls for attention towards the factors that are instrumental in shaping them (Appelbaum et al., 2005; Kidwell et al., 2005). Recently Judge et al., (1998) found out that a new dispositional construct of core self-evaluation is linked with performance mainly through motivation. Judge and colleagues assert that core self-evaluation traits more dynamically predict job performance than Big-Five model (Judge et al., 1997; Bono and Judge, 2003). The past research in personality-performance relationship was limited to the Big-Five model mostly focusing on its relationship with task performance. However changing nature of jobs and organizational structures demand for more dynamic constructs to understand and explain the personality and job performance relationship. Viewing through emerging new personality framework of core self-evaluation traits and new integrated job performance models may bring better understanding and explanation of this relationship. This is because core self-evaluation represents traits that offer greater scope than Big-Five model and can be generalized to all personality types (Watson and Clark, 1984).

Yet most studies on core self-evaluation and performance relationship focused only on task performance, very few have looked into the non task performance relationship, especially core self-evaluation and counterproductive work behaviors relationship was almost ignored.
Research also indicates that within individual factors such as personality traits, motivational needs also play a vital role in shaping non-task behaviors (Penner, et al., 1997; Tang and Abraham, 1998). However, literature lacks a need-based perspective of personality-counterproductive work behaviors association especially in view of new personality construct of core self-evaluation traits and integrated performance model representing task performance, organizational citizenship behavior and counterproductive work behaviors. McClelland's theory of motivation (McClelland, 1961; McClelland and Burnham, 1976; McClelland and Boyatzis, 1982) may also offer a theory-based explanation of the link between personality (i.e. Core-self-evaluation traits) and various job performance behaviors (Task Performance, Organizational Citizenship Behavior & Counterproductive work behaviors) and thus may fulfills the existing research gaps in these areas of knowledge.

This view is further strengthened with new research emphasis on developing process or theory based models (Barrick et al., 2001), redirecting I/O research towards understanding link between employee personality factors and various job performance behaviors (Barrick et al., 2001; Bono and Judge, 2003; Kacmar et al., 2009). It led to a shift towards examining the mediating mechanisms in addition to the direct relationships among variables. This trend paved the way for greater attention to the understanding of employees’ personality traits and motivational factors that are instrumental in shaping their performance behaviors (Morrison, 1994; Yen and Niehoff, 2004).

Barrick and colleagues (2001) note that despite robust support for association between particular personality construct and performance very few studies are dedicated to examine the comprehensive mechanisms that link personality to performance. They further observe that most personality and performance research is focused on probing direct relationship while the process that explains how personality influences performance is largely not taken into consideration. Therefore they urged that process models for personality-performance association should be developed. A plausible link in personality-performance relationship relates to an individual's motivation that has long been identified by various scholars as the proximal mechanism through which personality influences performance (Murray, 1938; Kanfer, 1991; Barrick, Mount and Strauss, 1993; Mount and Barrick, 1995).

Extensive literature review reveals that many researchers explored employee’s job performance generally using Big-Five personality traits model (Blake and Pfeffer, 1989; Judge, Martocchio and Thoresen, 1997; Hurtz and Donovan, 2000; Barrick, Mount and Judge, 2001; Barrick, Stewart and Piotrowski, 2002; Mount, Harter, and Barrick, 2004; Niehoff, 2004; Egan, 2005; Barrick and Mount, 2005).

However, despite recognizing multi-dimensionality of job performance, the focus remained limited to evaluating only employee task performance. Therefore, the personality relationship with non-task performance remained under-researched. Thus it needs to be elaborately explored, especially with emerging new framework of Core self-evaluation personality traits beyond the Big-Five model and also with new integrated performance model (Rotundo & Sackett, 2002) representing task performance and non-task performance that further is comprised of citizenship behaviors and counterproductive work behaviors.

Since counterproductive work behaviors are decisive for organizations, understanding them is vital for developing and introducing appropriate interventions and preventions. Therefore this paper is focusing on the within individual factors that contribute in developing and shaping counterproductive work behavior. The focus of the current study is thus, to examine core self-evaluation and counterproductive work behaviors relationship. For this purpose it is applying new integrated job performance model developed by Rotundo and Sackett (2002). The study also provides a unique perspective on personality and performance relationship by applying a new motivational framework of acquired motivational needs (McCleland, 1965) for examining how personality influences employee job performance, aiming to extend the body of knowledge to identify, decrease and prevent employee counterproductive work behaviors at workplace. Therefore the current study selects core self-evaluation personality traits as independent variables, acquired motivational needs as mediating factors while counterproductive work behaviors are taken as dependent variables of the current study.

Literature Review

**Integrated View of Employee Job Performance (Task & Non-Task Performance)**

The role theory (Katz, and Kahn, 1978) classifies employee job performance roles/behaviors into two types: the task-roles that are formally required to perform one’s specific assigned job and involve specific knowledge, abilities and skills, while the second type, the extra roles (non-task roles) are not formally required or mentioned in job-description and are based upon...
the discretionary choice of a person to indulge in or withhold; especially when there is no reward or retribution attached in either case by the organization. The discretionary choice links those roles with specific personality traits and motivational needs of an employee. The difference in traits and motivational needs of individuals may reflect in a difference in their performance behaviors (Shore et al, 1995).

The extra-roles are also termed as non-task or deviant behaviors of employees with a further sub categorization of positive and negative non-task behaviors or roles. The positive non task roles are termed as “Organizational Citizenship Behavior” and defined as “Individual behavior that is discretionary, not directly or explicitly recognized by the formal reward system and that in aggregate, promotes the effective functioning of the organization (Organ and Bateman, 1983; Organ et al, 2006).

The negative non-task roles commonly termed as counterproductive work behaviors are defined as “those voluntary employee behaviors that violates significant organizational norms and in doing so threatens the well-being of organization and its members or both” (Robinson and Bennett, 1995). The focus of this research is on the counterproductive work behaviors.

Despite categorization of employee job performance into task and non-task behaviors, the focus of Industrial/Organization research up till recently remained on evaluating only employee task-roles which were generally considered as overall job performance (Borman and Motowidlo, 1997). However, in the past few decades a paradigm shift in the approach to evaluate employee job performance is witnessed. The new performance model developed by Rotundo and Sackett (2002) is one example that offers an integrated view of the above three behavioral dimensions of employee job performance (task-behaviors, citizenship behaviors and counterproductive work behaviors). This integrated model gives equal credence to all three dimensions of employee job roles. The model views three employee performance behaviors lying on a single spectrum; task-behaviors being in the center and the two opposite poles represent positive and negative non-task or deviant behaviors (Rotundo and Sackett, 2002). A positive deviation from the task-behaviors (completing one’s own work and then helping a new coworker) will lead to organizational citizenship behaviors whereas the negative deviation (ignoring one’s job and gossiping against other coworkers) leads towards counterproductive work behaviors.

The financial, individual, organizational and psychological costs of counterproductive work behaviors are enormous and calls for examining the factors that shape these behaviors. Despite meaningful linkages between core self-evaluation traits and employee job performance (Douglas and Martinko, 2001; Salgado, 2002; Bennett and Robinson, 2003; Dalal, 2005) there is dearth of studies that examined this relationship while core self-evaluation and non-task performance relationship is almost ignored. The emphasis till date remains on the task-behavior dimension of employee performance. The core self-evaluation-counterproductive work behaviors (non-task performance) relationship has not been examined in past except few published studies that suggest strong association between different sub-traits of core self-evaluation and counterproductive work behaviors (Wells and Rankin, 1983; Salmivalli, 2001; Whelpley and Daniel, 2011) neuroticism and counterproductive work behaviors (Jerel and Edgar; 2009; Bowling et al., 2011), and locus of control and counterproductive work behaviors (Sprung, 2011). This literature gap necessitates the examination of role of core self-evaluation in developing and shaping counterproductive work behaviors in a comprehensive manner. We will first discuss the personality traits of core self-evaluation.

Research offers various explanations for employee deviant behaviors such as situational and dispositional factors (Bennett, 1998; Robinson and Bennett, 1997; Robinson and Greenberg, 1999). The situational perspective relates counterproductive work behaviors as an individuals’ reaction towards situational and environmental factors (Appelbuam et al., 2005). The dispositional perspective suggests that people have stable dispositions to behave in certain manner (Shoda and Mischel, 1993). The stable dispositions reflect through individual differences and in the manner an individual interprets a situation to respond or behave (Skarlicki et al., 1999). Kaplan (1975) suggests that counterproductive work behaviors occur either due to the lack of motivation to obey the rules or to become motivated to violate social norm of an organizational.

However, both perspectives are usually considered mutually exclusive on the basis that personality is contextual and likely to vary according to how an individual interprets and reacts to his environment.

Core self-evaluation Personality Traits

Personality traits are the first within individual factor that is chosen to be examined for its influences on counterproductive work behaviors. Recently the personality construct of core self-evaluation coined by Judge, Locke and Durham (1997) is gaining attention
of the organizational scholars. Research shows core self-evaluation significantly relates with job-performance including task performance (Judge et al., 1997; Judge and Bono, 2001), organizational citizenship behaviors (Bowling and Wang, 2012) and counterproductive work behaviors (Ferris et al., 2011). Core self-evaluation refers to employee’s subjective bottom-line judgment about their competencies, capabilities and overall organizational self-worth (Judge, Annelies, Van, and Erene; 2004). Self-efficacy, locus of control, self-esteem, and neuroticism/emotional stability signifies constituent core self-evaluation traits. Each of the four traits constitutes a deeper level evaluative expression a person holds about oneself (Judge at al., 1997). These fundamental self-assessments that people hold about themselves and their role in the world profoundly influence their motivational needs and behaviors at workplace (Judge and Larsen, 2001). 

Core self-evaluation is propagated to be more dynamically indicating employee job performance behaviors than the Big Five model (Judge and Bono; 2001b). Thus the core self-evaluation theorists suggest that core self-evaluation traits are better indicators of employee motivations and various performance behaviors.

The direct effects of core self-evaluation on motivation are examined in the past (Erez and Judge, 2001; Ferris, 2011) but no study so far has examined core self-evaluation influence on acquired motivational needs. Based on these assumptions, the study can build hypothesis that;

“Core self-evaluation is significantly related with acquired needs motivations”

Furthermore this hypothesis is built in such a way that the current study can achieve its particular objectives i.e.

“To what extent core self-evaluations influence acquired needs motivation”

**Acquired Motivational Needs**

Individual's motivation is an important and vital factor with regard to its influence on job performance especially employee counterproductive behaviors. Research suggests that dispositional traits reflect in individual differences and in the manner individuals interpret and react to a situation which essentially is linked with the difference in their motivational needs (Skarlicki et al., 1999). Motivation is viewed from different perspectives and literature offers various motivational mechanism/framework that are linked with counterproductive work behaviors. Nevertheless, this study takes a within individual approach towards counterproductive work behaviors considers acquired needs motivation (McClelland, 1961) to be of prime importance.

McClelland’s motivational needs theory (1961) offers an integrated framework to explain the influence of personality traits of core self-evaluation on employee behaviors at workplace. The theory also offers a better account and treatment of individual’s motivational needs in the context of workplace, which facilitates organizations to proactively encourage desirable behaviors through training programs and matching motivational needs with job requirements (Redmond, 2010). The theory represents three needs representing achievement, affiliation and power as acquired human needs which direct and influence their behavioral outcomes (McClelland, 1961). For example three needs indicate three different motivational sources: need for achievement indicates a desire to achieve success in competition with some standards of excellence (McClelland, Atkinson, Clark, and Lowell, 1958), need for affiliation (NAFF) a desire for social interaction and social approval (Hill, 1987a), while need for power (NPOW) indicates a desire to take control of people, situations and resources (McClelland, 1961; 1985).

Though motivation has been extensively studied with employee job performance criterion (Barrick and Mount, 1991; Schmidt and Hunter, 1992; Kanfer et al, 1994; Austin and Klein, 1996; Kuhl and Fuhrmann, 1999) but so far the relationship between acquired needs motivation and employee job performance is partially examined either with task behaviors or organizational citizenship behaviors, while its relationship with counterproductive work behavior is almost ignored.

This gap necessitates comprehensive examination of the impact of these motivational needs on employee job performance consisting of employee task and non-task performance behaviors. Thus main rationale of the current research is to study this problem in a comprehensive manner. Based on these assumptions the study can build hypothesis that;

“acquired needs motivations significantly influence employee counterproductive work behavior”

Furthermore this hypothesis is built in such a way that the current study can achieve its particular objectives i.e.

“To what extent do the motivational needs influence employee’s counterproductive work behavior?”
Acquired Motivational Needs as Motivational Process

Another important issue relates to the motivational process concerning personality traits and employee counterproductive work behaviors. Research suggests that people have steady dispositional traits to engage in specific behaviors (Shoda and Mischel, 1993). These dispositional traits reflect in individual differences and in the manner individuals interpret and react to a situation which is linked with the difference in their motivational needs (Skarlicki et al., 1999). A massive amount of research is dedicated to study the motivational process between personality and performance, yet the association between two variables showed incoherent results (Gellatly, 1996). Recently Judge et al., (1998) assert that personality trait of core self-evaluations is linked with performance mainly through motivation. Accordingly they suggest that core self-evaluation offers a dynamic context to examine mediating mechanism such as motivation between personality and performance relationship beyond Big-Five framework. Likewise Organ (1998) claimed that organizational citizenship behavior may have links with dispositional traits and motivational needs of the individuals which can also be applicable in case of counterproductive behavior being the negative deviant behavior.

However, Chang et al., (2011) in their review of core self- literature observe that core self-evaluation lacks a theoretical framework which can provide a parsimonious explanation for its effects on different dimensions of employee job performance. The study by Erez and Judge (2001) finds that personality traits of core self-evaluations are significantly related with goal-setting motivations. Similarly, Ferris (2008) finds that core self-evaluation is significantly related with approach and avoidance motivations. The application of goal-setting framework in examining core self-evaluation and employee job performance relationship theoretically supports the task performance context than non-task performance. Yet the findings show that not all specific and challenging goals motivate individuals except the ones they like to be committed to (Erez and Zidon, 1984; Locke and Latham, 1990).

Similarly, application of approach/avoidance motivation framework in explaining core self-evaluation influence on job performance (Ferris et al., 2011) is being criticized pertaining to the ongoing debate whether to proximally conceptualize core self-evaluation through approach or through avoidance motive (Chang et al, 2011). Thus Chang et al., (2011) note that confusion regarding which framework appropriately describes core self-evaluation influence on performance is prevailing and search to find a more dynamic framework still continues with a call from core self-evaluation researchers to examine new motivational frameworks in core self-evaluation studies.

Subsequently exploring other motivational frameworks in examining core self-evaluation relationship with job performance is suggested by core self-evaluation scholars (Judge et al., 2008). This paves the way for examining other motivation frameworks for further deepening our understanding of core self-evaluation-performance link including core self-evaluation-counterproductive work behaviors link.

Drawing on the above discussion that personality traits are linked with goal-setting motivations and approach and avoidance motivations, the current study offers an alternate framework of need-based perspective of employee counterproductive work behavior. It is argued that since the personality traits influence behaviors through the channel of motivation (Judge et al., 1998), it is also expected that core self-evaluation as a personality trait influences employee counterproductive work behavior through the motivational mechanisms of acquired needs of achievement, affiliation, and power. Based on these assumptions the study can build the hypothesis that core self-evaluation is significantly related with employee counterproductive work behavior through the mediating channel of acquired needs motivations. Furthermore this hypothesis is built in such a way that the current study can achieve its particular objectives i.e.

“To what extent acquired motivational needs mediate the relationship between core self-evaluations and employee counterproductive work behaviors”.

Conceptual Framework of the Study

<table>
<thead>
<tr>
<th>Core Self-Evaluations</th>
<th>Acquired Motivational Needs</th>
<th>Employee Job Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self Esteem</td>
<td>Need for Achievement</td>
<td>Counter Productive Work behaviors</td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>Need for Power</td>
<td></td>
</tr>
<tr>
<td>Neuroticism</td>
<td>Need for</td>
<td></td>
</tr>
<tr>
<td>Locus of Control</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure: Detailed Conceptual Framework of the Study Variables
Hypotheses Development

H1. Core self-evaluations significantly influence acquired needs motivations

H2. Acquired needs motivations significantly influence employee counterproductive work behaviors.

H3. Core self-evaluations significantly influence employee counterproductive work behaviors through the mediating channel of acquired needs motivations.

Methodology

Simple random sampling is used by administering standardized questionnaires personally to 650 male and female university teachers in five major cities of Pakistan including Lahore, Karachi, Quetta and Peshawar and the federal capital city of Islamabad. SEM is applied for data analysis. Out of the 650 only 590 forms were of use making 91% of recorded response as useful. The sample includes 267 females and 323 males. The 3% of respondents were between the age group of 25-30 years, 17% between 30-35 years, 17% between 35-40 years, 15% between 40-45, 20% between 45-50 and 28% fall in 50 and above. The respondents’ education in number of years recorded that 55% had 18 years, 42% had 19-20 years and 3% have above 20 years of education. All items were measured on 5-point Likert scale with exception to the locus of control that was measured on 6-point Likert scale. The Cronbach’s Alpha reliability of all measures ranged between .78 to .89, thus showing sufficient internal consistency. Data was analyzed through SPSS.

To analyze the hypotheses of the study the structural equation modeling of core self-evaluations as independent variable, acquired motivational needs as motivational process and counterproductive work behaviors as the dependent variables was used. Firstly descriptive statistics such as frequency, mean/average, and standard deviation were examined and then the data was analyzed through Structural Equation Modeling, based on two further models i.e. measurement and structural model.

measurement model was analyzed through common factor analysis and confirmatory factor analysis of each latent variable. The results of common factor analysis i.e. mean, standard deviation, square multiple correlations, factor loadings and reliability were examined, whereas confirmatory factor analysis of three latent variables was also done and their interrelationships were analyzed to further develop the initial measurement model. To improve the model fitness/fit statistics the re-specification of initial measurement model was also done through examination of factor loadings, examination of standardized residuals and examination of modification indices. After these examinations, study analyzed the results of final measurement model in terms of standardized regression weight, standardized factor loadings, square multiple correlations, composite reliability and average variance-extracted estimates. The following table shows the results of measurement model.

<table>
<thead>
<tr>
<th>Latent Variables</th>
<th>Retained items of latent variables</th>
<th>SMC Range</th>
<th>St. Factor Loading</th>
<th>IC</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. TCSE (with 8 items)</td>
<td>Cse1, Cse3, Cse6, Cse7, Cse8, Cse9, Cse10 &amp; Cse11</td>
<td>0.25-0.52</td>
<td>0.50-0.72</td>
<td>0.84</td>
<td>0.90</td>
<td>0.50</td>
</tr>
<tr>
<td>2. TSES (with 7 items)</td>
<td>ses1, ses2, ses3, ses4, ses5, ses6 &amp; ses9</td>
<td>0.44-0.62</td>
<td>0.66-0.79</td>
<td>0.88</td>
<td>0.90</td>
<td>0.60</td>
</tr>
<tr>
<td>3. TSEFF (with 8 items)</td>
<td>seff1, seff2, seff3, seff4, seff5, seff6, seff7 &amp; seff8</td>
<td>0.45-0.77</td>
<td>0.67-0.87</td>
<td>0.93</td>
<td>0.90</td>
<td>0.60</td>
</tr>
<tr>
<td>4. TNEU (with 10 items)</td>
<td>nue2, nue3, nue4, nue5, nue7, nue8, nue9, nue10, nue11 &amp; nue12</td>
<td>0.56-0.78</td>
<td>0.75-0.88</td>
<td>0.95</td>
<td>0.90</td>
<td>0.70</td>
</tr>
<tr>
<td>5. TLOC (with 6 items)</td>
<td>loc2, loc4, loc5, loc6, loc7 &amp; loc8</td>
<td>0.25-0.69</td>
<td>0.61-0.83</td>
<td>0.78</td>
<td>0.90</td>
<td>0.50</td>
</tr>
<tr>
<td>6. TNACH (with 4 items)</td>
<td>nach1, nach2, nach3 &amp; nach5</td>
<td>0.21-0.68</td>
<td>0.46-0.82</td>
<td>0.82</td>
<td>0.71</td>
<td>0.70</td>
</tr>
<tr>
<td>7. TNPW (with 3 items)</td>
<td>npow1, npow2 &amp; npow3</td>
<td></td>
<td></td>
<td></td>
<td>0.70</td>
<td>0.70</td>
</tr>
<tr>
<td>8. TCWB (with 6 items)</td>
<td>cwb4, cwb6, cwb7, cwb8, cwb9, cwb10</td>
<td>0.20-0.70</td>
<td>0.42-0.84</td>
<td>0.83</td>
<td>0.90</td>
<td>0.50</td>
</tr>
</tbody>
</table>
Concurrently, specification of structural model was discussed in terms of exogenous and endogenous variables and study also analyzed the results of hypotheses testing. The model fitness or fit statistics of structural model were also provided including Relative/Normal Chi-Square (CMIN/DF), Goodness Fit Index (GFI), Adjusted Goodness Fit Index (AGFI), Comparative Fit Index (CFI) and ‘Root Mean Square Error of Approximation (RMSEA).

To establish CMV in survey data Harman’s single-factor test was applied. The table below exhibits that variance of one factor was 24.58 (out of total variance of 74). This indicates that first factor show 34.62 % of total variance that was lower than the standard 49% tolerance limit of CMV. Hence, it was concluded that no threatening CMV issues were noted in the survey data.

### Table: Total Variance Explained

<table>
<thead>
<tr>
<th>Factor</th>
<th>Initial Eigenvalues</th>
<th>Extraction Sums of Squared Loadings</th>
<th>Rotation Sums of Squared Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% of Variance</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total 24.16</td>
<td>34.03</td>
</tr>
<tr>
<td>Total</td>
<td>34.62</td>
<td>34.62</td>
<td>12.33</td>
</tr>
<tr>
<td>1</td>
<td>24.58</td>
<td>24.16</td>
<td>17.36</td>
</tr>
</tbody>
</table>

Extraction Method: Maximum Likelihood.

**Procedures**

Through floating questionnaires personally, the responses were recorded from university teachers of five major cities in Pakistan including Lahore, Karachi, Quetta and Peshawar and Islamabad.

**Descriptive Statistics**

The total forms distributed were 650, out of which 590 were of use making 91% of recorded response useful. The sample includes 267 females and 323 males. The 3% of respondents were between the age group of 25-30 years, 17% between 30-35 years, 17%, 35-40, 15% 40-45, 20%, 45-50 and 28% fall in 50 years and above. The respondents’ education in number of years recorded shows that 55% had 18 years, 42% had 19-20 years and 3% have above 20 years of education. The descriptive statistics of the items measuring core self-evaluations, motivational needs and employee job performance are displayed along with Mean, SD, Skewness, Kurtosis and Reliability values were also established. Harman’s single-factor test was applied to establish CMV in survey data. The first factor showed 34.62 % of total variance that was lower than the standard 49% tolerance limit of CMV (Podsakoff et al., 2003). Hence, it was established that no threatening CMV issues were noted in the survey data.

**Testing of Measurement Model**

The measurement model comprises of two types of analysis. The first represents common factor analysis while second represents confirmatory factor analysis (CFA).

**Common Factor Analysis**

The first step of measurement model represents common factor analysis. It relates to the verification of all observed variables in order to increase the significance of model involving two procedures; by conducting the common factor analysis of each variable separately and then by conducting the confirmatory factor analysis of all latent variables collectively. The model became complex due to the constituent characteristics of the three selected variables which called for separate common factor analysis of each variable. Further confirmatory factor analysis was conducted for the purpose of cross checking. After completion of both procedures all such items having lower factor loading (FL) and squared multiple correlation (SMCs) were eliminated.

**Analysis of the Data and Results**

It is observable from the personality trait research that no single trait can aptly and comprehensively predict employee job performance behaviors. Additionally, the within individual factors do not exist in isolation rather they are interlinked and have an enduring persistent interaction and influence on each other which results in generating subsequent behaviors (Smith and Schneider, 2004). Yet there is a dearth of research that examines the personality traits interactions
with other factors for predicting behaviors (Smith and Schneider, 2004). The present study is an endeavor to fill this gap in personality traits and employee job performance literature.

Results of the current study exhibit strong association between personality traits and employee job performance behaviors. These results support the findings of the previous studies (Judge and Bono, 2001b; Bono and Judge, 2003; Hough, 2010) suggesting that individuals differ in their personality traits and this difference reflects in difference in their job performance behaviors categorized in the current study as task and non-task performance behaviors.

Similarly literature also suggests that individuals differing in their personality traits also differ in their motivational needs (Barrick, Mount, and Strauss, 1993; Gellatly, 1996; Judge and Ilies 2002; Barrick et al., 2003). Literature further suggests that both personality traits and motivational needs influence different facets of employee job performance in a way that personality traits influence an individual's motivational needs and the collective influence of both variables shape and develop employee job performance behaviors (Erez and Judge, 2001; Ferris, 2008). A summarization of the above findings implies that personality traits influence employee counterproductive work behaviors through the channel of motivation.

Following process models, the core self-evaluations theory also posits that motivation acts as a mediating process between core self-evaluation traits and employee job performance (Judge, Erez and Bono, 1998; Erez and Judge, 2001). Thus drawing upon the established models of performance (Campbell, 1990; Rotundo and Sackett, 2002) and also from assertions by core self-evaluations theorists (Judge, Erez and Bono, 1998) motivation in general is viewed as a mediator factor for predicting employee counterproductive work behaviors. Nevertheless, the forms of motivation differed according to the context specific to the study (Chang et al., 2011).

Erez and Judge (2001) argue that “motivation is a key determinant of employee job performance and employees with high core self-evaluations are more motivated to perform better”. Although the theory suggests significant role of motivation to explain the influence of personality traits on performance: only two studies so far have developed their theoretical framework using motivation as a mediating factor between the two variables (Erez and Judge, 2001; Ferris, 2008). The first study by Erez and Judge (2001) used goal-setting theory to link core self-evaluations traits to employee task performance behaviors. The appropriateness and relevance of goal-setting theory in the specific context of task-performance is evident. Since the task performance relates to the compulsory assigned tasks that are required to be accomplished by an employee (Borman and Motowidlo, 1993) and by applying goal setting theory such tasks can be accomplished more competently. However non-task behaviors representing organizational citizenship behaviors and counterproductive work behaviors that emerge from discretionary/voluntary choices of individuals fall beyond the domain of assigned and compulsory tasks and also beyond the relevance of goal-setting.

The second study applying approach and avoidance motivation framework (Ferris, 2008) as a mediating link between personality and job performance suggests that employee use either approach or avoidance orientation that exhibits in their job performance behaviors representing task and non-task behaviors. Theoretically and conceptually core self-evaluationsavor motivation is more close to approach motivation yet the findings of the study by Ferris (2008) show closeness between core self-evaluations and avoidance motivation. This initiated a debate among the core self-evaluations theorists whether to link core self-evaluations to approach motivation or avoidance motivation (Ferris, 2008; Chang et al., 2011).

The findings of the two motivational frameworks used as mediating channels between core self-evaluations and employee job performance have certain limitations and shortfalls (Ferris, 2008; Erez and Judge, 2001) and thus lack generalizability. This leads to the need to explore and apply other more broad and relevant motivational frameworks for the prediction of employee job performance behaviors comprehensively (Ferris, 2008; Erez and Judge, 2001). Literature has revealed that core self-evaluations research lacks application of need-based theories such as acquired needs theory. The application of acquired needs theory in the current study has significantly explained the core self-evaluations influence on employee job performance.

The acquired needs theory (McClelland, 1961) is an important content theory that explains the vital role of motivational needs in the process of development of employee job performance behaviors (task and non-task behaviors).

The current study has developed its framework using acquired needs theory (McClelland, 1961) as a mediating process to explain the process through which core self-evaluation traits influence employee counterproductive work behaviors (Rotundo and
A model of employee counterproductive work behaviors is presented that analyzes the influence of personality traits on job performance through the acquired motivational needs of the employee. This model explains the development and order regarding the process of the counterproductive work behaviors where the personality traits of core self-evaluations (Self-esteem, Self-efficacy, Locus of control, Neuroticism) influence acquired motivational needs (Achievement Need, Power Need, Affiliation Need) that eventually generate employee counterproductive work behaviors. The proposed framework of this study is supported by the findings and therefore the stated propositions.

3.4 Hypothesis Testing

Testing of the stated hypotheses was done so in accordance with Baron and Kenny’s (1986) description of mediation. A variable functions as a mediator when it meets the following conditions: (a) variations in levels of the independent variable significantly account for variations in the presumed medication (i.e., Path a), (b) variations in the mediator significantly account for variations in the dependent variable (i.e., Path b), and (c) when Paths a and b are controlled, a previously significant relation between the independent and dependent variables is no longer significant, with the strongest demonstration of mediation occurring when Path c is zero.

Hypothesis 1: core self-evaluations will significantly influence motivational needs of employees

Model A: Core self-evaluations as a single trait/construct

The significant relationships between personality traits and motivational needs were established under the hypotheses 1.

Model B: Core self-evaluations as constituent of four core traits

H1a: It was hypothesized that significant relationship exists between self-esteem (MSES) and need for achievement (MNACH). It is evident from the results that with the value of St. Regression weight 0.10 or ($\gamma = 0.10$) with $p<0.05$, there is a significant and positive relationship between MSES and MNACH. Thus the hypothesis is accepted.

H1b: It was hypothesized that significant relationship exists between self-esteem (MSES) and need for power (MNPOW). It is evident from the results that with the value of St. Regression weight 0.30 or ($\gamma = 0.30$) with $p<0.05$, there is a significant and positive relationship between MSES and MNPOW. Therefore the hypothesis is accepted.

H1c: It was hypothesized that significant relationship exists between self-efficacy (MSEFF) and need for achievement (MNACH). It is evident from the results that with the value of St. Regression weight 0.60 or ($\gamma = 0.60$) with $p<0.05$, there is a significant and positive relationship between MSEFF and MNACH. Thus the hypothesis is accepted.

H1d: It was hypothesized that significant relationship exists between self-efficacy (MSEFF) and need for power (MPOW). It is evident from the results that with the value of St. Regression weight 0.72 or ($\gamma = 0.72$) with $p<0.05$, there is a significant and positive relationship between MSEFF and MNPOW. Thus the hypothesis is accepted.

H1e: It was hypothesized that significant relationship exists between neuroticism (MNUE) and need for achievement (MACH). It is evident from the results that with the value of St. Regression weight 0.39 or ($\gamma = 0.39$) with $p<0.05$, there is a significant and positive relationship between MNUE and MNACH and thus the hypothesis is rejected.

H1f: It was hypothesized that significant relationship exists between neuroticism (MNUE) and need for power (MNPOW). It is evident from the results that with the value of St. Regression weight 0.39 or ($\gamma = 0.39$) with $p<0.05$, there is a significant and positive relationship between MNUE and MNPOW. Thus the hypothesis is accepted.

H1g: It was hypothesized that significant relationship exists between locus of control (MLOC) and need for achievement (MNACH). It is evident from the results that with the value of St. Regression weight 0.30 or ($\gamma = 0.30$) with $p<0.05$, there is a significant and positive relationship between MLOC and MNACH. Thus the hypothesis is accepted.

H1h: It was hypothesized that significant relationship exists between locus of control (MLOC) and need for power (MNPOW). It is evident from the results that with the value of St. Regression weight 0.13 or ($\gamma = 0.13$) with $p<0.05$, there is a significant and positive relationship between MLOC and MNPOW. Thus the hypothesis is accepted.

Hypothesis 2: Hypotheses 2: Relationship between acquired motivational needs and employee counterproductive work behaviors.

It was hypothesized that significant relationship exists between acquired motivational needs (MNACH and MNPOW) and employee counterproductive work behaviors. The significant relationships between acquired motivational needs and employee counterproductive work behaviors was established under the hypothesis 2.
H2a: It was hypothesized that a significant relationship exists between need for achievement (MNACH) and employee non-task performance behavior of counterproductive work behavior (MCWB). It is evident from the results that with the value of St. Regression weight -0.34 or ($\gamma = -0.34$) with $p<0.05$, there is a significant and negative relationship between MNACH and MCWB. Thus the hypothesis is accepted.

H2b: It was hypothesized that significant relationship exists between need for power (MNPOW) and employee counterproductive work behaviors (MCWB). It is evident from the results that no significant relationship exists between MNPOW and MCWB. Thus the hypothesis is rejected.

**Hypothesis 3: Motivational Need act as a mediator between core self-evaluations traits and employee counterproductive work behaviors**

For the requirement of mediation analysis, AMOS produces Standardised Indirect Effect (St. IE), Standardised Error (St.Err) and the Bollen-Stine p-value (two tailed significance (BC) of indirect effects) for the indirect effect for the significance. Hence examine the mediation effect between two variables and to obtain the test of significance for the indirect effect, $p$-value should be $< 0.05$.

According to the results of mediation analysis of H3a, the standard error for the regression coefficient (i.e. St. IE) 0.546 is thus 0.042 (i.e. St. Err). It is evident from the results that the $p$-value for the standardized indirect effect is equal to 0.00, indicating that it has sufficient evidence to reject the null hypothesis of no mediation (or accept the alternative hypothesis of mediation) as it is recommended by Denis (2010) that to obtain the test of significance for the standardized indirect effect, $p$-value should be $< 0.05$. It is evident from the result of H3a, the motivational need (MMNs) act as a mediator between core-self-evaluation (M Core self-evaluations) and counterproductive work behaviors (CWB). Similarly, all remaining hypotheses of mediation test are also accepted.

### Table: Summary of all Hypotheses Results of Model A

<table>
<thead>
<tr>
<th>Model B</th>
<th>Hypotheses</th>
<th>Structural path(s)</th>
<th>St. Regression Weight/co-efficient</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Direct relation between personality traits and motivational needs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1a</td>
<td>Self-esteem has significant influence on need for achievement</td>
<td>MSESS $\rightarrow$ MNACH</td>
<td>-0.10 ($p &lt; 0.05$; significant)</td>
<td>Accepted</td>
</tr>
<tr>
<td>H1b</td>
<td>Self-esteem has significant influence on need for power</td>
<td>MSESS $\rightarrow$ MNPOW</td>
<td>0.40 ($p &lt; 0.05$; significant)</td>
<td>Accepted</td>
</tr>
<tr>
<td>H1d</td>
<td>Self-efficacy has significant influence on need for achievement</td>
<td>MSEFF $\rightarrow$ MNACH</td>
<td>0.60 ($p &lt; 0.05$; significant)</td>
<td>Accepted</td>
</tr>
<tr>
<td>H1e</td>
<td>Self-efficacy has significant influence on need for power</td>
<td>MSEFF $\rightarrow$ MNPOW</td>
<td>0.72 ($p &lt; 0.05$; significant)</td>
<td>Accepted</td>
</tr>
<tr>
<td>H1g</td>
<td>Locus of control has significant influence on need for achievement</td>
<td>MLOC $\rightarrow$ MNACH</td>
<td>0.30 ($p &lt; 0.05$; significant)</td>
<td>Accepted</td>
</tr>
<tr>
<td>H1h</td>
<td>Locus of control has significant influence on need for power</td>
<td>MLOC $\rightarrow$ MNPOW</td>
<td>0.13 ($p &lt; 0.05$; significant)</td>
<td>Accepted</td>
</tr>
<tr>
<td>H1j</td>
<td>Neuroticism has significant influence on need for achievement</td>
<td>MNEU $\rightarrow$ MNACH</td>
<td>0.34 ($p &lt; 0.05$; insignificant)</td>
<td>Rejected</td>
</tr>
<tr>
<td>H1k</td>
<td>Neuroticism has significant influence on need for power</td>
<td>MNEU $\rightarrow$ MNPOW</td>
<td>-0.40 ($p &lt; 0.05$; significant)</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model B</th>
<th>Hypotheses</th>
<th>Structural path(s)</th>
<th>St. Regression Weight/co-efficient</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>H2</td>
<td>Direct relationship between motivational factors and job performance behavior(s)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H2a</td>
<td>Need for achievement has significant impact on counterproductive work behavior</td>
<td>MNACH $\rightarrow$ MCWB</td>
<td>-0.34 ($p &lt; 0.05$; significant)</td>
<td>Accepted</td>
</tr>
</tbody>
</table>
Discussion and Conclusion

Employee's personality traits and motivational needs significantly influence their counterproductive work behaviors (Judge et al., 1997; Erez and Judge, 2001). Despite the fact that literature affirms a significant correlation between three variables, in reality most organizations simply fail to consider their importance while making important hiring, firing, placement, promotion and training and development decisions which adversely effect the overall organizational performance. Likewise, mostly employees are also unaware of their personality traits and motivational needs and in practical life this unawareness reflects negatively in their career choices and performance behaviors.

Given to the new challenges, threats and changing nature of jobs and organizational structures, the practical utility of the findings of the current study has increased in many folds. Since organizations are developing more reliance on their employees, a clear understanding of the employee traits and motivational needs becomes more essential than ever before for the prediction of outcome behaviors. For optimal utility, it is important to incorporate this knowledge for selection, placement, promotions and training and development decisions for various positive organizational outcomes.

According to the theoretical groundings and related influences the results of the current study affirmed that employee counterproductive work behaviors are influenced by the personality traits of core self-evaluation and acquired motivational needs. Therefore, it is concluded that core self-evaluation traits and acquired motivational needs influence and shape employee counterproductive work behaviors.

For example employees with high self-esteem trait positively capitalize on their motivational need for achievement by refraining from activities that are harmful for their organization i.e. counterproductive work behaviors.

The present study's results show that an individuals’ self-view in form of core self-evaluation traits, significantly influences their non-task behaviors such as counterproductive work behaviors, while the three acquired motivational needs with different level of intensity are found significantly linking core self-evaluation traits with the counterproductive work behaviors.

Therefore, the current study due to the significant validity of its results has offered a within individual perspective through examining the interrelationships of core self-evaluation and acquired motivational needs on counterproductive work behaviors. The study also validate the previous findings that employees with high Core self-evaluation traits are more motivated (Ferris et al., 2011) to capitalize on their specific acquired needs for the optimum display of task and non-task performance behaviors. Likewise, employees with low Core self-evaluation traits react negatively to their specific acquired needs that reflect in form of counterproductive work behaviors.

Limitations

This research is groundwork to study the link between core self-evaluation traits and employee task and non-task behaviors using theoretical framework of acquired motivational needs. Yet in a single study, it is not empirically possible to examine every single variable influencing employee non-task performance behaviors. Thus positivist approach (Lee, 1991) is used for this study that allows selection of few exogenous variables out of numerous variables that influence the endogenous variables. Therefore the within individual factors of Core self-evaluations, need-based motivation and employee non-task are the main focus of the study. The study examines only the key relationships among selected variables of the study’s research-model.

This study is limited to the university teachers in public and private universities in five major cities of Pakistan. Another limitation relates to the cross sectional approach of this research that limited the scope of findings of the study. For instance, the effects of gender regarding employee job performance process may have been taken into consideration but due to the limited scope could not be included in the current study.

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Table: Result Summary of Mediation Analysis of all Possible Paths

<table>
<thead>
<tr>
<th>Hypotheses Structural Path(s)</th>
<th>St. Indirect Effect</th>
<th>St. Error</th>
<th>Two Tailed Significance (BC) of Indirect Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>H3 Indirect relation between personality trait &amp; employee counterproductive work behavior(s) through motivational needs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MCSE → MMNs → MCWB</td>
<td></td>
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<td></td>
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</tbody>
</table>

Contributions for Research and Practice

Regardless of different limitations, this study is extending a range of notable theoretical and practical contributions to core self-evaluations-employee job performance literature. The study attempted to develop and test a model that examined the influences of personality traits and motivational needs on the development of employees’ counterproductive work behaviors among the university teachers in Pakistan. The results of the current study are the landmark for understanding the need-based motivational process of employee counterproductive work behaviors in the context of within individual factors.

The current study verified the results of the previous studies as well as added need-based perspective to examine the association between Core self-evaluations and counterproductive work behaviors. By incorporating acquired motivational needs as a mediating mechanism this study has also endeavored to answer the call of core self-evaluation theorists to conduct more studies examining Core self-evaluations relationship with counterproductive work behaviors as well as applying new theories that could more aptly explain the relationship between the two variables.

The research focusing on mediating mechanisms is still scant (Hough, 2010). This study is unique also because for the first time acquired needs motivations are used as a mediating mechanism to explain the influence of personality traits of core self-evaluation on employee counterproductive work behaviors simultaneously.

In terms of practical implications the study offers a guideline for proximal understanding, prediction and prevention of counterproductive work behaviors by describing the link between employee traits and motivational needs with the counterproductive work behaviors. Therefore, managers and policy makers can benefit from the findings of this study simultaneously.

Future Recommendations

The results of the study also demand for further research. Significant areas that require follow-up research include extension of job performance model regarding improving generalizability, longitudinal studies, development of a comprehensive model, and incorporating other personality characteristics and behavioral processes in the future research in this domain.

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A STRATEGIC APPROACH TO DRIVE GRASS-ROOT AND RURAL BUSINESSES TOWARDS TRENDING CONSUMER DEMANDS

Spandana Paluri
Raghuveer R

ABSTRACT

In the current economic setting there is a huge upspring of small and rural businesses and most of them tend to be investing in consumer products, agricultural and other small businesses that require minimum capital investment. While the market demand for some of the goods produced by these industries is considerably high, whether or not these businesses would sustain with the ever-changing consumer demands continues to remain a big question.

Consumer behavior and market demand become critical factors for sustenance and growth in the market. It is important to cater to the changing consumer demands and address the requirements of the end-customer in today’s competitive market. Failure to understand and satisfy these needs might result in break-even or loss thus pulling down these businesses below the profit-making margin, thereby ruling out the possibility of the idea of revenue and profit generation. This in turn affects employment, inventory costs, costs for fixed assets and other expenditure.

In order to make these business groups aware of the constant shifts in the consumer industry, there is a dire need to enable them with knowledge on investment patterns, supply-demand ratio and more so to suggest mechanisms for capacity building and encourage the use of technology wherever possible to improve their chances of succeeding in the growing economic pool.

While there are currently functioning mechanisms to address some of these challenges, this paper proposes a three step strategic approach - ‘Interest, Involve and Invest’ to encourage the grass root investors to tap the trend in the industry and invest wisely thus enhancing their chances of succeeding in the market and catering effectively to the constantly changing consumer demands.

Key words: Grass-root, consumer-behavior, rural-businesses, strategic-approach, capacity-building

Introduction

Rural businesses are those which are generally built around a small investment and are managed by an individual or group of individuals. There are a number of such businesses which perform fairly well and gain profits. But, at the same time a number of them have been unable to sustain the tough market conditions and have been scraped down. One of the primary reasons for such failures is the dynamically changing consumer behavior. The urban population is highly influenced by the latest trends in the industry, and given the increasing utilization of technology and sophisticated machinery for the production of goods, hundreds of new products are being churned out everyday which are capturing the attention of the consumers. Due to this tough competition, the rural ventures are taking a huge blow as they are mostly unaware of the demand curve of the urban population.
Grass-root and Rural Businesses – Existence and Know-hows

The owners of these small businesses are mostly villagers, who are manufacturing these products for their livelihood with limited access to technology and machinery. They have not had enough exposure to the ways of the urban-metro population. Hence most of them are unable to assess the mind sets of their end users and are manufacturing products which may not have an appeal with the target groups.

Be it in case of agricultural goods, handlooms and handicrafts, food processing etc, there is a need for these business owners to cater to the current trends by bridging the gaps in demand and supply. With an awareness of the products which are likely to hit the bull's eye, the manufacturers can adopt various approaches like making some modifications to their current products, gaining knowledge of their possible target groups etc. to improve the product value. As these industries start thriving, there will be a number of ventures following suit. This will provide more job opportunities to the villagers, eventually helping them to lead a self-sufficient life.

Sustainability of businesses in the current Economic Setting

Since these businesses are managed by rural investors with limited investments, they are in need of funds either through governmental partnerships or external investors in order to sustain their business. Once their products start selling fairly well in the market and start generating revenues they can be financially secure and increase their produce.

This increase in demand for the products can happen through proper analysis of the demand curves and by giving the consumers what they need most. Failure to do so could result in break even, and eventually lead to losses and scraping down of these ventures.

Consumer Behavior in today’s Context

With rapidly changing technology, there are hundreds of new ideas being implemented every day, resulting in varied products. There is a constant urge among consumers to be upgraded to the best and smartest of the products used in their daily life. This could be either out of want for a better and more comfortable life style or simply to be in line with the trend. Whatever may be the reasons, this race for grabbing the best, cost effective and simplified products results in major shifts in the demands of the consumers.

There is a need to analyze these changes and adapt an approach of foreseeing the future demands of the end users. As the current Indian government’s pet campaign - ‘Make In India’ is being widely accepted by the public, rural investors can tap into this momentum and widen their market share in daily use products like toothpastes, cosmetics, clothing, food products etc.

Analysis and Discussion

In order to identify the areas where these rural businesses can increase their profits, we have conducted case studies with respect to some industries. This analysis will make investors aware of the strengths, weaknesses, opportunities and threats of their business and help them in tapping the market potential in the best possible way.

Below are few scenarios which have been observed, wherein with a better understanding of the customer demands, the products can achieve a bigger market share. The SWOT analysis has been used to detail the findings.

SWOT Analysis

- **Strengths:** The benefits of using these products and the reasons why these ventures can expect a higher profit rate by analyzing the demand – supply graph.
- **Weaknesses:** The gaps in understanding the demand-supply ratio, that are leading these ventures to scrap down.
- **Opportunities:** The scope of success of these products and the increasing demand in likely target groups
- **Threats:** The losses and threats to these ventures by external sources, if they do not follow a more analytical approach in their operations.

Case Study I

There are hand made cell phone pouches available in the markets which are made of jute and cotton. These pouches are attractive and are economical. But due to the advent of smart phones and tablets which are bigger in size when compared to an average mobile, the pouches are unable to accommodate them. With a better understanding of the shapes and sizes of the new age mobiles, the makers of these pouches can customize them accordingly.

Since these products will be affordable to a wide population, when compared to the costlier leather pouches, demand for these will eventually rise and generate profits.
**Case Study II**

There is a rise in health consciousness among the urban working population today. They want to consume toxic-free fruits and vegetables in order to avoid the side effects induced by too many chemicals in food products. Hence, the rural farmers can focus their farming skills into organic farming and capture the attention of the consumers by effective marketing of their products. This is a venture that could have a high success rate as there is huge demand for these produces currently. Presently, there is only a minimum percentage of the farming community which has moved to this mode of agriculture. There is a need to supply more organic products in the market as consumer demand for the same is rising.

<table>
<thead>
<tr>
<th>Strength</th>
<th>Weakness</th>
<th>Opportunity</th>
<th>Threat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health benefits due to toxic-free foods</td>
<td>The toxic-filled agricultural produce has a declined interest among the consumers who are more driven towards a healthy intake in their daily life</td>
<td>Definite success rate as there is an increasing trend towards consuming organic produces among all the age groups in urban areas</td>
<td>Lack of sufficient quality organic produce could result in customers using imported organic foods. The local organic producers may eventually lose their market value, thus resulting in losses</td>
</tr>
</tbody>
</table>
Case Study III
While changing product base is important in some cases, in other cases a change in marketing strategy is required to drive the business growth, leading to a profitable market value.
For instance, the cosmetic industry is major revenue grosser and is one of the biggest markets in this generation. Most of the hair and skin care products which are successful today use extremely harsh chemicals which gradually cause irreparable damage when used for a long period. Though there are some herbal products in the market already, not all of them are being used widely. With proper marketing strategies and by explaining the damage the artificial products can cause, these small scale ventures can make larger profits and flourish.

<table>
<thead>
<tr>
<th>Strength</th>
<th>Weakness</th>
<th>Opportunity</th>
<th>Threat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affordability and greater benefits due to natural products</td>
<td>Lack of awareness created among public about the benefits of herbal products</td>
<td>Definite success rate as the cosmetic industry is ever growing and people are increasingly inclined towards using herbal products for their cosmetic care.</td>
<td>There are hundreds of cosmetic brands introduced in the market everyday. These pose serious competition to the herbal products, if proper strategies are not used to promote the rural ventures</td>
</tr>
</tbody>
</table>

Approach & Methodology
An immediate shift in the mindset of the people running small rural and grass-root businesses is difficult to achieve. But at the same time not being mindful of the demand shift in the market is going to affect the profits and revenue. It may also pose a serious threat to the sustenance of the business and may impact the livelihood of the dependents.
Keeping in mind the underlying aspects, this study proposes a strategic approach to deal with the changing consumer demands. A well-defined methodology is being proposed to help follow a phased approach to building a sustainable business by way of constant demand-listening and intelligent-investing in areas that make sense at times of shifts and changes.
The phased approach comprises of three key activities namely — Interest, Involve and Invest which forms the basis for the proposed 3-I Strategic Framework meant to create interest in the rural businesses by involving them in real-time scenarios and thereby encouraging them to invest wisely by tapping the trend in the market.

Fig:1 The 3-I Strategic Framework
The 3-I methodology is detailed below with emphasis and proposed activities and tasks within each of the Interest, Involve and Invest phases.

**Phase 1: Interest**

It is very essential for a grass root investor to understand why his/her business is not making profits to take any further corrective actions. So, there is a need to create anxiety and interest in them to be able to understand as to what is going wrong. In order to create such interest in them to understand the issues leading to the fall in demand certain actions can be implemented as discussed below.

- **Sharing a success story:** The groups can be educated about other possible groups for whom the change in strategy worked or about someone who benefitted by listening to the changing consumer behavior. This can occur by means of simply showing facts and figures or by having someone share their personal experiences or through other relevant and impactful resources.

- **Demonstrating a case study:** The groups can be made aware of the impact, consumer behavior has in the market. This can be done by showing practical working scenarios, results from research done in their community or a community of the same stature and relevance. Visual cues can be great candidates to invigorate the interest in the rural groups to seek this mechanism.

**Phase 2: Involve**

After inducing interest about the changing consumer demands and creating awareness about the falling revenue trends, it is important to give an initial feel of the working case by sheer involvement. Some actions as listed below can be taken to facilitate involvement of the groups in the proposed business scenarios.

- **Setting up a prototype:** A mock-up of the actual can be set-up to assess the performance and results of the future investment. This would give an opportunity for the grass root businesses to see the impact for themselves and also provide scope for further refinement and improvement by employing their creative thoughts and proven processes as appropriate.

- **Showing on-the-ground scenarios:** Taking the groups to witness the real-time on-the-floor scenarios, be it in an urban setting or a market would convince the groups that such an investment would be of great benefit. It will also give an open networking opportunity for them to interact with buyers and other industry contacts thereby opening up avenues for sales.

**Phase 3: Invest**

The interest and involve phases would have been strong advocates in urging the groups to make an investment in the new proposed lines. After getting insights on why something would work and after having had an initial prototyping experience, the groups would now by far be in the verge of investing and seeing the difference for themselves. Here are some steps that might help them in this phase:

- **Establishing linkages and partnerships:** After doing a great deal of homework and investing in the prospect of making profits, it is important to also find markets where the new products/services would be in demand. Linkages can be established with several market establishments where there might be a very high scope for sale of such products. Also partnering with industries that specialize in those products would greatly help market and ultimately bolster their sale.

- **Identifying financing firms:** Helping the groups identify firms that offer financing for rural businesses and thereby helping the economy grow thus in-turn supporting them to improve their standard of living, is a suggested step. Creating awareness about existing or proposed governmental policies, identifying venture capitalists who might be interested to invest in these businesses and other organizations that might support with the initial capital would further help the businesses become more confident.

This phased 3-I Framework would systematically help the rural and grass-root businesses in a proper manner progressing step-by-step and helping them make decisions one after the other. It will also enable and empower them to be more vigilant of any potential risks and take necessary corrective actions much ahead in the process.

**Results**

The proposed 3-I Strategic Framework may create a strong impact on the businesses, but there has to be a standard way of measuring the impact and the results of applying the framework. This section lists certain important measurement parameters to gauge the impact...
of the proposed methodology. Each of these parameters can be measured before and after applying the strategy giving sufficient time for the new approach to start showing results.

- Annual Revenue of the involved groups
- Annual rate of increase in profits
- Market demand for the products/services
- Rate of increase in production rate
- Rate of increase in consumption rate
- Demand vs Supply Curve

These besides other selective customized parameters will be useful in determining the amount of impact as a result of applying the strategic framework.

Conclusion

In conclusion, it is important for the rural and grass root businesses to stay abreast of the latest trends in the market and consumer demand in order to stay competitive and sustainable in the market. There is a need to follow a systematic approach to achieve this. The 3-I strategic framework model proposed in this paper provides a proper phased systematic methodology to go about this task. Creating interest, encouraging involvement and thereby triggering investment would definitely help rural businesses to make intelligent decisions, the results of which can then be measured by the listed parameters.

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Disclaimer: The opinions listed in this paper are our own and do not reflect the opinions of our respective affiliations.
A CASE STUDY OF THE INDIAN ORAL CARE MARKET: MARKETING STRATEGIES AND IMPLICATIONS

Anupama Ghoshal
Dr. Soney Mathews

ABSTRACT

The paper discusses in case study format the marketing strategies of key brands in the Indian market dominated by Colgate, Pepsodent, Close-Up, Dabur etc. The case describes the contemporary events, challenges and opportunities prevailing in the Indian oral care segment with the presence of other niche brands as well. The case also outlines the implications of the factors affecting the marketing strategies for the brands in the contemporary marketing context when targeting the Indian consumer. The present case study can be used for classroom discussions in marketing, strategic marketing and consumer behavior to describe the strategies of the fast moving consumer goods (FMCG) players in the contemporary Indian market. The content of the case study can also be used to further develop detailed cases on the individual brands competing in the oral care space.

Keywords: oral care, consumer, niche brands, consumer behavior.

Introduction

India is considered to be an important market for consumer products. The rural and urban consumer is attracting a host of players into the Indian market. The Indian consumer spending is expected to double by 2025. The Indian consumer growth story is based on a young demographic population that is likely to yield demographic dividend for the country. Thus consumer products have been forecasted to have a bright future backed by affordability and rising incomes.

The country is expected to become the fifth largest consumer economy by 2025 as estimated by McKinsey Global Institute (MGI). As per the report prepared by Deloitte, India is expected to become the largest middle class consumer segment globally with an estimated spend of about US $13 trillion by 2030. The fast moving consumer goods (FMCG) market is expected to grow at a compound annual growth rate (CAGR) of 14.7 per cent to US$ 110.4 billion during 2012–2020, with the rural FMCG market expected to grow at a CAGR of 17.7 per cent to US$ 100 billion during 2011–2025 (http://www.ibef.org/industry).

The Indian Market

The Indian oral care market has been estimated to be almost worth Rs. 7000 crore. The market is composed of national and regional players (http://articles.economictimes.indiatimes.com). The oral care system is an important aspect of consumer demand in the consumer products space. The oral care market of the country is considered to be at a nascent stage which provides huge opportunities for growth of the market with premium offers in oral care solutions. The marketing strategies of key brands in the Indian market dominated by Colgate, Pepsodent, Close-Up, Dabur etc highlights the challenges and opportunities prevailing in the segment dominated by consumer preferences for traditional modes of oral care that is influencing the value package from oral care brands. Oral care category players continue to focus on toothpaste with supplementary benefits like sensitivity protection, tooth whitening and complete gum care to achieve market success. For example, Colgate-Palmolive India Ltd launched Colgate Total Pro Gum Health Toothpaste in January 2013 for gum care and
Colgate Visible White in April 2013 for whitening of teeth. Colgate-Palmolive India Ltd has been a relentless player in the urban and rural markets of the country that helped it garner a 46% value share in 2013. The company also has a value share of 48% in toothpastes and 41% in toothbrushes. In 2013, Colgate-Palmolive India Ltd launched Slim Soft, a toothbrush with thin bristles for better cleaning (http://www.euromonitor.com).

**Oral Care Category**

The oral care category is commonly segmented into broadly five product categories that include toothpaste, toothbrush, toothpowder, mouthwashes and dental flosses. Oral care chewing gums are also sometimes considered an integral product of the category as well. Toothpaste segment accounts the maximum share in the oral care market (http://www.news.kenresearch.com). The oral care market is expected to grow to become an INR131 billion market by 2018. Some of the factors that are expected to contribute to the growth story include the aggressive marketing campaigns undertaken by the oral care brands in the category to increase awareness of oral care products, developing strategies to increase rural market adoption and expanding the product portfolio of oral care variants in leading companies. Companies who are marketing oral care products and brands are trying to increase awareness of their brands by educating consumers about good dental hygiene through television advertisements and building a campaign that promotes the benefits of brushing twice a day (http://www.euromonitor.com).

The Indian consumer has to be won with the twin challenge of providing oral care product ranges that are both affordable and compatible with the needs of the segment. The present case describes the contemporary events, challenges and opportunities prevailing in the Indian oral care segment with the presence of other niche brands as well. The case also outlines the implications of the factors affecting the marketing strategies for the brands in the contemporary marketing context when targeting the Indian consumer.

Since time immemorial, Indians have been managing their oral care regime traditionally with Neem (Azadirachta Indica), ash, salt mixed with oil etc. Cloves and white sesame seeds have been popular to control toothache and gum problems.

**Product Category Classification**

The oral care segment can be broadly classified into toothpastes, toothbrushes, mouthwashes, mouthwashes/dental rinses, denture care, mouth fresheners, tooth whiteners and dental floss as illustrated below (http://www.euromonitor.com).

- **Toothpastes**
- **Toothbrushes**
  - Manual Toothbrushes
  - Power Toothbrushes
    - Battery Toothbrushes
      - Battery Toothbrush Replacement Heads
      - Battery Toothbrush Units
    - Electric Toothbrushes
      - Electric Toothbrush Replacement Heads
      - Electric Toothbrush Units
- **Mouthwashes/Dental Rinses**
- **Denture Care**
- **Mouth Fresheners**
- **Tooth Whiteners**
- **Dental Floss**

**Marketing & Merchandising**

**Toothpastes**

The oral care market dominated by brands like Colgate, Pepsodent, Close-Up etc are being merchandised along with other brands like Listerine, Sensodyne, Parodontax, Vicco, Dabur etc where toothpastes, mouthwashes, dental floss, toothbrushes are exhibited together to offer a comprehensive oral care solution. The pictures in Figures 1, 2 & 3 illustrate how the oral care stock keeping units (SKUs) are being positioned in the retail shelves.

The retail shelves can be seen to be typically stocked with popular brands like Colgate, Close-Up, Pepsodent, Sensodyne, Parodontax etc. As can be seen from Figure 1, the retail shelves are typically stocked with the contemporary oral care product variants offered by the leading brands to encourage choice and purchase. Since there is a scope for a lot of impulse purchase in this segment, so the merchandising of the oral care brands would be planned keeping the product category and the usage needs of the consumers in mind. The consumption system of the consumer comprising of toothpastes, toothpowders, toothbrushes and mouthwashes are likely to be found in the same area of retail shelves.
Thus, as seen from Figure 1, different brand variants of toothpastes can be seen to be stocked alongside each other to encourage brand visibility among consumers to stimulate choice and preference. Vertical and horizontal package placements aid visual appeal in the shelves. The sales promotional offers for the SKUs work the last mile to encourage the customers to pick up their preferred brands of toothpastes for purchasing.

**Toothbrushes**

The oral care segment is a total care of the oral needs of consumers as highlighted earlier that includes toothpowders, toothpastes, mouthwashes and various kinds of toothbrushes. The usage of toothbrushes for cleaning the teeth has been considered to be an integral aspect of oral care routine. The toothbrush category has also seen the inroads of electronic toothbrushes that promise both convenient and effective cleaning for the user. As a category of product, toothbrushes have been given immense attention by oral care brands like Oral-B, Colgate, and Pepsodent etc. Advertisements about toothbrushes in general can be seen that focus on highlighting the importance of type and design of toothbrush bristles that are a means to effective cleaning of teeth for preventing caries, cavities and other gum problems.
As can be seen from Figure 2, packaging of toothbrushes can be seen in the market that have been done with the twin objectives of encouraging impulse purchase and also communicating value to the consumer through the use sales promotional schemes like ‘Buy 2 Get 1 Free’, ‘Saver-Pack’, or even simple discounts on the maximum retail price (MRP).

The toothbrush category has also seen the brands offering toothbrushes for different segments of consumers based on age. Some of the key players in the toothbrush space include Oral-B, Colgate, Pepsodent and Johnson & Johnson who offer different varieties of toothbrushes to cater to both the adult and children segments as can be seen from Figure 3.

![Figure 3: Merchandising of toothbrushes for both adults and children. Source: Courtesy Health & Glow.](image)

Toothbrushes for adults and children come in different shapes, bristle types and design. Children toothbrushes are often cobranded with fairy or comic characters like Barbie, Spider-Man, Superman, Ben-10 and Mickey Mouse etc. As can be seen from Figure 3 the retail shelves stocking toothbrushes would often include toothbrushes for both adults and children. Johnson & Johnson provides toothbrushes for very young children that can be seen displayed with other children toothbrush brands from Colgate, Pepsodent and Oral-B.

Mouthwashes
Mouthwashes today figure prominently within the range of products offered by contemporary oral care marketers. As can be seen from Figure 4, mouthwashes typically are likely to be found stocked and displayed along with toothbrushes and sometimes even with toothpastes.

![Figure 4: Mouthwashes from different brands. Source: Courtesy Health & Glow.](image)

Some of the main brands that dominate the mouthwash category are Listerine & Colgate. Listerine and Colgate have different variants of mouthwashes that promise different tastes and effectiveness to suit different consumer tastes and preferences.
Typically, consumers contemplating purchase of mouthwashes go through the dilemma of approach-avoidance motivational conflict as the positive aspects of mouthwashes get compared with negative aspects of the sharp, prickly & tangy taste of the liquid that is considered by a lot of people as generally distasteful despite the benefits promised for oral hygiene. Contemporary mouthwash brands have made newer formulations with to suit consumer tastes and preferences better. Consumers in the contemporary market can choose from a broad range of mouthwash formulations that have varieties of color, taste and benefits.

As can be seen from Figure 5, most of the oral care products, categorized for both adults and children get displayed alongside each other as the products are holistically required for oral care and hygiene. Thus different varieties of toothpastes for both adults and children can be seen in shop displays. Toothpaste brands are available across chemical, herbal and ayurvedic formulations to suit different customer needs and wants. Dabur, Himalaya, Vicco, Colgate and Pepsodent and Close-up remain some of the major brands that can be found across a majority of retail outlets in the country.

Different toothpaste brands exist in the market that promises various benefits. Cosmetic benefits of shiny teeth and fresh breath are meant to encourage purchase among young and socially active consumers.

Dental care for prevention of tooth decay, pyorrhea, swollen gums, bleeding gums and toothache remain the core proposition of most of the toothpastes, toothpowders and mouthwashes. Dental flossing as advised by dentists is one of the reasons that dental floss products get purchased by some consumers.

Market Developments

Colgate-Palmolive, Hindustan Unilever and the lone Indian player in the big league, Dabur, have widened their reach to almost all rural and urban markets and slashed entry-level prices to Rs 5 and Rs 10 — hitting local brands on their home turf. Also, multinationals like Procter & Gamble (P&G) and GlaxoSmithKline (GSK) entered the oral-care market recently, increasing competition.

Dabur has 11% market share in the country’s oral-care market. Dabur Red toothpaste is the fastest growing brand in the market with 17% annual growth rate. The brand crossed the Rs 200-crore mark in 2013. Companies such as Dabur and Hindustan Unilever (HUL) have doubled their rural reach over the past couple of years to grow their market share. Market leader Colgate, too, increased its share in the toothpaste segment to 54% last year, from 51% in 2011.

Big players in the oral-care space also wooed consumers with value-added products that offer extra benefits at a small premium to the basic white toothpaste that most regional players sell. The successful entry of
P&G and GSK to the market since 2011 also affected small regional players. GSK’s Sensodyne has 2.3% share in the Indian oral care market, while P&G’s mass brand Oral-B has a market share of 30 basis points in the first six months of its launch. Sensodyne has crossed Rs 100 crore in annual revenues and leads the sensitive toothpaste category with a 27% market share.

Localized taste, rising awareness, innovative retail display and aggressive advertising helped establish the Sensodyne brand (http://articles.economictimes.indiatimes.com)

Consumer socialization starts from the childhood of a consumer. Intergenerational brand transfer for toothpastes and toothbrushes influence the choice and preferences of young consumers. Dentists and doctors influence cosmetic and dental care regime among consumers. Oral-B has been able to encourage a lot of dentists to recommend the brand among their patients ranging from adults to children. There is a lot of importance given to personal grooming of consumers in the contemporary social setting. Personal grooming is considered to be a means for attaining self-confidence and professional success along with social visibility. Thus for personal grooming, oral care is considered to be an integral aspect to obtaining a shiny and health set of teeth to accompany a fabulous smile that can give enormous self-confidence to consumers. Hence, oral care segment products become important products to aid and enhance personal grooming. Thus the country can see substantial growth of the oral care products provided marketers can develop and market different brands that can be suitably compatible with the needs, wants and preferences of the contemporary Indian consumer mindset.

Some of the key strategies of the Indian oral care market players have been:

- **Colgate-Palmolive**

  Colgate-Palmolive is the market leader in toothpastes in India. The company had a share of slightly over than half of the market since 2010 till date (http://www.trefis.com). The company has increased focus on its marketing mix like increasing the frequency of innovative product launches, structuring affordable pricings, and increasing its distribution strength. The company also increased its advertising and promotional spend by thirty one per cent in the first half of 2013 leading to a market share of around fifty six per cent.

  There is strong brand recognition of Colgate in the Indian market. The Colgate brand has almost been synonymous with toothpastes in the country. Colgate has achieved the second global ranking after Coca Cola, for being bought by almost sixty five per cent of the world’s households (http://www20.gencat.cat). It has also been considered to be a brand that is bought by more than half the world’s households. In fact Colgate is a brand that features among the thirteen brands belonging to the ‘Billionaire Club’ as per the Kantar Worldpanel ranking.

![Figure 6: Contemporary market developments.](http://articles.economictimes.indiatimes.com)

*Source: http://articles.economictimes.indiatimes.com.*

The key influencers of the oral care category products remain families, dentists and store salespeople.
The implication is that Colgate is among those brands that get chosen by consumers more than one billion times in a year and so belong to the ‘Billionnaire Club’. The brand distributes its toothpastes across almost 4.5 million outlets across India. The brand focuses on selling more in rural markets as compared to P&G and Unilever that concentrate selling toothpastes in the urban areas. In the rural areas, the rising awareness about oral hygiene is driving a strong growth in oral care. Colgate has almost ten brand extensions of its Colgate Sensitive brand. Thus the company is well equipped to take on challenges in the sensitive toothpaste category that is considered to have a high growth potential. About forty five per cent of Colgate’s revenues come in from the oral care division while P&G and Unilever earn less than five per cent of their revenues from oral care products. The strategic importance of oral care for Colgate is likely to help the division attract more resources and investments from the company to maintain its strength in the markets (http://www.financialexpress.com).

It is expected that Colgate will continue to be among the top players in the Indian oral care market. The brand is expected to remain the market leader in India backed by high levels of advertising and promotional expenditure.

Unilever

Ever since 1994 Unilever has been present in the Indian oral care market with the two major brands of toothpastes, namely ‘Close-up’ and ‘Pepsodent’. The company has been persistent in its marketing effort with several efforts like re-launches, educative campaigns and heavy offline advertising. The market share reduced from about twenty six per cent in 2010 to about twenty two per cent around 2013. The company has also done some comparative advertising against its close competitor Colgate.

Procter & Gamble

Despite high growth in India’s oral care industry, P&G has not been able to build a significant presence in the market. Until 2012, the company was present in India’s toothbrush segment only, which constitutes less than twenty per cent of the oral care market in the country. P&G entered the toothpaste segment in July 2013 with the launch of Oral-B Pro-Health. The company managed to get only about 0.2 per cent share in toothpastes in the first month. P&G launched the Smile India campaign by endorsing the famous Indian actress, Madhuri Dixit-Nene, for the Oral-B brand and driving sales of the new toothpaste. P&G’s products are renowned worldwide for their functional properties. P&G focuses more on selling the product in urban areas, where consumers are trading up from regular to functional toothpastes.
The Indian oral care sector is going to see many more product variants being launched to stimulate consumer interest. Marketing efforts and strategies from Indian and multinational companies in the oral care segment will drive category growth and development in the mass, popular and premium ranges as can be seen from Figure 8. The final beneficiaries are expected to be the consumer who will have a lot of choices for their oral care and hygiene needs.

REFERENCES

EFFECTS OF JOB STRESS ON ACADEMICIANS

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ABSTRACT

Stress is our body’s way of responding to any kind of demand. It can be caused by both good and bad experiences. Job stress comes in different forms and affects our mind and body in different ways. Major stress comes from having too much or not enough work or doing work that doesn't satisfy us. Conflicts with the boss, coworkers, or customers are other major causes of stress. Stress can be useful when we need to focus on or finish a big project. But too much stress or being under stress for too long isn’t good. A healthy job is likely to be one where the pressures on employees are appropriate in relation to their abilities and resources, to the amount of control they have over their work, and to the support they receive from people who matter to them.

This research is conducted to find out the facts about job stress and its effects on people. The research is conducted with the help of questionnaires. Through personal interview the respondents were queried on what they do to cope with job stress and also what all anti-stress techniques the organization adopts in order to avoid stress. The sample taken is 50 Academicians (Assistant Professors) from different institutes and universities and the major findings discloses that almost every worker is suffering from job stress. The main cause found for the job stress was work load. Stress can be prevented if appropriate measures are taken at right time.

Keywords: anti-stress techniques, job stress, level of stress, stress prevention, work load.

Introduction

The word stress is derived from Latin word ‘Stringere’ which means ‘to draw tight’. French writers use the word distress which means ‘place under authority’. It is defined as the force exerted on a person that causes tension. It is defined as demand which creates threats to acquire changes. Anything that poses a challenge or a threat to our well-being is a stress. We generally use the word “stress” when we feel that everything seems to have become too much – we are overloaded and wonder whether we really can cope with the pressures placed upon us.

A stressor is an agent or stimulus that causes stress. Examples of stressors are noises, unpleasant people, a speeding car, or even going out on a first date. Common symptoms of stress could be frequent headaches, difficulty concentrating, faintness, cold or sweaty hands and feet, suicidal thoughts, increased anger, frustration, difficulty in decision-making, weight gain or loss without diet, depression, frequent or wild mood swings, over-reaction, etc.

The continuous and frequently heated debates about how to define stress are a measure of how much it now permeates everyday language. In the course of a given day, each of us will hear or use the word in a variety of contexts. It is variously, a term of derision or one of abuse; it may be used to dismiss or critique colleagues or alternatively, to validate a ‘high-octane’ style of working. The term attaches itself to feelings of pressure, anticipation or even dread; as in meeting deadlines or watching one’s football team participate in a penalty shootout. It is arguable that the term is now so ubiquitous that it has been entirely cut adrift from both professional discourse and real life experience.
However, the term retains a profoundly serious currency. It is used to describe genuine suffering, either as a result of daily pressures, or momentous events. In other words, there may well be something lurking in the woods that most of us will chance upon at some point in our lives. Real or imagined, misunderstood or misused, rare or widespread, the problem of stress cannot be ignored. Organisations vary in their operational definitions of stress and this in turn produces the differing responses and contractual arrangements used to address it. Pollock has argued that the term has now become ‘so vacuous that it represents an obstacle rather than an aid to research, and that further investigation of the relationships which the stress theory attempts to elucidate would get on better without it.’ There are, however, a number of working definitions which suggest the word still has some meaning.

'Stress is the psychological, physiological and behavioural response by an individual when they perceive a lack of equilibrium between the demands placed upon them and their ability to meet those demands, which, over a period of time, leads to ill-health’

**Occupational Stress or Job Stress**

Job stress results from job demands, absence in decision making process and social problems. Job stress implicates for organizational functions and quality of work-life, from two perspectives; employee perspective that relates to psychological wellbeing and organizational perspective, associated with shared behaviours. Job stress forecasts job satisfaction, leads to dissatisfaction and inversely related to performance that is negatively affected by stressful situations it is also affected on workload as low or high and causes health hazards resulting in absenteeism, low productivity, dissatisfaction and turnover. Burnout is a specific form of chronic stress, visible as emotional exhaustion, depersonalization and reduced sense of personal accomplishment and one of the main outcome of job stress due to its exponential impact on profession. It is less convincing to limit burnout to human services only as it equally relates to family factors. Its outcomes are same throughout in all occupations and are known as exhaustion and avoiding emotional involvement.

The Health and Safety Executive (HSE) defines stress as an ‘adverse reaction people have to excessive pressures or other types of demand placed on them’. Work-related stress is thus understood to occur when there is a mismatch between the demands of the job and the resources and capabilities of the individual worker to meet those demands. This definition emphasises the relationship between individuals and their working environment, and helps to explain why a situation that one person regards as a stimulating challenge causes another to experience a damaging degree of stress.

It is the response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope. It arises when demands exceed abilities. Stress caused by job related factors is eustress which is reflected in job performance but if an individual cannot take the tension and work pressure then it becomes distress for an individual.

Where stress is not controlled and the individual and organization suffers, the following may be observed:

**Effects on People may include:**

- Physical (sleep, Disturbances, headaches, gastrointestinal, upset, raised bloodpressure/cardiovascular disease)
- Emotional (anxiety and irritability, depression, labile emotions)
- Intellectual (loss of concentration, lack of motivation, difficulty without thought process, loss of memory, poor decision-making)
- Behavioural (substance [including alcohol] misuse, decreased libido, inappropriate display of behaviour, isolation, unpunctuality)

**Effects on the organization may include:**

- High absenteeism
- High labour turnover
- Poor time keeping
- Poor performance and productivity
- Low morale
- Poor motivation
- Increased employee complaints
- Increased ill-health, accidents and incidents reports

Workplace stress affects different people in different ways:

- Personality differences
- Gender difference
- Age differences

Job life is one of the important parts of our daily lives which cause a great deal of stress. Due to the competitive nature of the job environment most of the people in the world are spending their time for
job related work purposes resulting ignore the stressor those are influencing their work and life. Usually people are more worry about their outcome of their work that can even affect the way they treat other people and how they communicate with their peers and customers. For example, people with a higher percentage of occupational stress may not be satisfied with their job and therefore they will not feel happy working in the organization. They may feel frustrated or “burned out “when they are having problems with peers or customers. This may leave a negative impact to the organization itself.

Therefore, it is very important for employer and employees to realize the stress and the stressor that cause all the negative effects.

Job Stress in Academia

University teaching has traditionally been regarded as a low stress occupation. In historical point of view it could be true, but it is not so at modern universities and institutes. It is due to imbalance between job demands and their ability to respond. Academic staff involved in research and teaching may give rise to a conflicting situation as both need energy and concentration. The symptoms found among lecturers are tiredness, sleeping problem and concentration. These are more visible when more workload is levied upon them. Teachers are more pressurized to impress their seniors, meeting targets set by administration and attending different meetings. Overwork, insecurity in jobs, poor communication, and organizational conflicts give rise to burnout and stress.

Parents have high expectations from teachers and attribute low individual performance to them. They assume teachers as answerable for everything, which may become a stressor. Interference of parents in student teacher relation may aggravate situations to a level that may causes burnout. Low student’s engagement during teaching hours can be a cause of student’s attitudinal problems. Serious concerns are unscientific faculty regulations, management style along with lack of administrative support. Favouritism is another stressor which affects wellbeing and performance. Lack of administrative support causes stress, burnout and leads to job switching. Stress occurs teachers while they try to make themselves accountable during more meetings, paper work and more documentation. Performance assessment may also add to stress as such processes mostly are done over and above the classroom. Developing countries are struggling as they have to equip their educational institutions with technologies and have more importantly to train their teachers to utilize those resources properly. Academia is under pressure due to heavy workload, job demands and publication efforts. It is observed as strained due to policies, asking for high performance in teaching, research and pursuing studies. Innovation and creativity has its fallout related to stress when one of the objective is to save money or to attract and earn funds.

Many previous studies investigated that the escalation in workload and long working hours also provide the base of occupational stress among the academicians. The job demands of the teaching profession as researchers, administrators and supervisors also increase job related stress among teachers of higher education. Due the rapid changes in higher education structure, the academicians also supposed to perceive a considerable increase in the executive responsibilities which cause psychological problems.

There are many individual differences and abilities among the teaching staff which lead them to emotional and psychological worries. The main factors of this state are excessive research work, shortage of time and energy as well as over loads of teaching the extra classes. There are many personal differences, inter and intra personal conflicts among the teaching staff, everyday work load, contradictory demands from colleagues and seniors, uneven demands from their different personal and organizational roles, insufficient resources for suitable presentation, unsatisfactory proficiency to meet the demands of their job, poor self-sufficiency to make decision on different tasks became the main basis of job related stressors.

The number of university in India has increase tremendously for the past few years. Due to the increasing number of universities in India, university academic teachers may face more problems in their job as the managements are facing competitive pressure from other universities. Almost universities are now setting new goal to compete with other universities as well as the academic teachers are involving with the ultimate goal. This may causes the university academic teachers to face plenty of stress and therefore affect their satisfaction and even their physical or mental health.

The aim of this study is to identify the stressors issues that will influence the academic teachers’ job satisfaction. We selected teaching because educators have been consistently identified as a group experiencing high stress at work.

Review of Literature

Reference [21].It was evidenced in the past studies that job stress deposited adverse relationship on job
attitudes, self-confidence, dissatisfaction with life and the upswing in turnover intentions. Job stress is an outcome of many psychosocial factors which affect the workforce in irregular ways.

“Reference [22] described that there is an undesirable correlation between job stress and job performance”. A famous study of the faculty members of a medical college also established these results across the gender. Stress is connected to some psychological problems i.e. anxiety, low self-esteem and motivation, mood variations. These consequences decline the job performance; job satisfaction and climbing the turnover intentions severely without gender regard. The subject of turnover intentions has been deeply rooted history and remarkable reputation among researchers, consultants and academicians around the world.

“Reference [23] defined the turnover intentions as it is a rational and measured attitude towards leaving a job. Many studies in the past pointed out that turnover intention forecasts the turnover precisely. Job stress has broad consequences on turnover intentions. The high amount of stress leads to dissatisfaction with the job and low job performance. This deprived situation provides a favourable environment for turnover intention among the employees. Finally they leave the job and find a better opportunity.

“Reference [24, 25] conducted a study on health workers and established the negative relationship among job stress, job satisfaction and job performance. Another research revealed the negative significant association with job satisfaction and poor physical health, low psychological well-being and high level of job stress.

“Reference [26] defined that stress is the key component and have positive significant correlation with high turnover and turnover intentions, absenteeism and costs substantial health problems. These researchers also established the negative significant relation to decreased job performance, job satisfaction and low level of satisfaction with life”.

Numerous past researches also highlighted the significant link between stress and its contrary reactions such as sleep disorders, psychological problems, heart disease and low level of job performance, job satisfaction, rising turnover intentions and low standard of satisfaction with life [27]

**Need of the Study**

As we shall see, whatever it is, stress has grown rapidly in recent years. It is therefore of some importance whether or not there is an epidemic of stress, what is causing it and whether it will continue to rise. As we shall see, stress has its greatest effects upon those at the very top and those at the very bottom of the socio-economic ladder.

A large percentage in today’s world are working class and almost every day they are encountered by challenges related to work environment and job related expectations which leads to stress which is termed as “Occupational stress”. Here, we would like to study about an Intellectual Industry which imparts education, values and knowledge of well-being to the world and i.e Educational Industry. Unfortunately this industry of intellectuals are also not left as an exception to this competitive corporate culture and the stress created due to this rat race.

### Objectives of the Study

From the last three decades stress is a topic of wide-ranging attention to industrial and organizational scholars, managing experts, and human resource administrators. Keeping in mind the importance of this bubbly and fizzing issue this current study has following objectives:

1. To identify the factors causing job stress.
2. To study about the effect of job stress on people.
3. To inspect the association of job stress with job performance, job satisfaction, turnover intentions and life satisfaction among the college lecturers.
4. To recommend the coping strategies to manage stress.

### Research Methodology

#### Sample

Sample size is comprising of 50 academicians.

#### Sampling method

Simple random sampling method is used for the research.

#### Methods of data collection

There are two ways through which data is collected:

1. **Primary data:**

   This data is original in nature and is generated from the results of personal interviews and questionnaires duly filled by the respondents working in the organization.

2. **Secondary data:**

   Some data was acquired from existing sources of information which were accessed due to
availability of various other forms of information and data. This data served as the secondary data for the research work. Sources for this data is: journals, publications, articles, etc.

**Analysis Technique:** Tables have been used to analyse the data collected.

**Limitations:**
- The research was depending on the information provided by the respondents which may be insufficient.
- Due to the financial and time constraints the study wasn't able to include more academicians.
- The analysis of research was based on observations and interpretation on the basis of sample survey and questionnaires.
- All the observation and recommendation will be made on the feedback obtained from survey and questionnaires.

**Analysis and Findings**

The results of this study exposed the negative relationship of job stress with job performance, job satisfaction, and life satisfaction. However, stress has a positive significant relationship with turnover intentions among lecturers. Various previous studies also verified that employees who face unusual high job stress have low levels of job performance, job satisfaction and life satisfaction. Ultimately this state of dissatisfaction leads to high turnover intentions.

Few other findings are:

1. Almost every worker feel stressed but the degree of stress vary from person to person.
2. Women are likely to face more stress as compared to men because they fail to balance their work and home.
3. Work pressure is the major factor causing job stress out of all the other factors.
4. Job stress affects both individuals as well as organization.
5. Job stress affects a person physically, mentally and biologically.
6. Job stress is not always a distress. It can prove to be a eustress if a worker can handle the work pressure.
7. Bad work culture is the culprits behind health costs and can be a major source of misery for many employees.

**Recommendations**

Stress management is the need of an hour. Stressors, if not escapable, are fairly manageable and treatable. There are two approaches towards managing stress:

- Individual approach
- Organizational approach

**Individual Approaches**

An employee can take personal responsibility for reducing his or her stress level.

1. Time management: it includes some time management principles. They are:
   - Making daily lists of activities to be accomplished
   - Prioritizing activities by importance and urgency
   - Scheduling activities according to the priority set
   - Knowing your daily cycle and handling the most demanding part of the job.
2. Physical exercise: such as aerobics, walking, jogging, swimming and riding a bicycle is a way to deal with excessive stress levels
3. Relaxation technique: such as meditation, hypnosis and biofeedback helps to reach a state of deep relaxation.
4. Social support network: expand your social support network (friends, family, relatives)

**Organizational Approaches**

Organizations can do the following to reduce job stress:

1. Selection and placement: management should not restrict hiring to only experienced individual with an internal locus, but such individuals may adapt better to high stress jobs and perform those jobs more effectively.
2. Training: it can increase and individual’s self-efficacy and thus lessen job strain.
3. Goal setting: the uses of goals reduce stress as well as provide motivation. Specific goals that are perceived as attainable clarify performance expectation. In addition, goal feedback reduces uncertainties about actual job performance. The result is less employee frustration, role ambiguity, and stress.
4. Redesigning jobs: jobs should be redesigned for employees even with a low need for growth
as there might be less responsibility and increased specialization. If individuals prefer structure and routine, reducing skill variety should also reduce uncertainties and stress levels.

5. Increasing employee involvements: by giving employees a voice in the decision that directly affect their job performance, management can increase employees control and reduce this role stress.

6. Organizational communication: increasing formal organizational communication with employees reduces uncertainty by lessening role ambiguity and role conflict

7. Wellness program: provide workshop to help people quit smoking, control alcohol use, lose weight, eat better and develop a regular exercise program. The assumption underlying most wellness programs is that employees need to take personal responsibility for their physical and mental health.

Other recommendations are:

1. Laugh
2. Utilize relaxation technique
3. Get organized and take control of your work load
4. Take time at the beginning of the work day to prepare a game plan for the day
5. Eat right
6. Get enough rest
7. Exercise
8. Build on your self-confidence
9. Make time for family and friends
10. Accept support
11. Address financial problems
12. Volunteer to help others

Conclusion

Based on the finding of the study, there are a few key points that can be used to conclude this research paper. It is very important that the university or institute understands the needs of its employees and provide what is best for the employees. Constant appraisal programs and appreciation should be given to reinstate and motivate the employees. Motivation is a key factor as well in affecting job stress among employees. Work stress is a real challenge for workers and their employing organizations. As organizations and their working environment transform, so do the kinds of stress problems that employees may face. It is important that your workplace is being continuously monitored for stress problems.

Further, it is not only important to identify stress problems and to deal; with them but to promote healthy work and reduce harmful aspects of work. Work in itself can be self-promoting activity as long as it takes place in a safe, development-and health promoting environment.

Successful employers and managers provide leadership in dealing with the challenge of work stress.

REFERENCES


ANNEXURES

Tables

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<td>5 to 10 Years</td>
<td>50</td>
</tr>
<tr>
<td>3</td>
<td>10 to 15 Years</td>
<td>22</td>
</tr>
<tr>
<td>4</td>
<td>More than 15 Years</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Place where u feel maximum stressed</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Work place</td>
<td>80</td>
</tr>
<tr>
<td>2</td>
<td>Home</td>
<td>20</td>
</tr>
<tr>
<td>3</td>
<td>Any other</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Feeling about Job</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I am completely happy and enjoy my work</td>
<td>10</td>
</tr>
<tr>
<td>2</td>
<td>I sometimes feel dissatisfied but generally enjoy my job</td>
<td>30</td>
</tr>
<tr>
<td>3</td>
<td>Most of the time I do not enjoy my work</td>
<td>50</td>
</tr>
<tr>
<td>4</td>
<td>I have no interest at all in my work</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>Any other</td>
<td>-</td>
</tr>
</tbody>
</table>
QUESTIONNAIRE RESPONDENT PROFILE

1. Name of the respondent _______________
2. Gender (Please tick)
   □ Male  □ Female
3. Age (In years) (Please tick)
   □ Less than 25  □ 25 to 35
   □ 35 to 50  □ Above 50
4. Salary (Please tick)
   □ Less than Rs.30,000
   □ Rs.30,001 to Rs.40,000
   □ Rs.40,001 to Rs.50,000
   □ More than Rs.50,000
5. Numbers of years of service (Please tick)
   □ Less than 5 years
   □ 5 years to 10 years
   □ 10 years to 15 years
   □ More than 15 years
6. If you feel you are under stress, please tick the appropriate place where you feel maximum stressed
   □ Work Place
   □ Home
   □ Any other (please specify) ____________
7. How do you feel about your job in general?
   □ I am completely happy and enjoy my work
   □ I sometimes feel dissatisfied but generally enjoy my job
   □ Most of the time I do not enjoy my work
   □ I have no interest at all in my work
   □ Any other (please specify) ____________
8. If you feel stressed, please tick any five sources of stress (Extremely Stressful-1, Very Stressful-2, Moderately Stressful-3, Mildly Stressful-4, Not at all Stressful-5) you think are prevailing at your workplace.
   □ Teaching Environment
   □ Study Material for students
   □ Absence of silent room for working
   □ Work organizing problem
   □ Large number of students in one class
   □ Ambiguity in work instructions
   □ Work overload
   □ Inconsistent workload
   □ Increasing quantity and quality of work
   □ Formal Quality Evaluation
   □ Administrative duties
   □ Increasing bureaucracy
   □ Different reports and paperwork
   □ Non-realistic Deadlines
   □ Shift Work
   □ Inadequate break times/meal times
   □ Extended work hours
   □ Repetitive Work
   □ Poor relations with supervisor
   □ Poor relations with workmates
   □ Harassment and/or discrimination

S. No. 5 Sources of stress      Rank          Percentage
1. Work overload   Extremely Stressful-1  100
2. Large number of students in one class Very Stressful-2  80
3. Administrative duties  Moderately Stressful-3  66
4. Teaching Environment   Mildly Stressful-4  50
5. Formal Quality Evaluation Not at all Stressful-5  40

S. No. Effects of Stress      Percentage
1. Emotional  100
2. Mental  90
3. Behavioural  80
4. Organizational  70

S. No. Remedies                  Percentage
1. Talk to family or friends  80
2. Listen to music  60
3. Taking up a hobby on regular basis  50
4. Add humor  20
5. Brisk Walk  20
6. Self Talk  30
7. Rehydrate  24
8. Power nap  16
9. Have Tea or coffee  90
10. Crying  40
11. Any other

International Journal of Management and Computing Sciences (IJMCS), Vol. 4 No. 3-4 (2014) PP 87-95
□ Impersonal treatment
□ Lack of communication with management
□ Any other (please specify) ___________

9. Please tick the effects of stress you are observing on your own self.

□ Emotional
  ○ Negative or depressive feeling
  ○ Disappointment with yourself
  ○ Increased emotional reactions
  ○ Loneliness
  ○ Loss of motivation, commitment and confidence
  ○ Mood swings (Not Behavioral)

□ Mental
  ○ Confusion (indecision)
  ○ Can’t concentrate
  ○ Poor memory

□ Behavioral
  ○ Change in eating habits
  ○ Increased smoking, drinking or drug taking to cope
  ○ Mood swing affecting your behavior
  ○ Changes in sleep patterns
  ○ Twitchy or nervous behaviour
  ○ Changes in attendance such as arriving late or taking time-off
  ○ Sickness (neck pain, etc.)

□ Organizational
  ○ Increased Turnover
  ○ Increased grievance & complaints
  ○ Increased sickness absence
  ○ Difficulty in gelling with new staff
  ○ Poor performance

10. Please tick the remedies that you will prefer to reduce stress.

□ Talk to family or friends
□ Listen to music
□ Taking up a hobby on regular basis
□ Add humor
□ Brisk Walk
□ Self Talk
□ Rehydrate
□ Power nap
□ Have Tea or coffee
□ Crying
□ Any other (please specify) ___________

11. Suggestions?

□
□
□
□
□
FOSTERING FDI: A KEY TO REVIVE INDIAN ECONOMY

Dr. Vijay Kumar Jain
Vikas Tyagi

ABSTRACT

Indian economy has been witnessing phenomenal slowdown. It grew at its slowest in the previous four years and recorded a growth rate of 4.4% in the first quarter (April-June) of fiscal year 2013-2014. Amid this gloom, foreign direct investment can provide impetus to stagnant Indian economy and can be used as strategic tool to sustained economic growth. FDI flow to India has remained sluggish in recent year. This FDI slowdown can be attributed to many factors like regulatory policies in terms of procedural delays, complex rules and regulation related to land acquisition, legal requirement and environmental obligations. This paper discusses the role of FDI in reviving the Indian economy, hurdles in FDI and policy measures required to attract FDI.

Keywords: Foreign Direct Investment (FDI), Economic Growth & FIPB.

1. Introduction

India, after witnessing a spectacular growth averaging 9 percent over the past decade has started to slow down in the last few years. The slump in infrastructure and corporate investment has been the single biggest contributor to India’s recent growth slowdown. Two decades of fast economic growth and growing international trade had given India the economic and strategic rise to go with its world wide vision and voice. The current slump threatens to bring back the lowest economic numbers in twenty years. This sluggish performance can burden both India’s domestic politics and its strategic goals. The economy is facing new challenges, while old ones persist. The consistent fall in capital goods production and dismal industrial activity is reflection of depressed investment scenario in country. The major economic problems include: rupee depreciation, widening current deficit, the reversal of capital inflow, falling investment level, fiscal deficit and inflation. In the first quarter (April-June) of the fiscal year 2013-2014, Indian economy grew at its slowest in the previous four years and recorded a growth rate of 4.4%. The international Monetary Fund’s recent downward revision of growth 2014 from 5.9 percent to 5.7 percent indicates that the economy now needs steady government policies and more reforms to recover. The figure below shows the forecast of Indian economy by ADB, IMF and PMEAC which expect it to grow by 6.3%. However, rating agency Moody’s (August, 2014) recently predicted that India's economy can easily hit 7% growth rate with modest reforms. The question remains how the economy will grow amid so many hurdles. This paper discusses the role of FDI, major hurdles in FDI and policy measures required to revive Indian economy to achieve modest growth rate.

2. Importance of Foreign Direct Investment for Indian Economy

Foreign direct investment can provide a great stimulus for growth to the Indian economy. The growth of FDI will provide opportunities to Indian industry for Technological up gradation, gaining access to managerial skills and practices, optimizing utilization of human and natural resources and competing internationally with higher efficiency. Foreign companies will not only bring in much needed capital but enhanced technological capability and expertise as well. The regular inflow of FDI will also ensure faith of investors in the country’s economy. The growing reluctance to invest in India has been caused by regulatory hurdles, a lack of adequate infrastructure and policy inaction. India was the fourth largest recipient in terms of project started in 2012 but in...
2013 foreign direct investment declined by 465% compared with corresponding period last year. India received cumulative FDI of US$331,923 million during the period April 2000 –May 2014. The government policy and healthy business climate will ensure that foreign capital keep flowing in country. FDI is needed by India for its sustained economic growth and development through creation of jobs, expansion of existing industries etc. Government need to design FDI policy in a way which can be utilized as a tools of enhancing domestic production, saving and exports through equitable distribution among state by providing much freedom to state so that they can attract FDI at their own. Sectors like Defense, Insurance, Retail, Railways and e-commerce are expected to benefit from FDI. Low labor cost and market size is the most promising feature of India, but constraints have emerged such as the corporate taxation, inflexibility of labor laws and transport and logistic infrastructure. With India poised to become second largest economy in the world by 2050 and with the country requiring about US$ 1 trillion to be spent on infrastructure in the next five years, PE(Private Equity) investment need to be encouraged to bridge the gap between the need of Indian economy and the ability for public fund to meet the same. FDI in retail is expected to create over 4 million jobs in the country and in logistics, about 5-6 million jobs in three years. Vast Investment potential exist in sectors such as biotechnology, retail, real estate, roads and highways, power, telecommunications, civil aviation, special economic zones, healthcare. Government should simplify and relax entry barriers for business activities and provide investor friendly laws and tax system for foreign investors to invest in India. Even equity investment in various sectors has come down in recent years.

Table 1: Sector wise FDI Equity Investment in FY2014 (April-October 2013) (INR Billion)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Service sector</td>
<td>246</td>
<td>263</td>
<td>79</td>
</tr>
<tr>
<td>Construction: Townships, Housing, Built Up Infrastructure</td>
<td>152</td>
<td>72</td>
<td>42</td>
</tr>
<tr>
<td>Telecommunication</td>
<td>90</td>
<td>16</td>
<td>1</td>
</tr>
<tr>
<td>IT</td>
<td>38</td>
<td>26</td>
<td>29</td>
</tr>
<tr>
<td>Pharma</td>
<td>146</td>
<td>60</td>
<td>59</td>
</tr>
<tr>
<td>Chemicals</td>
<td>184</td>
<td>15</td>
<td>25</td>
</tr>
<tr>
<td>Automobiles</td>
<td>43</td>
<td>83</td>
<td>44</td>
</tr>
<tr>
<td>Power</td>
<td>76</td>
<td>29</td>
<td>18</td>
</tr>
<tr>
<td>Metallurgical Industries</td>
<td>83</td>
<td>78</td>
<td>14</td>
</tr>
<tr>
<td>Hotel/Tourism</td>
<td>47</td>
<td>177</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>1,105</td>
<td>819</td>
<td>320</td>
</tr>
</tbody>
</table>

Source: DIPP

3. Major Hurdles for Foreign Direct Investment in India

India stays attractive to investors due to its traditional strength such as cheap labor but infrastructure and taxation are major challenges for it according to EY, s India Attractiveness Survey. Low Labor cost and size of domestic market in India are its most promising features but constraints have emerged as the corporate taxation, lack of flexibility in labor laws and transport and logistics infrastructure. The growing reluctance on the part of investor is due to regulatory hurdles lack of adequate infrastructure and policy inactions. Investors see infrastructure as a single biggest hurdle to doing business in country. India was ranked 89th among 113 countries surveyed in infrastructure. To cater to the aspirations for global economic leadership and to keep pace with growing urbanization and the ensuing demand, India needs to increase the investment in infrastructure. Foreign companies find big investment opportunities in India but they are reluctant to invest in India because of bureaucracy. Delay due to red tape, arbitrary regulatory decisions and corruption poses a big challenge for investors. China continues to be the main competitor for India in investment but countries such as Vietnam, Malaysia and Philippines are also creating challenge for India.

4. Policy Measures Required to Attract Foreign Direct Investment

India has seen good flow of FDI post liberalization period. It has created conducive environment for foreign investment by abolishing industrial licensing, establishing institutions lifting FDI equity ceilings, shifting more sectors to automatic routes, providing...
incentives and liberalizing foreign exchange regulations. FDI in India is still concentrated in a few sectors and states. The major factors that hinder FDI inflows include infrastructure bottlenecks, rigid and complicated labour laws, lack of coordination between states and central government, Lack of reforms at state level, FDI equity caps in many potential sectors and delays in getting multiple clearances and approvals. Government need to take some reforms and design policies to address these issues and set up some institutions. Some necessary measures includes creating better environment for infrastructure development with a appropriate institutional framework such as dispute resolution mechanism, independent regulatory authority and special investment laws; establishment of uniform labour code after consulting with all major stakeholders, ensuring proper design and planning of special economic zones(SEZ), including local level solution for land acquisition and sector specific policies with incentives to attract FDI into SEZ, revising outdated laws, control and regulatory system.

5. Conclusion

The Indian economy experienced a successive year of weak performance with GDP growing at 4.7% in 2013-17 compared with 4.5% in 2012-2013. But despite this slowdown, India is still one of the most attractive investment destinations. Foreign Direct Investment can play crucial role in the development of Indian economy. It will lead to creation of jobs and expansion of industries. FDI in India in many ways can enable it to achieve a certain degree of financial stability, growth and development. The government policies and conducive business climate will lead way for sustained flow of foreign capital in India.FDI is required by India for its sustained economic growth and development.

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AN INFLUENCE CREATED BY CHILDREN ON PARENTS’ PURCHASE DECISIONS DUE TO TELEVISION ADVERTISEMENTS

Mrs. Pallavi K. Mhatre

ABSTRACT

Children’s role as ‘influencers’ in purchase decisions is gaining prominence in majority of the households. The advertisements too are soon catching up on this trend by incorporating children across a variety of products irrespective of their relevance and uses to children. The objectives of this paper are to find out if children have an influence on the purchase decisions made by the parents, to find out the categories of products where the influence of children is prevalent and to identify the ad recall, among parents, of advertisements in five categories of products with children featured in them.

There is a set of three hypotheses which has been tested through this study.

1. Ho: Children do have an influence on the purchase decisions made by the parents.
2. Ho: Children can influence the purchase decisions of only the child centric products.
3. Ho: All brands of child centric and non child centric products tend to have equal chances of brand recall.

Methodology followed: Fifty mothers whose children fall in the age group of five to twelve years have been surveyed using the random sampling technique.

Quantitative technique such as the ‘Chi-square’ test is conducted to ensure influences of children on purchase decisions made by parents.

The findings reflect the fact that children's opinion is generally considered for child centric products and not as much for the non child centric products. The recall of advertisements with children featuring in them is generally favourable.

Key words: Children’s influence, Pester Power, Television Advertising, Ad recall
To find out if children have an influence on
their parents. (www.phrases.org.uk)
Pester power refers to the power children have, by
repeated nagging, or influencing their parents to buy
advertised or fashionable items. (www.phrases.org.uk)
Pestering or nagging can be divided into two categories-
"persistence" and "importance". Persistence nagging
(a plea which is repeated over and over again) is not
as effective as the more sophisticated "importance
nagging". This latter method appeals to parents' desire
to provide the best for their children, and plays in
any guilt they may have about not having enough time
for their kids. Marketing to children especially via
television advertisements is all about creating pester
power, because advertisers know what a powerful force
it can be.

Barbara A. Martino an Advertising Executive from
the U.S has promptly concluded as, “We’re relying on
the kid to pester the mom to buy the product, rather
than going straight to the mom”

Parents, in their dual roles as purchase agents and
customer educators, are the primary, mediating force
between their children and the purchase of the products
their children want and ask for. The interaction of
the parent and the child seems to proceed in two
directions: the child requests of the parent, and the
parent responds to the child.

There are various other factors which tend to affect
purchase decisions of parents influenced by children
such as the time of the year, value orientations of
parent and children, Brand Recall among others.(Sunil

A mother's attitude towards television and advertising
have some bearing upon the degree to which she
(mother) will yield to purchase influence attempts made
by her child. The mother who watches a lot of
television experiences a greater number of influence
attempts by her child and the likelihood that she will
respond positively is greater. Furthermore, mothers
who have more positive attitudes towards advertising
agree more often to the requests of their children.
Conversely, the more restrictions parents place on their
children's television viewing, the less receptive they
are to influence attempts of their children. (Ward and
Wackman, 1972a)

Research Review

Objectives of the Study

1. To find out if children have an influence on
the purchase decisions made by the parents.

2. To find out the categories of products where
the influence of children is prevalent.
3. To identify the ad recall, among parents, of advertisements in five categories of products with children featured in them.

**Hypothesis of the Study**

There is a set of three hypotheses which has been tested through this study.

1. Ho: Children do have an influence on the purchase decisions made by the parents.
   H1: Children do not have an influence on the purchase decisions made by the parents.

2. Ho: Children can influence the purchase decisions of only the child centric products.
   H1: Children can influence the purchase decisions of the non-child centric products as well.

3. Ho: All brands of child centric and non child centric products tend to have equal chances of brand recall.
   H1: All brands of child centric and non child centric products do not tend to have equal chances of brand recall.

**Sample Size: Fifty Parents.**

**Sample Design:** It was ensured that the respondent was a parent of at least one child in the age group of three to fourteen years.

The ‘Simple Random Sampling’ technique was utilised.

Secondary sources of information such as World Wide Web, Books, Journals, Magazines and Newspaper articles were also relied upon.

**Limitations of the Study**

The study is constrained due to time, personnel and monetary resources. The Study is restricted to few regions in Mumbai only. The sample size if extended would offer lesser scope of errors.

The study is limited to advertising on Television for children and by children of the age group of three to fourteen years.

**Analysis of the Survey**

The analysis of the survey is as following. A graphical analysis supported by statistical analysis has been followed.

**In view of the analysis above, it is seen that the child's opinion is considered almost always for the purchase of products meant for their consumption, that is, chocolates (82 percent), health drinks (72 percent) and kids clothing (86 percent). On the other hand, the child's suggestion is not regarded for the purchase of Mobile Service providers (8 percent) and Detergent (10 percent).**

By applying the chi-square test, the above can be reinstated.

Child’s opinion is taken while purchase
<table>
<thead>
<tr>
<th>Product</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
<th>Proportion p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chocolates</td>
<td>41</td>
<td>9</td>
<td>50</td>
<td>0.82</td>
</tr>
<tr>
<td>Health Drinks</td>
<td>36</td>
<td>14</td>
<td>50</td>
<td>0.72</td>
</tr>
<tr>
<td>Kids Clothing</td>
<td>43</td>
<td>7</td>
<td>50</td>
<td>0.86</td>
</tr>
<tr>
<td>Mobile Service</td>
<td>4</td>
<td>46</td>
<td>50</td>
<td>0.92</td>
</tr>
<tr>
<td>Detergents</td>
<td>5</td>
<td>45</td>
<td>50</td>
<td>0.9</td>
</tr>
</tbody>
</table>

1 To test  
Ho: More than 90% of the parents take their child's opinion while buying Chocolates. i.e. \( p > 0.90 \) 
against H1: \( p \leq 90\% \) 
The test statistic is \( z = \frac{\hat{p} - p_0}{\sqrt{\frac{p_0(1-p_0)}{n}}} \) 
\( \begin{align*} z &= \frac{0.82 - 0.90}{\sqrt{\frac{0.90(1-0.90)}{50}}} \approx -1.8856181 \end{align*} \) 
Table value of \( z \) at 5% level of significance is -1.96 
We Reject \( H_0 \) if the calculated value is greater than the table value 
Ho is rejected. 
**LESS than 90% of the parents take their child's opinion while buying Chocolates.**

2 To test  
Ho: More than 90% of the parents take their child's opinion while buying Health Drinks. 
against H1: \( p \leq 90\% \) 
The test statistic is \( z = \frac{\hat{p} - p_0}{\sqrt{\frac{p_0(1-p_0)}{n}}} \) 
\( \begin{align*} z &= \frac{0.72 - 0.90}{\sqrt{\frac{0.90(1-0.90)}{50}}} \approx -4.2426407 \end{align*} \) 
Table value of \( z \) at 5% level of significance is -1.96 
We Reject \( H_0 \) if the calculated value is greater than the table value 
Ho is accepted. 
**More than 90% of the parents do take their child's opinion while buying Health Drinks.**

3 To test  
Ho: More than 90% of the parents take their child's opinion while buying Kid's Clothing. 
against H1: \( p \leq 90\% \) 
The test statistic is \( z = \frac{\hat{p} - p_0}{\sqrt{\frac{p_0(1-p_0)}{n}}} \) 
\( \begin{align*} z &= \frac{0.86 - 0.90}{\sqrt{\frac{0.90(1-0.90)}{50}}} \approx -0.942809 \end{align*} \) 
Table value of \( z \) at 5% level of significance is -1.96 
We Reject \( H_0 \) if the calculated value is greater than the table value 
Ho is rejected. 
**LESS than 90% of the parents take their child's opinion while buying Kid's Clothing.**

4 To test  
Ho: More than 90% of the parents do not take their child's opinion while opting for Mobile service providers. i.e. \( 1 \geq 0.90 \) 
against H1: \( p \leq 90\% \) 
The test statistic is \( z = \frac{\hat{p} - p_0}{\sqrt{\frac{p_0(1-p_0)}{n}}} \) 
\( \begin{align*} z &= \frac{0.92 - 0.90}{\sqrt{\frac{0.90(1-0.90)}{50}}} \approx 0 \end{align*} \) 
Table value of \( z \) at 5% level of significance is -1.96 
We Reject \( H_0 \) if the calculated value is greater than the table value 
Ho is rejected. 
**LESS than 90% of the parents do not take their child's opinion while opting for Mobile service providers.**

5 To test  
Ho: More than 90% of the parents do not take their child's opinion while shopping for Detergents. i.e. \( 1 \geq 0.90 \) 
against H1: \( p \leq 90\% \) 
The test statistic is \( z = \frac{\hat{p} - p_0}{\sqrt{\frac{p_0(1-p_0)}{n}}} \) 
\( \begin{align*} z &= \frac{0.9 - 0.90}{\sqrt{\frac{0.90(1-0.90)}{50}}} \approx 0 \end{align*} \) 
Table value of \( z \) at 5% level of significance is -1.96 
We Reject \( H_0 \) if the calculated value is greater than the table value 
Ho is rejected. 
**MORE than 90% of the parents do not take their child's opinion while shopping for Detergents.**

Parents surveyed, easily recall the ads in the categories of chocolates (75 percent), health drinks (85 percent), kids clothing (75 percent) and detergent (73 percent).
Whereas for mobile service providers the recall is comparatively low at 55 percent. With the help of Chi-square test and single-test for proportion we can deduce the preferences of people for different brands in the product categories.

### Table No. 5.3: Preference for Chocolate Brands

<table>
<thead>
<tr>
<th>Brand</th>
<th>Observed</th>
<th>Pooled</th>
<th>Expected</th>
<th>Pooled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadbury</td>
<td>33</td>
<td>6.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nestle</td>
<td>7</td>
<td>6.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melody</td>
<td>2</td>
<td>6.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Firklover</td>
<td>1</td>
<td>5</td>
<td>6.25</td>
<td>25</td>
</tr>
<tr>
<td>Mango Bite</td>
<td>1</td>
<td></td>
<td>6.25</td>
<td></td>
</tr>
<tr>
<td>Bubaloo</td>
<td>1</td>
<td></td>
<td>6.25</td>
<td></td>
</tr>
<tr>
<td>Alpenlibe</td>
<td>1</td>
<td></td>
<td>6.25</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>4</td>
<td>5</td>
<td>6.25</td>
<td>12.5</td>
</tr>
<tr>
<td>Total N</td>
<td>50</td>
<td>50</td>
<td>37.5</td>
<td>134.28</td>
</tr>
</tbody>
</table>

No of Brands n=8

Expected is $\frac{N}{n}$ i.e. $\frac{50}{8}$

To Test Ho: All brands are equally likely, i.e. All brands occur with the same relative frequency $p = \frac{1}{8}$.

Against H1: Not Ho.

The test statistic is $\chi^2 = \sum \frac{(O_i - E_i)^2}{E_i} = 134.28$.

No of effective classes k=5

Table value of $\chi^2$ at 5% level of Significance is 9.49.

Conclusion: Reject Ho if $\chi^2 > 9.49$

All Brands are Not equally likely, i.e. All brands do not occur with the same relative frequency $p = \frac{1}{8}$.

Now to check if the more than 50% of the population prefers the brand Cadburys.

To test Ho: $P \leq 50%$

Against H1: $I \geq 50%$

The test statistic is $z = \frac{P - P_0}{\sqrt{\frac{P_0(1-P_0)}{n}}}$ = 2.26.

Table value of $z$ at 5% level of significance is 1.96.

We Reject $H_0$ if the calculated value is greater than the table value.

Ho is accepted.

Less than 50% of the population prefer Cadburys.

### Table No. 5.4 : Preference for Health Drink Brands

<table>
<thead>
<tr>
<th>Brand</th>
<th>Observed</th>
<th>Pooled</th>
<th>Expected</th>
<th>Pooled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bournvita</td>
<td>19</td>
<td>6.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Horlicks</td>
<td>13</td>
<td>6.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complan</td>
<td>6</td>
<td>6.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boost</td>
<td>3</td>
<td>6</td>
<td>6.25</td>
<td>25</td>
</tr>
<tr>
<td>Protinex</td>
<td>1</td>
<td>6.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gatorade</td>
<td>1</td>
<td>6.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Milo</td>
<td>1</td>
<td>6.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>6</td>
<td>6.25</td>
<td></td>
<td>0.01</td>
</tr>
<tr>
<td>Total N</td>
<td>50</td>
<td>50</td>
<td>47.76</td>
<td></td>
</tr>
</tbody>
</table>

No Of Brands n=8
Expected \( \frac{N}{n} \)

To Test Ho: All brands are equally likely, i.e. All brands occur with the same relative frequency \( p = \frac{1}{8} \).

Against H1: Not Ho.

The test statistic is \( \chi^2 = \sum \frac{(O_i - E_i)^2}{E_i} \) = 66.65

No. of effective classes \( k = 5 \)

Table value of \( \chi^2 \) at 5% level of Significance is 7.81.

Conclusion: Reject Ho if \( \chi^2 > 7.81 \)

All Brands are Not equally likely, i.e. All brands do not occur with the same relative frequency \( p = \frac{1}{8} \).

Now to check if the more than 50% of the population prefers the brand Cadburys.

To test Ho: \( P \leq 50\% \)

Against H1: \( \geq 50\% \)

The test statistic is \( z = \frac{p - p_o}{\sqrt{\frac{p_oQ}{n}}} \) = -1.13

Table value of \( z \) at 5% level of significance is 1.96.

We Reject \( H_o \) if the calculated value is greater than the table value.

Ho is accepted.

Less than 50% of the population prefer G & J.

Table No. 5.5 Preference for Kids’ Clothing Brands

<table>
<thead>
<tr>
<th>Brand</th>
<th>Observed</th>
<th>Pooled</th>
<th>Expected Pooled</th>
<th>( \frac{(O - E)_i}{E_i} )</th>
</tr>
</thead>
<tbody>
<tr>
<td>G&amp;J</td>
<td>21</td>
<td>21</td>
<td>7.142857</td>
<td>26.88285714</td>
</tr>
<tr>
<td>Lilliput</td>
<td>5</td>
<td>5</td>
<td>7.142857</td>
<td>0.642857143</td>
</tr>
<tr>
<td>barbie</td>
<td>2</td>
<td>5</td>
<td>7.142857</td>
<td>19.44642857</td>
</tr>
<tr>
<td>Benetton</td>
<td>1</td>
<td></td>
<td>7.142857</td>
<td></td>
</tr>
<tr>
<td>Cliff</td>
<td>1</td>
<td></td>
<td>7.142857</td>
<td></td>
</tr>
<tr>
<td>Littleones</td>
<td>1</td>
<td></td>
<td>7.142857</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>19</td>
<td>19</td>
<td>7.142857</td>
<td>19.68285714</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50</td>
<td>50</td>
<td>66.655</td>
</tr>
<tr>
<td>G&amp;J</td>
<td>21</td>
<td>21</td>
<td>7.142857</td>
<td>26.88285714</td>
</tr>
</tbody>
</table>

Expected \( \frac{N}{n} \)

To Test Ho: All brands are equally likely, i.e. All brands occur with the same relative frequency \( p = \frac{1}{8} \).

Against H1: Not Ho.

The test statistic is \( \chi^2 = \sum \frac{(O_i - E_i)^2}{E_i} \) = 66.65

No. of effective classes \( k = 4 \)

Table value of \( \chi^2 \) at 5% level of Significance is 9.49.

Conclusion: Reject Ho if \( \chi^2 > 9.49 \)

All Brands are Not equally likely, i.e. All brands do not occur with the same relative frequency \( p = \frac{1}{8} \).

Now to check if the more than 50% of the population prefers the brand G & J.

To test Ho: \( P \leq 50\% \)

Against H1: \( \geq 50\% \)

The test statistic is \( z = \frac{p - p_o}{\sqrt{\frac{p_oQ}{n}}} \) = -1.13

Table value of \( z \) at 5% level of significance is 1.96.

We Reject \( H_o \) if the calculated value is greater than the table value.

Ho is accepted.

Less than 50% of the population prefer Bournvita.
Table No. 5.6 Preference for Mobile Service Provider Brands

<table>
<thead>
<tr>
<th>Brand</th>
<th>Observed</th>
<th>Pooled</th>
<th>Expected</th>
<th>Pooled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vodafone</td>
<td>24</td>
<td>8.3333333</td>
<td>29.45333333</td>
<td></td>
</tr>
<tr>
<td>Airtel</td>
<td>6</td>
<td>8.3333333</td>
<td>0.653333333</td>
<td></td>
</tr>
<tr>
<td>Reliance</td>
<td>3</td>
<td>6</td>
<td>8.3333333</td>
<td>25</td>
</tr>
<tr>
<td>BPL</td>
<td>2</td>
<td>8.3333333</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tata</td>
<td>1</td>
<td>8.3333333</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indicom</td>
<td></td>
<td></td>
<td></td>
<td>3.853333333</td>
</tr>
<tr>
<td>Others</td>
<td>14</td>
<td>8.3333333</td>
<td>3.853333333</td>
<td></td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>50</td>
<td></td>
<td>48.4</td>
</tr>
</tbody>
</table>

No. of Brands n=6

Expected $\frac{N}{n}$

To Test Ho: All brands are equally likely, i.e. All brands occur with the same relative frequency $p = 1/6$.
Against H1: Not Ho.

The test statistic is $\chi^2 = \sum_{i=1}^{k} \frac{(O_i - E_i)^2}{E_i}$ = 134.28

No. of effective classes $k=4$

Table value of $\chi^2$ at 5% level of Significance is 9.48

Conclusion: Reject Ho if $\chi^2 > 9.48$

All Brands are Not equally likely, i.e. All brands do not occur with the same relative frequency $p = 1/6$.

Now to check if the more than 50% of the population prefers the brand Vodafone.

To test Ho: $P \leq 50$
Against H1: $\geq 50$

The test statistic is $z = \frac{\hat{p} - p}{\sqrt{\frac{p(1-p)}{n}}}$ = -0.28

Table value of $z$ at 5% level of significance is 1.96.

We Reject $H_0$ if the calculated value is greater than the table value.

$H_0$ is accepted.

Less than 50% of the population prefer Vodafone.

---

Table No. 5.7 Preference for Detergent Brand

<table>
<thead>
<tr>
<th>Brand</th>
<th>Observed</th>
<th>Pooled</th>
<th>Expected</th>
<th>Pooled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surf Excel</td>
<td>36</td>
<td>36</td>
<td>7.142857</td>
<td>7.14285714</td>
</tr>
<tr>
<td>Tide</td>
<td>4</td>
<td>6</td>
<td>7.142857</td>
<td>21.4285714</td>
</tr>
<tr>
<td>Nirma</td>
<td>1</td>
<td></td>
<td>7.142857</td>
<td></td>
</tr>
<tr>
<td>Rin</td>
<td>1</td>
<td></td>
<td>7.142857</td>
<td></td>
</tr>
<tr>
<td>Ariel</td>
<td>4</td>
<td>8</td>
<td>7.142857</td>
<td>21.4285714</td>
</tr>
<tr>
<td>Wheel</td>
<td>2</td>
<td></td>
<td>7.142857</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>2</td>
<td></td>
<td>7.142857</td>
<td></td>
</tr>
</tbody>
</table>

No. of Brands n=7

Expected $\frac{N}{n}$

To Test Ho: All brands are equally likely, i.e. All brands occur with the same relative frequency $p = 1/7$.
Against H1: Not Ho.

The test statistic is $\chi^2 = \sum_{i=1}^{k} \frac{(O_i - E_i)^2}{E_i}$ = 136.11

No. of effective classes $k=3$

Table value of $\chi^2$ at 5% level of Significance is 5.99

Conclusion: Reject Ho if $\chi^2 > 5.99$

All Brands are Not equally likely, i.e. All brands do not occur with the same relative frequency $p = 1/7$.

Now to check if the more than 50% of the population prefers the brand
Surf Excel.

To test Ho: \( P \leq 50\% \)

Against H1: \( 1 \geq 50\% \)

The test statistic is \[ z = \frac{p - P_0}{\sqrt{P_0(1-P_0)/n}} \] \( = 3.11 \).

The table value of \( z \) at 5% level of significance is 1.96.

We reject \( H_0 \) if the calculated value is greater than the table value.

\( H_0 \) is rejected.

**More than 50% of the population prefer Surf Excel.**

We have seen the categories where children influence the parents’ decision. But what influences the children is also crucial for the study. About 33 percent of the children get influenced by Advertisements, 10 percent by the brand name, 20 percent by the attractive package, 27 percent by the freebies attached to the product and 10 percent by all the factors related to communication of the products.

**Conclusions**

**To Marketers**

Children get influenced the most by Advertisements. Thus, it is recommended to the marketer that for planning of communication tools, allocation of the budget should be most for Advertising, followed by sales promotion and then packaging and labelling. The sales promotion tool utilised should necessarily be child centric, like an attractive gift or toy enviable by the peer.

The guilt feeling or the need to compensate is felt by approximately one-third of the parents. This is a very positive sign for the marketers, but it has to be tackled or encashed by them with ethical decisions.

Marketers can tap the schools to encourage trial of the products, where the child is not influenced by the parent’s decision.

Children’s opinion is almost always considered for the purchase of chocolates, health Drinks and Kids Clothing, thus marketers can aim their communication targeting to children. However, in the case of Mobile Service Providers and Detergent in case the marketers aim to feature children in the advertisements, it may prove redundant unless executed strategically. That is, it should be borne in mind that for detergent, though the buyer is the mother, the child plays the role of users and at times even an influencer.

Similarly, for the Mobile Service Providers, children will play the role of influencers to the extent the usage of mobile phones affects them. That is, parents (especially working parents) would want to feel secure that they are easily connected (networked) to their children in times of need, or easily accessible to the children. Advertisements should focus on this concept and emotion.

**To Parents**

The first and foremost rule is to rate one’s need for a particular product or feature. The tendency is to overlook a very crucial feature for an appealing one. It is essential that the need be judged before jumping in for that “trendy” item, especially under the influence and coerce of the child.

Understand the psychology of selling and advertising. The things that are depicted in advertisements are not gospel truths. Many advertisements make false promises, are highly exaggerated and give incomplete descriptions of products.

Before buying a particular product, find out the credibility of the choices of brands offered. Everyone believes and says (through advertisements) that they are the best. If all of them are the bests, then go for the better than the best one, and most important of all, involve your child in doing so.

Marketers should be ethically bound especially while targeting children and parents should remain more aware. These are some of the vital ingredients for the health of the children, the pillars for tomorrow’s economy.

**Future Scope of the Study**

Child’s presence in an advertisement is understood to have its charm on parents, without doubt. But it can be analysed in the future, if such charm materialises into a purchase by parents. Further it can be analysed if there is any correlation between an ad recall attractively featuring children and its influence on the purchase of the respective brands.
BIBLIOGRAPHY


A FUZZY AHP APPROACH FOR THE EVALUATION OF A FIRM AS A POTENTIAL EMPLOYER

L. Bruno Augustin  
K.G. Sai Shreenaath  
Arjhun Hariharan  
Pranav Prakash  
S. Vijayan

ABSTRACT
Due to the fierce competition in the global market, survival is only possible for those companies which provide quality products. This can be achieved only when the company is capable of employing talented personnel. This article provides an idea on the different criteria which attract these professionals. Using the Fuzzy AHP method, the importance degree of each criterion is established thus enabling us to identify the necessary aspects which a job should entail.

Keywords: Fuzzy AHP, Fuzzy set theory, Multi-decision criteria, Potential Employer.

1. Introduction
If getting a job in a reputed company is a challenge, companies being able to offer a job that will have all the necessary aspects which will keep the employee happy, is a bigger challenge. In a world which is highly competitive, it becomes the company's responsibility to hire and retain talented employees. Several aspects including monetary and non-monetary benefits, work schedule etc. play a crucial role in this. Only if the company is able to impress their potential employee in the aspects that play a major role can they hire the most talented lot. The aim of this paper is to identify the most important and crucial aspect using the concept of Fuzzy AHP.

The analytic hierarchy process (AHP) developed by Saaty is an effective method used for multi-criteria decision making. It uses pair-wise comparison of all the criteria on a scale ranging from 1-9. But one of the major drawbacks of the AHP is its incapability to handle the ambiguity associated with the mapping of one's perception to an exact number. To solve this issue, Buckley developed the fuzzy AHP model which incorporates fuzzy numbers in the place of real numbers.

Fuzzy AHP is a systematic method of multi-criteria decision making, which uses concepts of fuzzy set theory. The decision maker ranks a criterion in comparison to another criterion in the form of linguistic terms such as 'Very Unimportant', 'Less Important', 'Equally important', 'More important' and 'Very important'. (ref1)

\[
A = \begin{pmatrix}
1 & \ldots & r_{in} \\
\vdots & \ddots & \vdots \\
r_{in} & \ldots & 1
\end{pmatrix}
\]

With this, the Fuzzy comparison matrix is formed which is given by:

where \( r_{in} \) ... Are the ranks assigned by the decision maker.

Each linguistic term is assigned a triangular fuzzy number which is used for the calculation of the weights. In Buckley's method, the element of negative judgement is treated as the inverse of the corresponding judgement. Since it requires complex calculations, each negative judgement is assigned a characteristic fuzzy number as done in (ref2). This is shown in Table 1.
In order to compute the fuzzy weights, the above matrix is further divided into 3 matrices, lower bound matrix \((A_L)\), most-likely matrix \((A_M)\) and upper bound matrix \((A_U)\).

For example, the lower bound matrix is given as,

\[
A_L = \begin{bmatrix}
1 & \ldots & x_{11L} \\
\vdots & \ddots & \vdots \\
x_{n1L} & \ldots & 1
\end{bmatrix}
\]

The geometric mean method in Buckley’s model is used to calculate the local weights (ref3, ref4). It is given by:

\[
l_i = \left( \sum_{j=1}^{n} r_{ij} \right)^{1/n}
\]

and \(g\) is the geometric mean of the criterion 1 and \(r_{ij}\) is the value of the comparison of criterion I to criterion j.

In order to compile all the opinions into one, the opinions are aggregated and are then defuzzified. In Buckley’s method, fuzzy addition and fuzzy multiplication is used for defuzzification. Since it is very complex, the centroid of the COG method is used for defuzzification. The fuzzy minimum-maximum operator is given by, (ref5)

\[
\mu_A(x) = \max \left[ \min (\mu_1(x), \mu_2(x), \ldots, \mu_n(x)) \right]
\]

Where \(\mu_i(\chi)\) is the membership value of \(x\) in the aggregated subset \(A\) and \(\mu_i(\chi), \mu_j(\chi), \ldots, \mu_n(\chi)\) are the membership values corresponding to the 1st, 2nd…nth opinion respectively.

And, the COG method is given by:

\[
z = \frac{\int \mu(z) dz}{\int \mu(z) dz}
\]

where \(z\) is the weighted average.

The overall weight of the \(l\)th sub criterion is given by,

\[
S_l = \sum_{i=1}^{l} w_k \times s_{lk}
\]

Where \(w_k\) is the weight of the \(k\)th main criterion and \(s_{lk}\) is local weight of the \(l\)th sub criterion.

2. Overview of the factors

2.1 Monetary benefits

All benefits related to money that an employee is entitled to in an organization come under this category. The amount of money that an employee can potentially earn doing a particular job in a particular company is determined by various aspects of one’s salary ranging from signing bonuses to performance based increments in salary. This category includes 1. Starting salary/pay scale 2. Performance appraisal and 3. Bonuses.

<table>
<thead>
<tr>
<th>Linguistic Term</th>
<th>Explanation</th>
<th>Fuzzy Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Unimportant (VU)</td>
<td>Former is least important</td>
<td>(0,1,2)</td>
</tr>
<tr>
<td>Less Important (LI)</td>
<td>Former is less important</td>
<td>(1,2,3)</td>
</tr>
<tr>
<td>Equally Important (EI)</td>
<td>Both are equally important</td>
<td>(2,3,4)</td>
</tr>
<tr>
<td>More Important (MI)</td>
<td>Former is more important</td>
<td>(3,4,5)</td>
</tr>
<tr>
<td>Very Important (VI)</td>
<td>Former is very important</td>
<td>(4,5,6)</td>
</tr>
</tbody>
</table>

Accordingly, the fuzzy comparison matrix is,

\[
A = \begin{bmatrix}
1 & (x_{12L}, x_{12M}, x_{12U}) & \ldots & (x_{1nL}, x_{1nM}, x_{1nU}) \\
(x_{21L}, x_{21M}, x_{21U}) & 1 & \ldots & \vdots \\
\vdots & \ddots & \ddots & \vdots \\
x_{n1L} & \ldots & 1
\end{bmatrix}
\]

Table 1

<table>
<thead>
<tr>
<th>Linguistic Term</th>
<th>Explanation</th>
<th>Fuzzy Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Unimportant (VU)</td>
<td>Former is least important</td>
<td>(0,1,2)</td>
</tr>
<tr>
<td>Less Important (LI)</td>
<td>Former is less important</td>
<td>(1,2,3)</td>
</tr>
<tr>
<td>Equally Important (EI)</td>
<td>Both are equally important</td>
<td>(2,3,4)</td>
</tr>
<tr>
<td>More Important (MI)</td>
<td>Former is more important</td>
<td>(3,4,5)</td>
</tr>
<tr>
<td>Very Important (VI)</td>
<td>Former is very important</td>
<td>(4,5,6)</td>
</tr>
</tbody>
</table>
2.2 Non-monetary benefits

Employees benefits are not limited to monetary benefits alone. There are several other benefits that one can avail of in an organization. These non-monetary benefits are broadly classified as 1. Healthcare/insurance 2. Accommodation and 3. Perks

2.3 Work schedule

The amount of time that an employee has to dedicate towards work as demanded by the organization is always considered before one takes up the job. A lenient work schedule gives one the opportunity to work overtime, if needed. A rigorous work schedule on the other hand limits one from pursuing interests outside of work. The aspects that are related to work schedule include 1. No of working hours 2. Paid holidays and 3. Flexibility in timing

2.4 Career scope

Employees not only consider what an organization can provide for the short term but also what it can offer in the long run. An employee will look for everything from a stimulating work environment that is conducive to learning, to the opportunities that might arise as a result of working with a particular organization. Career scope encompasses 1. Learning/experience 2. Promotion and 3. Sponsorship for future education

2.5 Qualitative aspects

Not all aspects of a job can be easily quantized. There are a few qualitative aspects of any job that are also taken into account when employees search for potential jobs, such as 1. Job stability 2. Interaction with peers and 3. Location of the job

3. Literature Review

Tan R.R. et al (2013) used a fuzzy AHP variant to rank alternatives based on multiple conflicting criteria, some of which were difficult to quantify. Through this approach and the use of triangular fuzzy numbers, they were able to eliminate inconsistencies in judgment and thus generate suitable values for the weighting factors. ZulalGungor et al (2009) created a multiple-criteria decision making model based on fuzzy set theory and applied it to the personnel selection problem. They changed pair-wise comparisons to triangular fuzzy numbers and employed fuzzy operators in selecting the most appropriate alternative. They were able to arrive at the same result using both the FAHP approach and Yager’s weighted method.

AdemGolec and EsraKahya (2007) utilized a fuzzy-model for employee evaluation and selection. Their fuzzy model not only added to the simplicity of an otherwise complex employee selection problem but also made it possible to include extra factors in the evaluation, if needed. They suggested the use of Choquet integrals instead of the fuzzy model in order to perform a global evaluation of the various factors involved. FENG KONG AND HONGYAN LIU (2005) used Fuzzy-AHP method to determine the key factors affecting E-commerce. The weights of the various attributes were determined by using an integrated subjective and objective approach which effectively eliminates any shortcomings that each individual approach might have.

Kwong C.K. and Bai H. (2001) used fuzzy-AHP method to determine the weights of customer requirements in quality function deployment (QFD). The use of fuzzy numbers enabled them to increase the range a crisp comparison matrix in the conventional AHP method, overcoming the drawbacks of human judgment. MahmoodzadehS. et al (2007) employed a combination of Fuzzy AHP and TOPSIS algorithm to select industrial projects for investment. The FAHP technique was used instead of financial information to effectively calculate the weights of all the criteria. This was then integrated with TOPSIS to facilitate project selection. BojanSrdjevic and YvonildeDantas Pinto Medeiros (2008) performed an assessment of water management plans using the Fuzzy AHP technique. The results of their fuzzy decision making approach were checked with an alternative method of de-fuzzification and the same ranking of the criteria was obtained.

4. Illustration

The Fuzzy-AHP approach followed in the current topic is given in the following steps:

1. The topic to be studied is understood thoroughly and a hierarchy consisting of a number of criteria and sub-criteria is formed.
2. With the hierarchy and the linguistic variables, a questionnaire was created and opinions of 10 candidates were taken and used for calculation of the weights. The questionnaire is shown in the table below.

Table 2

<table>
<thead>
<tr>
<th>Question No</th>
<th>Keeping all the expectations of a job in mind, answer the following questions:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Compare ‘Monetary benefits’ (C1) of the company and the ‘Non-monetary benefits’ (C2):</td>
</tr>
<tr>
<td>2</td>
<td>Compare ‘Monetary benefits’ (C1) of the company and the ‘Work schedule’ (C3):</td>
</tr>
<tr>
<td>3</td>
<td>Compare ‘Monetary benefits’ (C1) of the company and the ‘Career scope’ (C4):</td>
</tr>
<tr>
<td>4</td>
<td>Compare ‘Monetary benefits’ (C1) of the company and the ‘Qualitative aspects’ (C5):</td>
</tr>
<tr>
<td>5</td>
<td>Compare ‘Non-Monetary benefits’ (C2) of the company and the ‘Work schedule’ (C3):</td>
</tr>
<tr>
<td>6</td>
<td>Compare ‘Non-Monetary benefits’ (C2) of the company and the ‘Career scope’ (C4):</td>
</tr>
<tr>
<td>7</td>
<td>Compare ‘Non-Monetary benefits’ (C2) of the company and the ‘Qualitative aspects’ (C5):</td>
</tr>
<tr>
<td>8</td>
<td>Compare ‘Work schedule’ (C3) of the company and the ‘Career scope’ (C4):</td>
</tr>
<tr>
<td>9</td>
<td>Compare ‘Work schedule’ (C3) of the company and the ‘Qualitative aspects’ (C5):</td>
</tr>
<tr>
<td>10</td>
<td>Compare ‘Career scope’ (C4) of the company and the ‘Qualitative aspects’ (C5):</td>
</tr>
<tr>
<td>11</td>
<td>Compare ‘Starting salary/Pay scale’ (M1) and ‘Performance Appraisal’ (M2):</td>
</tr>
<tr>
<td>12</td>
<td>Compare ‘Starting salary/Pay scale’ (M1) and ‘Bonuses’ (M3):</td>
</tr>
<tr>
<td>13</td>
<td>Compare ‘Performance Appraisal’ (M2) and ‘Bonuses’ (M3):</td>
</tr>
<tr>
<td>14</td>
<td>Compare ‘Healthcare/Insurance’ (N1) and ‘Accommodation’ (N2):</td>
</tr>
<tr>
<td>15</td>
<td>Compare ‘Healthcare/Insurance’ (N1) and ‘Perks’ (N3):</td>
</tr>
<tr>
<td>16</td>
<td>Compare ‘Accommodation’ (N2) and ‘Perks’ (N3):</td>
</tr>
<tr>
<td>17</td>
<td>Compare ‘Number of working hours’ (W1) and ‘Paid holidays’ (W2):</td>
</tr>
<tr>
<td>18</td>
<td>Compare ‘Number of working hours’ (W1) and ‘Flexibility in timing’ (W3):</td>
</tr>
<tr>
<td>19</td>
<td>Compare ‘Paid holidays’ (W2) and ‘Flexibility in timing’ (W3):</td>
</tr>
<tr>
<td>20</td>
<td>Compare ‘Learning/Experiences’ (S1) and ‘Promotions’ (S2):</td>
</tr>
<tr>
<td>21</td>
<td>Compare ‘Learning/Experiences’ (S1) and ‘Sponsorship for future education’ (S3):</td>
</tr>
<tr>
<td>22</td>
<td>Compare ‘Promotions’ (S2) and ‘Sponsorship for future education’ (S3):</td>
</tr>
<tr>
<td>23</td>
<td>Compare ‘Job stability’ (Q1) and ‘Interaction with peers’ (Q2):</td>
</tr>
<tr>
<td>24</td>
<td>Compare ‘Job stability’ (Q1) and ‘Location of the job’ (Q3):</td>
</tr>
<tr>
<td>25</td>
<td>Compare ‘Interaction with peers’ (Q2) and ‘Location of the job’ (Q3):</td>
</tr>
</tbody>
</table>
The consolidated opinions of the 10 candidates for the above questions is shown below:

Table 3

<table>
<thead>
<tr>
<th>Question No</th>
<th>Candidate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>1</td>
<td>MI EI EI MI VI VI EI MI EI</td>
</tr>
<tr>
<td>2</td>
<td>VU LI EI EI LI EI EI VI LI</td>
</tr>
<tr>
<td>3</td>
<td>EI VU LI LI VI EI MI EI VI EI</td>
</tr>
<tr>
<td>4</td>
<td>LI EI EI MI LI EI MI EI MI VI</td>
</tr>
<tr>
<td>5</td>
<td>LI LI EI LI LI EI EI MI EI MI</td>
</tr>
<tr>
<td>6</td>
<td>LI VU LI EI VI VU MI MI MI EI</td>
</tr>
<tr>
<td>7</td>
<td>LI LI MI MI VI EI EI MI EI EI</td>
</tr>
<tr>
<td>8</td>
<td>EI VU VU LI VI EI MI MI EI EI</td>
</tr>
<tr>
<td>9</td>
<td>LI EI EI EI VI MI EI MI VI EI</td>
</tr>
<tr>
<td>10</td>
<td>MI MI EI EI EI EI MI EI EI EI</td>
</tr>
<tr>
<td>11</td>
<td>LI LI EI MI VI MI EI EI EI VI LI</td>
</tr>
<tr>
<td>12</td>
<td>EI LI EI EI VU EI LI MI VI MI</td>
</tr>
<tr>
<td>13</td>
<td>MI VI LI LI VU EI LI MI EI EI</td>
</tr>
<tr>
<td>14</td>
<td>EI EI MI MI EI EI MI LI VI VU</td>
</tr>
<tr>
<td>15</td>
<td>MI LI VU MI MI EI EI LI VI VI</td>
</tr>
<tr>
<td>16</td>
<td>MI LI EI EI MI MI EI EI EI VI</td>
</tr>
<tr>
<td>17</td>
<td>MI EI EI LI LI LI MI MI VI EI</td>
</tr>
<tr>
<td>18</td>
<td>MI EI EI MI VI MI LI EI MI LI</td>
</tr>
<tr>
<td>19</td>
<td>MI LI LI LI LI VU MI LI VU LI</td>
</tr>
<tr>
<td>20</td>
<td>MI EI EI MI LI LI LI MI MI EI</td>
</tr>
<tr>
<td>21</td>
<td>VI MI VI EI VU VI EI MI VI EI</td>
</tr>
<tr>
<td>22</td>
<td>MI EI MI MI VU EI VU EI MI EI</td>
</tr>
</tbody>
</table>
3. With the data from the above table 3 and 1, the fuzzy comparison matrix for the first candidate’s opinion for the main 5 criteria is formed:

\[
A = \begin{bmatrix}
(1,1) & (3,4,5) & (0,1,2) & (2,3,4) & (1,2,3) \\
(1,2,3) & (1,1,1) & (1,2,3) & (1,2,3) & (1,2,3) \\
(4,5,6) & (3,4,5) & (1,1,1) & (2,3,4) & (1,2,3) \\
(2,3,4) & (3,4,5) & (2,3,4) & (1,1,1) & (3,4,5) \\
(3,4,5) & (3,4,5) & (3,4,5) & (1,2,3) & (1,1,1)
\end{bmatrix}
\]

4. The upper bound matrix for the above matrix is found and is given by:

\[
A_U = \begin{bmatrix}
1 & 5 & 2 & 4 & 3 \\
3 & 1 & 3 & 3 & 3 \\
6 & 5 & 1 & 4 & 3 \\
4 & 5 & 4 & 1 & 5 \\
5 & 5 & 5 & 3 & 1
\end{bmatrix}
\]

5. Next, the geometric mean of C1 with respect to C2, C3, C4 and C5 is calculated as follows:

\[
u_1 = (1 \times 5 \times 2 \times 4 \times 3)^{1/5} = 2.605171
\]

Similarly, \(u_2, u_3, u_4, u_5\) are calculated as 2.408225, 3.245342, 3.314454 and 3.271947.

6. Now, the relative weight of C1 can be found out as:

\[
w_1 = \frac{2.605171}{(2.605171 + 2.408225 + 3.245342 + 3.314454 + 3.271947)} = 0.220405
\]

Similarly, the weights of C2, C3, C4 and C5 are found to be: 0.223269, 0.218613, 0.162223 and 0.17549.

7. By repeating the same procedure of calculating the geometric means and the relative weight for the most-likely and lower bound matrices, the minimum, mean and maximum weight of C1, C2, C3, C4 and C5 can be found out. The values for C1 is found to be: (0, 0.16312, 0.17549).

8. Following the same procedure for the second opinion, the minimum, mean and maximum weights for C1 is : (0, 0.156188, 0.168748).

9. These weights for a particular criterion say C1, are defuzzified using the centroid method formula and is given by:

\[
z_{\text{numerator}} = \int_{0}^{0.156188} \frac{(x - 0)x \, dx}{0.156188} + \int_{0.156188}^{0.156684} \frac{(0.156188 - x)x \, dx}{0.000496} + \int_{0.156684}^{0.16312} \frac{(0.156188 - x)x \, dx}{0.006436} + \int_{0.16312}^{0.17549} \frac{(0.17549 - x)x \, dx}{0.01237}
\]

\[
z_{\text{denominator}} = \int_{0}^{0.156188} (x - 0)x \, dx + \int_{0.156188}^{0.156684} (0.156188 - x)x \, dx + \int_{0.156684}^{0.16312} (0.156188 - x)x \, dx + \int_{0.16312}^{0.17549} (0.17549 - x)x \, dx
\]

\[
z = \frac{z_{\text{numerator}}}{z_{\text{denominator}}} = 0.110807
\]

By applying the same formula, the defuzzified weights for C2, C3, C4 and C5 are can be found. This method is used to compute the weights for each criterion or sub criterion by taking one fuzzy comparison matrix at a time.

10. The above steps show the illustration for the calculation of the weights taking 2 candidates opinions. In the same way, the 10 opinions are to be considered to calculate the final weights of the criteria and sub criteria.

11. The final consolidated weights are found table of weights is given below:
### Table 4

<table>
<thead>
<tr>
<th>1st Level</th>
<th>Priority</th>
<th>2nd Level</th>
<th>Priority</th>
<th>Overall Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monetary</td>
<td>0.29015</td>
<td>Starting Salary</td>
<td>0.479242</td>
<td>0.139052</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Performance Appraisal</td>
<td>0.343149</td>
<td>0.099565</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bonuses</td>
<td>0.177609</td>
<td>0.051533</td>
</tr>
<tr>
<td>Non-Monetary</td>
<td>0.109642</td>
<td>Healthcare</td>
<td>0.566452</td>
<td>0.062107</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Perks</td>
<td>0.131832</td>
<td>0.014454</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Accommodation</td>
<td>0.301716</td>
<td>0.033081</td>
</tr>
<tr>
<td>Work Schedule</td>
<td>0.221849</td>
<td>Working Hours</td>
<td>0.437827</td>
<td>0.097131</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Paid Holiday</td>
<td>0.262386</td>
<td>0.05821</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Flexibility</td>
<td>0.299787</td>
<td>0.066507</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Experience</td>
<td>0.304865</td>
<td>0.069444</td>
</tr>
<tr>
<td>Career Scope</td>
<td>0.227785</td>
<td>Sponsorship</td>
<td>0.279939</td>
<td>0.063766</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Promotions</td>
<td>0.415196</td>
<td>0.094575</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Job Stability</td>
<td>0.298134</td>
<td>0.044891</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Interaction with Peers</td>
<td>0.446228</td>
<td>0.06719</td>
</tr>
<tr>
<td>Qualitative Aspects</td>
<td></td>
<td>Location of Job</td>
<td>0.255638</td>
<td></td>
</tr>
</tbody>
</table>

5 Conclusion

For companies to stay ahead of their competitors, their products and services need to be better. This can only happen when the company’s workforce consists of extremely talented individuals who can help propel the company forward. It is therefore in the best interest of any company to attract the best and brightest employees. Using the Fuzzy AHP approach, the various criteria that prospective employees consider when looking for a job are weighed and it is determined that among the various criteria under consideration, Monetary Benefits has the highest priority of 0.29015 which indicates that companies should give the most importance to this. Among the sub-criteria that come under the scope of Monetary Benefits, it is found that the Starting Salary has the highest overall priority of 0.139052. Thus, the calculated priorities of each individual criterion and sub-criterion...
should provide companies with a detailed idea of what they have to offer in order to draw in the best professionals to be a part of their organisation.

REFERENCES


ENGAGING CONSUMER THROUGH SOCIAL MEDIA AND GAINING ADVANTAGES FOR BRAND: AN EMPIRICAL STUDY IN UTTER PRADESH

Krishn Pal Singh

ABSTRACT

Purpose – The purpose of this paper is to examine the impact of company's social media engagement on different brands and understanding the theoretical building block between company, social media and consumer.

Design/methodology/approach – Descriptive research design is used in this paper and principle component factor analysis for analyzing the variables with the help of SPSS 20.

Findings – Social media, brand knowledge and brand personality have high variance. Hypothesis H1, H2, H3 and H4 found to be correct through empirically testing.

Practical implications – This framework should be useful to brand managers or company executives forengagingtheirbrand through social media and getting positive outcomes for their brand.

Originality/value – This work is the first to develop a managerial framework for engaging consumer and brand on social media platform for enhancing brand loyalty and brand equity.

Keywords: Social media, Brand personality, company engagement, brand knowledge, outcome, word-of-mouth.

Paper type Research paper

Introduction

Social media is a digital platform where anyone can freely put their thoughts, views and share their experience. So business managers and marketers worldwide getting attention on this phenomena, are trying to update them with rapidly changing consumer behavior as well as harness the potential of this new online channel. With the rapid development of mobile technology, social media is now accessible anywhere and at any time. A study by Josh Bernoff (2010) on mobile internet users (in US) finds that 75% of Internet surfers used “Social Media” in the form of liking the fan page, post photos and videos and using social networking sites. By 2011, approximately 83% of Fortune 500 companies were using some form of social media to connect with consumers. Furthermore, surveys suggest that consumers are increasingly relying on social media to know and learn about unfamiliar and existing brands. The Telecom Regulatory Authority of India (TRAI) pegged the number of Internet subscribers in India at 164.81 million as of March 31, 2013, with seven out of eight accessing the Internet from their mobile phones. A deep investigation by Beer and Burrows (2010) suggests that user-generated contents (UGC) and social networking sites (SNSs) have significant implications for consumption and the study of consumer cultures. As brands are increasingly embedded in SNSs (e.g. Facebook and Twitter) and other variant forms of social media (e.g. YouTube), the competition between brands has become a
battlefield where companies co-own their brands, companies direct competitive strategies, and update their brand as per consumer requirement (Heil et al., 2010; Tynan et al., 2010). For marketers, social media has the power to achieve great results at very minimal cost, and in less time; however doing so creates incalculable risks that many businesses are not yet prepared to take. One such risk relates to the issue of how engagement with consumers via social media might impact outcomes related to brand. This research conceptualizes the relationships between consumer engagement and social media, which are proposed to have an effect on brand outcomes. The conceptual framework presented herein was developed based on literature review on online consumer behavior, interactive marketing, and theoretical perspectives such as, community approach and consumer-based approach to brands. Literature about social media’s impact on brands is evolving, but lacks a systematic identification of motivational outcomes related to managing brands in this new environment. There is limited research on its potential effect on brand knowledge, brand personality, brand loyalty, word-of-mouth and consumer relationship. Though many of these elements have received individual attention but there is gap to take companies and consumer together with other variables. This conceptual paper makes an important contribution creating the fundamental linkages between companies’ active engagement with social media and brands, and the effects of this engagement on outcomes for brands.

**Literature Review**

**Social media**

There is limited academic literature which guides marketing manager about the role of social media in integrated marketing communication (Mangold and Faulds, 2009). It therefore makes sense to take a step back and provide insight regarding social media applications in respect to motivational outcomes for brands. On the basis of two dimensions- social presence and self-disclosure social media applications can include collaborative projects (i.e. Wikipedia), blogs, content communities (e.g. YouTube), social networking sites (e.g. Facebook, Twitter and LinkedIn), virtual social worlds (e.g. Second Life) and virtual game worlds (e.g. World of Warcraft) (Kaplan and Haenlein, 2010). For the present study company’s engagement with social media is considered in the most common form of blogs, social networking sites and content communities which influences brand management element. According to OECD (2007) Blogs, which represent the earliest form of Social Media, are special types of websites that usually display date-stamped entries in reverse chronological order. Blogs are usually managed by one individual and give opportunity to others for interaction through the addition of comments (Kalpan and Haenlein, 2010). Many companies are already using blogs to update employees, customers, and shareholders on important development issues, In this reference one good example is That of Jonathan Schwartz, CEO of Sun Microsystems, maintains a personal blog to improve the transparency of his company (Kalpan and Haenlein, 2010).

The main objective behind content communities is the sharing of content between numbers of users in this electric platform and content communities exist for a wide range of different media types, including text (e.g. google books), photos (e.g. Flickr), videos (e.g. YouTube), and PowerPoint presentations (e.g., Slideshare) (Kalpan and Haenlein, 2010). Communities are very popular channel between firms and consumers. For example, more than one billion unique users visit YouTube each month (Kaplan and Haenlein, 2010). Brand communities also have an significant role in promotion of a brand (McAlexander, Schouten, &Koening, 2002), giving customers deep understanding of brand stories or culture, and collecting and sharing important information such as customer opinions, experiences and grievances about the products or services of the brand (Muniz &O’Guinn, 2001).

Social networking sites are applications that enable users to connect with friends and colleagues by creating personal profile and sending friend request, sharing messages and emails (Kalpan and Haenlein, 2010). According to Wikipedia, the largest social networking sites in terms of users in U.S. based Facebook and MySpace. Several companies are already using social networking sites to support the creation of brand communities (Muniz &O’Guinn, 2001).

So, on the basis of literature review it is find that companies (like Amazon, McDonald, Coca-Cola) are using these social media application, for managing brands and connecting with consumers, employees & stakeholders. The present paper examines how active engagement of companies in this platform impact in favor of brands.

**Brand**

According to American Marketing Association brand is “A name, term, sign, symbol, or design, or a combination of them which is intended to identify the goods or services of one seller or a group of sellers and to differentiate them from those of competitors”. Brands are highly valuable assets for
differentiating and identifying products of one firm among the existing competitors. A study by Keller (1993); Srivastava, Shervani, and Fahey (1998) suggests that firms aim to create strong brands with creating a knowledge structure in consumer mind by brand stories in the form of customer experience. These stories may be told through social networking sites, blogs and content communities.

Company’s Engagement and Role in Social Media

Wirtz et al., (2013) suggest that companies identify the need for establishment and management of online brand communities. Due to enhancing relation with people, brand communities play an important role for updating a business (Fournier and Lee, 2009). Calder, Malthouse and Schaedel (2009) studied that consumer engagement with a website can positively affect companies promotion campaign. Zeng, Huang and Dou (2009) focused particularly on promotion through communities and found that social identity is being affected by group norms and judgments of community users.

After understanding the interest of consumer, companies using internet for engaging different segment of consumers by sending messages for their knowledge (Keller, 2009). Berthon, Pitt and Campbell (2008) explored the motivations and power of creative consumer on user generated content but within social media literature, discussion of these constructs is limited. Forrester Research (2010) classifies the online active consumers in seven parts - Creators, Conversationalists, Critics, Collectors, Joiners, Spectators, and Inactive. For example, Conversationalists weekly update their status on social networking sites (e.g. facebook) and actively post updates on twitter. (Forrester Research, 2010). This study provides different engagement and roles companies for using social media. When consumers are able to submit their feedback and suggestions to organizations about their products then they feel more engaged (Mangold and Flud 2009).

Social media in the form of blogs, communities (company generated), social networking sites etc. provide consumer a platform for putting their complaints and share their experiences about product. That is why companies are using this emerging media for engaging themselves with consumers.

Outcomes in Favor of Brand

Outcome means end result of an action, in this reference company’s active engagement with social media strengthening the brand through increasing the brand knowledge, spreading word-of-mouth communication, enhancing brand personality and brand loyalty and building relationship with consumers.

Active brand engagement is viewed as potentially the strongest confirmation of brand resonance, the final stage of brand development in the consumer-based brand equity pyramid proposed by Keller (2001; 2009). Keller (1993) identifies brand knowledge as a chain of respective associations like product attributes and benefits, user imagery etc. Interactive marketing communications such as social media allows consumers for learning, teaching and expression of commitment and keep an eye on other consumer’s loyalty towards brands (Keller, 2009).

Mangold and Faulds (2009) studied that how every stage of the consumer decision-making process influence by social media including information acquisition, brand awareness, purchase behavior, and post-purchase communication and evaluation, as well as influencing general opinions and attitude formation.

Social media have been contributed for giving new ways to gain knowledge and increasing awareness through fulfilling the information requirement by consumers (Keller, 2009). It suggests that consumer increasing their brand knowledge through social media.

According to a study by Fogel (2010), Social media has facilitated number of ways for consumers to interact and communicate with, admiring for complain against brands. Word-Of-Mouth is a significantly influencer of behavior in the form of information search and decision making (Brown & Reingen, 1987). So word of mouth could affect the behavior and motivations of consumer and give them direction for uprising their knowledge and awareness towards a brand.

Shankar, Smith and Rangaswamy (2003) find that the relationship between satisfaction and loyalty is stronger in online than offline. Consumers are actively engage with online brand communities in the form of membership perpetuation, participation, exchanging recommendation between other community users’ results in the form of brand loyalty and customer advocacy (Algesheimer et al., 2005). Users of online brand communities can easily share their experiences and opinion through proper interaction, and can influence the brand loyalty of other community user (Casaló, Flavián, & Guinalíu, 2010; Laroche, Habibi, & Richard, 2013). Users of these communities are highly interested in firm’s new product in comparison to competitors (Thompson and Sinha, 2008). Brand loyalty is a positive indicator which enhances brand equity.
Brand equity enhances through brand awareness and brand image in the form of brand knowledge (Buil et al. 2013).

Through Interactive marketing communications on website marketers can also build brand personality by providing creative content and comparisons to other competitors on prices, designs, features and performance (Keller, 2009).

Interacting through online brand communities gives positive experiences which strengthen the relationship between consumers and brand (Algesheimer et al., 2010). Consumer’s active engagement with online brand communities enhances brand engagement which confines interactive relationship with brands (JochenWirtz et al., 2013). A study by CédricManara (2011) shows that social media play an important role in protecting and enhancing brand equity.

So, social media play a crucial role in building relationship with consumer and brand, increasing brand knowledge, spreading word of mouth, enhancing brand loyalty and maintaining brand personality, all of these help to increase brand equity.

**Conceptual Framework**

The model hypothesizes that use of social media, company’s engagement and roles with social media are antecedents to brand knowledge, word of mouth, brand loyalty, brand personality and consumer relationship with brands. It further hypothesizes the relationship between company’s engagement, social media and brands. These are as follows-

H1: Use of brand communities, blogs and social networking sites leads to more spread of Knowledge related to brands.

H2: Outcomes for brands positively affected by social media.

H3: Companies engagement with social media enhances brand equity.

H4: Company’s active engagement through social networking sites builds relationship between brands and consumers.

**Figure 1: Linkage between company, brand and consumer**
Research Methodology

The study focuses on ads of different mobile companies on social media. Descriptive research design is used for this paper. Sampling unit is graduate students who are using social media. Sampling area is Lucknow city. Sample size is 100 and source of data collection is primary. Data collection instrument is questionnaire. 100 questionnaires distributed among sample, out of which 72 questionnaire returned and for the study 54 questionnaire selected. Convenience sampling was used for sample selection. Statistical method for data analysis was principle component factor analysis. Statistical tool used for analysis and interpretation was SPSS 20.

Analysis and Findings

The reliability coefficients checked by Cronbach alpha comes to 0.664 and this value conform the accuracy of results. The objective of this study is to identify the fundamental linkages between company’s engagement with social media and brands, and the effects of this engagement on outcomes for brands. The KMO measure 0.516 which is greater than 0.5 and results shows significant chi square value of (3704.521, p<0.01). The factor analysis was applied using principal component matrix. The four factors were extracted using a stand-ard Eigen value of 1.0. The results are shown in Table 1.

<table>
<thead>
<tr>
<th>Factor and Items</th>
<th>Eigen Value</th>
<th>Factor loading</th>
<th>% of Variance</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Social Media</strong></td>
<td>4.771</td>
<td>16.185</td>
<td>16.185</td>
<td></td>
</tr>
<tr>
<td>Company’s social media communication regarding brand is satisfactory.</td>
<td>2.655</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level of social media communication used by company for brands meets my expectations</td>
<td>1.188</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Company’s social media communication for brand is entertaining</td>
<td>0.478</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I Influenced by other user’s expressions about brand.</td>
<td>0.277</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The level of other user’s communication meets my expectation.</td>
<td>0.173</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Brand Knowledge</strong></td>
<td>4.498</td>
<td>48.914</td>
<td>65.099</td>
<td></td>
</tr>
<tr>
<td>Awareness towards brands increases.</td>
<td>2.056</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brands are offer value for price products.</td>
<td>1.265</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brands are durable.</td>
<td>0.549</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brands are admired by known persons.</td>
<td>0.349</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brands are able to express my personality.</td>
<td>.279</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>Brand Personality</strong></td>
<td>2.885</td>
<td>18.797</td>
<td>83.896</td>
<td></td>
</tr>
<tr>
<td>Brands are down-to-earth.</td>
<td>1.372</td>
<td></td>
<td></td>
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<tr>
<td>Brands are cheerful.</td>
<td>1.029</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Information regarding brands is up-to-date.</td>
<td>.314</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Brands are reliable.</td>
<td>.170</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Word of Mouth</strong></td>
<td>4.329</td>
<td>7.593</td>
<td>91.489</td>
<td></td>
</tr>
<tr>
<td>Using strong words for brand while communicating others.</td>
<td>2.142</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Informatively communicating about brands.</td>
<td>1.204</td>
<td></td>
<td></td>
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<tr>
<td>During word-of-mouth influence others.</td>
<td>.524</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>While word-of-mouth spread credible information.</td>
<td>.276</td>
<td></td>
<td></td>
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</table>
Word-of-mouth is helpful for other users.  

<table>
<thead>
<tr>
<th>Brand Loyalty</th>
<th>6.086</th>
<th>7.535</th>
<th>99.024</th>
</tr>
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<tbody>
<tr>
<td>Committed towards a particular brand.</td>
<td>3.443</td>
<td></td>
<td></td>
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<tr>
<td>Pay more attention towards brands I like.</td>
<td>1.551</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I recommend the brand to others.</td>
<td>.522</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Repeatedly purchase a brand.</td>
<td>.296</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchasing a admired brand is important in comparison to other competitive brands</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Brand Relationship</th>
<th>3.645</th>
<th>.976</th>
<th>100.000</th>
</tr>
</thead>
<tbody>
<tr>
<td>I like to talk about my favorite brand with others.</td>
<td>1.875</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Always interested in learning more about my brand.</td>
<td>1.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel proud when others know I use this brand.</td>
<td>.546</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I visit the website for my brand.</td>
<td>.223</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The factors derived (Social media, brand knowledge, brand personality, word-of-mouth, brand loyalty, brand relationship) represent the different elements, which form the underlying factors from the original 28 scale response items given. Referring to the Table 1, Factor 1 having variance 16.185% represents the elements of the social media affects and is therefore labeled as ‘Social media’. Factor 2 with a variance of 48.914% has all the statements related to the brand knowledge of customer and therefore has been termed as ‘Brand Knowledge’. Factor 3 with a variance of 18.797% has all the statements related to the brand perception of customer and therefore has been termed as ‘Brand Personality’. Factor 4 with a variance of 7.593% has all the statements related to the word of mouth publicity and therefore has been termed as ‘Word of Mouth’. Factor 5 with a variance of 7.535% has all the statements related to the brand loyalty of customertowards the particular brand and therefore has been termed as ‘Brand Loyalty’. The statements that load into Factor 6, having variance 0.976% all were concerned with the building relationship with the customer with the help of social media and therefore termed as ‘Brand Relationship’.

H4: The correlation coefficient value 0.378 supported the hypothesis 4 that the company’s active engagement through websites building relationship between brands and consumers.

Conclusion and Findings

Social media provide a new home to managers for using in promotion mix and effectively target the selected consumer groups (Mangold and Faulds, 2009). Although, In the area of marketing communication social media is in developing stage and getting attention of marketer for managing brands in this complex environment. Social media gives opportunity for firms to timely engage with consumer and connect with end consumer at relatively low cost with higher efficiency than traditional communication tool (Andreas M. Kaplan and Michael Haenlein, 2010). The present paper analyzes how company’s active engagement with social media affect brand knowledge, word of mouth, brand loyalty, consumer relationship and brand personality, and giving direction for marketers and managers for better utilizes this channel in favor of brand. Variables like Brand knowledge, Social media, Word-of-mouth and Brand loyalty have Eigen values greater than 4. Social media, Brand knowledge and Brand personality have high variance (Table 1) in comparison to low variance variables like Brand loyalty, Word-of-mouth and brand relationship.

Scope and Limitation for Further Research

Results of the study used further for impact of social media of purchasing behavior of consumer, brand equity of company and sales of the products of different companies. Limitations which must be
identified are given accordingly. Research is limited in the Lucknow city and it can further expended to other cities also and across different industries with number of product categories. Different techniques and variables also included for further research.

REFERENCES


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http://socialtimes.com/social-media-usage-exploding-amongst-fortune-500-companies_b53572
http://www.thefreedictionary.com/outcome


APPENDIX

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
</tr>
<tr>
<td>Company's social media communication regarding brand is satisfactory.</td>
</tr>
<tr>
<td>Level of social media communication used by company for brands meets my expectations</td>
</tr>
<tr>
<td>Company’s social media communication for brand is entertaining.</td>
</tr>
<tr>
<td>I Influenced by other user’s expressions about brand.</td>
</tr>
<tr>
<td>The level of other user’s communication meets my expectation.</td>
</tr>
<tr>
<td>Awareness towards brands increases.</td>
</tr>
<tr>
<td>Brands are offer value for price products.</td>
</tr>
<tr>
<td>Brands are durable.</td>
</tr>
<tr>
<td>Brands are admired by known persons.</td>
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<tr>
<td>Brands are able to express my personality.</td>
</tr>
<tr>
<td>Brands are down-to-earth.</td>
</tr>
<tr>
<td>Brands are cheerful.</td>
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<tr>
<td>Information regarding brands are up-to-date.</td>
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<td>During word-of-mouth influence others.</td>
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<td>Word-of-mouth is helpful for other users.</td>
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<td>Committed towards a particular brand.</td>
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<td>Pay more attention towards brands I like.</td>
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<td>I recommend the brand to others.</td>
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<td></td>
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<td>-----</td>
</tr>
<tr>
<td>SM1</td>
</tr>
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<td>SM2</td>
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<td>SM3</td>
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<td>SM4</td>
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INDIA’S TRADE WITH SINGAPORE AND OTHER ASEAN COUNTRIES- A COMPARATIVE STUDY

Shelly De (Pandit)

ABSTRACT

INTRODUCTION – After the 2nd world war one of the most significant developments of world economy to accelerate the developmental process and to improve the life standard of the people was the formation of Regional Economic Groupings. Association of Southeast Asian Nations (ASEAN) is one of the most successful of them. India became the sectoral dialogue partner with ASEAN in 1993 and became full dialogue partner in 1996.

OBJECTIVES – The purpose of this paper is to explore the comparative position of India’s trade with Singapore and other ASEAN countries for the last ten years.

METHODOLOGY – Research into India’s trade with ASEAN are reviewed and analysed. This paper discloses the comparative trade scenario of India with Singapore and other ASEAN countries.

RESULTS and CONCLUSIONS – Singapore continues to be the single largest investor in India amongst the ASEAN countries. Though India has faced a negative trade balance with ASEAN there is always a possibility of substantial expansion of trade between India and ASEAN. Cooperation, comparative advantages, lower intra-regional tariffs in the ASEAN and establishing a special relationship Free Trade Area (AFTA) can boost up the trade between India and ASEAN to the optimum level.

Keywords: ASEAN, India, Singapore, import, export, AFTA)

Introduction

After the 2nd world war one of the most significant developments of world economy to accelerate the developmental process and to improve the life standard of the people was the formation of Regional Economic Groupings. The formation of REGs (Regional Economic Groupings) explores a choice to the region to act both as a producer and as a consumer and to remove trade barriers among countries. The journey of REG was started in 1958 with the formation of European Common Market (ECM) and at present there are 28 regional groupings (GATT report, 1993) in the world. One of the most successful REGs is the Association of Southeast Asian Nations (ASEAN). On 8th August, 1967, by signing the Bangkok Declaration, ASEAN was established in the Southeast Asian region with five member countries, namely Indonesia, Malaysia, Singapore, Thailand and the Philippines. In 1984 Brunei Darussalam joined the association. It was followed by the Vietnam in 1995 and by the Laos and Myanmar in 1997. Cambodia became the last member of ASEAN 1999.

With a combined nominal GDP of USD $2.3 trillion in 2012 (source: www.eu.org); the ASEAN has transcended more than 47 years and within this period it has been established as the most dynamic Asian region by keeping the main objectives to promote the economic cooperation and the welfare of the people and to manage the regional conflicts. In 1977 ASEAN started the Preferential Trading Arrangement (PTA) among the member countries to promote economic co-operation. Gradually ASEAN established itself as a platform for external relations.
At the first summit in Bali in 1976, the ASEAN Heads of government expressed –ASEAN’s readiness to develop fruitful relations and mutually beneficial cooperation with other countries in the region (source- www.asean.org). They established full Dialogue relations with countries like Australia, Japan, New Zealand, and USA. India initially became the sectoral dialogue partner of ASEAN in 1993 and became full dialogue partner in 1996. By adopting the dialogue relations; ASEAN has promoted the technology transfer, trade and investment mobilization, and an expanded market for ASEAN products in the market of its dialogue partners. The relationship was further elevated with the convening of the India's membership in the ASEAN Regional Forum (ARF) in 1996 and India and ASEAN have been holding summit-level meetings on an annual basis started in 2002 in Phnom Penh. On 26 August 2007, ASEAN stated that it aims to complete all its free trade agreement with China, Japan, South Korea, India, Australia and New Zealand by 2013, in line with the establishment of the ASEAN economic community by 2015(source-www.aseansec.org). In August 2009 as a part of ASEAN free trade area India signed a Free Trade Agreement (FTA) with the ASEAN members in Thailand. Under the ASEAN-India FTA, ASEAN member countries and India will lift import tariffs on more than 80 per cent of traded products between 2013 and 2016 (source-www.asean.org). Negotiations for conclusion of the Comprehensive Economic Cooperation Agreement (CECA) with ASEAN are largely concluded (source-MOEA-India). All these took place in a decade, which clearly shows the importance of trade relation between India and ASEAN countries.

The Comprehensive Economic Cooperation Agreement (CECA,2005) with Singapore was the first such agreement to be signed by India with any country. It integrates agreements on trade in goods and services, investment protection, and economic cooperation in fields like education, intellectual property and science & technology. Singapore has become a preferred centre of operations for Indian companies active in the Asia Pacific region. Singapore has emerged as a key offshore logistic and financial hub for many Indian corporate houses with a good enabling environment, strong air connectivity and the presence of a large Indian community. About 6,000 registered 'Indian' companies are estimated to be present in Singapore. Nine Indian banks operate in the country – Bank of India, Indian Overseas Bank, UCO Bank, Indian Bank, Axis Bank, and State Bank of India, ICICI, EXIM Bank and Bank of Baroda. (source- source-MOEA-India)

The two countries will also explore and develop cooperation, in science and technology, intellectual property rights, and media. India-Singapore Bilateral Economic Roadmap includes:

- Increase two-way flow of tourists, businessmen and professionals
- Expedite conclusion of mutual recognition agreements (MRAs) for dentistry, medical, nursing, architecture, accountancy and company secretary professionals on priority
- Explore expansion of the provisions of CECA to liberalise and facilitate movement of Indian professionals to Singapore.
- Develop closer co-operation in tourism

**Objective**

The objective of this paper is to explore the comparative position of India's trade with Singapore and other ASEAN countries for the last ten years to signify the importance of the dialogue partnership to ASEAN and India and the progress made up in the cooperation to boost up India's role as a lead trade player with Singapore in the global order.

**Literature Review**

- As India’s vision of becoming a developed nation by 2020 continues to be translated into domestic reform initiatives and leads to its further integration with the world economy, the opportunities for ASEAN and other economic partners for mutually beneficial economic cooperation are likely to multiply. (ASEAN- India Economic Relations: Current Status And Future Prospects by Rahul Sen, Mukul G. Asher and Ramkishen S. Rajan April 2004)
- Another very important area of economic cooperation among India and ASEAN is in infrastructure development, particularly in railways, aviation and highways. The Port of Singapore Authority (PSA) has been involved with the development and management of the Tuticorin Port in Tamil Nadu and the Pipavav port in Gujarat. (ASEAN- India Economic Relations: Current Status and Future Prospects by Rahul Sen et al April 2004)
- It should also be remembered that compared to some large regional blocks like the EU, and to some extent NAFTA, trade in services and movement of service providers among the...
ASEAN countries are non-existent; the current level of regional integration in services is strikingly low, given that the policy focus of both ASEAN and the individual Member states have been on merchandise trade liberalisation and inducing foreign-investment-led technology-transfer. (India–ASEAN Cooperation In Services – An Overview, Suparna Karmakar November 2005)

Meanwhile, bilateral FTA is being negotiated with several countries in the region, the conclusion of which would significantly enhance the two-way trade between India and ASEAN countries. (Annual Report 2008-2009, Ministry of External Affairs)

The ASEAN-India Trade-in-Goods Agreement was signed on 13 August, 2009 at ASEAN Economic Ministers-India Meeting at Bangkok after six years of intensive negotiations. The agreement will pave way for tariff reductions to stipulated levels and creation of a market of over 1.5 billion people in the region. The next step is for conclusion of negotiations on Trade-in-Services and Trade-in-Investment Agreements in near future, to complete the India-ASEAN FTA. (Annual Report 2008-2009, Ministry of External Affairs)

By analyzing the share of each country of ASEAN in India Exports and Imports, it is concluded that four countries of ASEAN namely Singapore, Malaysia, Indonesia and Thailand constitute more than 80 percent share of India’s Exports and major Import destinations of India are Indonesia, Singapore, Malaysia and Thailand. Thus, the direction of India’s trade in ASEAN region has been changing overtime. These results are confirmed by Exports and Imports growth of India with each country of ASEAN. (India and ASEAN Trade: An Overview Choudhary, 2013)

Bilateral trade amounted to US$ 19.3 billion in 2013-14 making Singapore the 7th largest trade partner of India globally (Source: DGCIS, 2014).

Acknowledging this trend and recognising the economic potential of closer linkages, both sides recognised the opportunities for deepening trade and investment ties, and agreed to negotiate a framework agreement to pave the way for the establishment of an ASEAN-India Free Trade Area (FTA).

Methodology

- Research into India’s trade with ASEAN are reviewed and analysed. Data are based on secondary sources taken from ASEAN website as well as from different websites of Govt of India and from books, journals, corporate reports and announcements
- To disclose the comparative trade scenario of India with Singapore and other ASEAN countries, the data processing involved logical as well as statistical techniques.
- MS-Excel is used to analyse and to make diagrams from data

Analysis, Discussions and Findings

With the Liberalisation, Globalisation and New Economic Policy (1991), India has gradually become an emerging country in respect of world economy. All these reflect India’s inclusion in G-20 which is an extension of G-8 of developed countries. Though ASEAN accounted for a very little amount of India’s total trade (only 9.75%)(source- DGCIS, 2013-2014) trading with ASEAN countries has become important as India’s exports and imports with ASEAN have been increasing consistently. Though India plays the role of a main trading partner for ASEAN but always reflects an unfavourable trade balance. The following table depicts India’s trade with SAARC for the last ten years-

The trade relation between India and ASEAN is quite old and steadily rising. In the Indian context, ASEAN is emerging as an important trade partner for India. India’s bilateral trade (exports plus imports) with ASEAN stood as US $ 6944.88 million in 2000-01 has grown sharply to US $ 17,540.55 million in 2004-05(source- www.commerce.nic.in). There is a sharp increase in total trade from 2004-05 to 2013-14 which stood as US $ 17,540.55 million and US $ 74,411.64 million respectively. It shows a CAGR of 324.22% from 2004-05 to 2013-14 which is significantly very high. The balance of trade with India has been in favour of the ASEAN. India’s trade deficit with ASEAN widened from US $ --688.77 million in 2003-04 to US $ -8,144.54 million in 2013-14. Although ASEAN’s share in India’s total trade has grown significantly, India’s share in ASEAN’s trade has, however, remained modest. India accounted for only 2.7 per cent of ASEAN’s exports and 1.6 per cent of imports in 2007 which were 1.6 per cent and 0.9
Exports to ASEAN increased from US $ 8,425.89 million in 2003-01 to US $ 33,133.55 million in 2013-14 (source - www.commerce.nic.in) and imports increased from US $ 9,114.66 million to US $ 41,278.09 million during this period (source - www.commerce.nic.in). (Table 1). The exports are showing a growth rate of 23.56% to 0.37% in the year 2003-04 to 2013-2014 respectively and the CAGR in exports stood as 293.33%. On the other hand the imports show an increase of growth of 19.41% from the year 2004-2005 to -3.71% in the year 2013-2014. But there was a fall of exports and imports during 2009-2010 and exports during 2012-2013 comparing with the previous years. Immediate recovery starts in 2010-2011 showing a growth of 41.48% in export and 18.64% in import. This trend continued for the
next two financial years. The table-1 clearly shows that the exports have registered higher growth than imports in a couple of years. 2014-2015 (Ap-June) has shown that the export becomes US $ 7,935.74 million and Total import becomes US $10,968.23 million, 2014-2015 (Ap-June) (source-www.commerce.nic.in). For the last ten years the total exports stand as US $ 213626.48 million and the imports as US $ 217287.9 million which were significantly very high with the CAGR in imports as 352.88 %. Chart-2 shows the trend analysis of India’s trade in terms of export and import with ASEAN for the last ten years-

Since the inception of India’s Look East Policy in the early 1990s, Singapore has played an important role in reconnecting us to the countries of South East Asia. The trading relationship between India and Singapore is currently of special interest in both countries for a number of reasons. Among the ASEAN countries Singapore is one of the largest export markets for Indian trade. The bilateral trade between the two nations is carried out as per guidelines given in the key agreements include the Comprehensive Economic Cooperation Agreement, CECA (2005), Double Taxation Avoidance Agreement, DTAA (1994). Finally, both countries have long shared common objectives for closer economic integration within the South Asia region. Therefore a comparative analysis is required to ascertain the trade relation between India-Singapore and India-other ASEAN countries. The following table compares India’s trade with Singapore and other ASEAN countries-

A growing bilateral economic relationship is reflected between Singapore and India. Singapore continues to be the single largest investor in India amongst the ASEAN countries and the second largest amongst all countries with foreign direct investment (FDI) inflows into India, totalling US$ 2.4 billion in 2009-10(source-RBI). The cumulative FDI inflows from Singapore during April 2000 and March 2010 were US$ 10.2 billion, (source-Department of Industrial Policy and Promotion (DIPP).The total bilateral trade has seen during 2013-14was US$ 19,273.03 million, a CAGR of 189.73 per cent over US$ 6,652.01 million in 2004-05, (source-Ministry of Commerce and Industry). Comparing to the total trade with India,
Singapore solely accounted for almost a half amount of other ASEAN countries total trade except for the last two years. In case of total trade with India, there is a sharp increasing trend for both Singapore and other ASEAN countries except for the last two years. Following chart shows the comparison between India's total trade with Singapore and other ASEAN countries—

Table 2: India’s Trade With Singapore And Other Asean Countries From 2004-2005 TO 2013-2014 (value in US million $)

<table>
<thead>
<tr>
<th>Year</th>
<th>Trade With Singapore</th>
<th>Trade With Other ASEAN Countries</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Exports</td>
<td>Imports</td>
</tr>
<tr>
<td>2004-2005</td>
<td>4,000.61</td>
<td>2,651.40</td>
</tr>
<tr>
<td>2005-2006</td>
<td>5,425.29</td>
<td>3,353.77</td>
</tr>
<tr>
<td>2006-2007</td>
<td>6,053.84</td>
<td>5,484.32</td>
</tr>
<tr>
<td>2007-2008</td>
<td>7,379.20</td>
<td>8,122.63</td>
</tr>
<tr>
<td>2008-2009</td>
<td>8,444.93</td>
<td>7,654.86</td>
</tr>
<tr>
<td>2009-2010</td>
<td>7,592.17</td>
<td>6,454.57</td>
</tr>
<tr>
<td>2010-2011</td>
<td>9,825.44</td>
<td>7,139.31</td>
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<tr>
<td>2011-2012</td>
<td>16,857.71</td>
<td>8,388.49</td>
</tr>
<tr>
<td>2012-2013</td>
<td>13,619.24</td>
<td>7,486.38</td>
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<tr>
<td>2013-2014</td>
<td>12,510.54</td>
<td>6,762.49</td>
</tr>
<tr>
<td>total</td>
<td>91,708.97</td>
<td>63,498.22</td>
</tr>
</tbody>
</table>

Comparing to the trade balance with India, Singapore always accounted for a positive trade balance except in 2007-08 than the other ASEAN countries trade balance. Trade balance with other ASEAN countries always depicts a negative trade balance. It can be noted that growth in export in much higher than the imports, with the result the trade balance is rising continuously with Singapore. The growth rate in trade balance with India and Singapore is 326.03% as trade balance
increased from US $ 1,349.21 million in 2004-2005 to US $ 5,748.05 million in 2013-2014. Following chart-shows India’s trade balance with Singapore and other ASEAN countries.

![Chart-4](image1.png)

**Chart-4**

During 2008-09, India exported goods worth US$ 8.45 billion to Singapore. During April-December 2009-10, Indian merchandise exports to Singapore totalled US$ 5.12 billion, comprising mainly of mineral fuels and oils, ships, boats and floating structures and natural pearls, gems and jewellery, according to data released by the Ministry of Commerce and Industry. The two countries will also explore and develop co-operation in many areas like, in science and technology, intellectual property rights, and media. The above table-2 shows that India’s exports to Singapore as well as imports from the country increased in a significant amount. From US$ 4,000.61 in 2004-2005, it increased to US$ 12,510.54 in 2013-2014, which indicates a growth of 212.71%. Comparing to the exports of other ASEAN countries, India accounted for 366.02% growth rate. Thus it revealed that the growth rate of India’s export is higher in case of other ASEAN countries than Singapore.

![Chart-5](image2.png)

**Chart-5**

Again the imports from Singapore have increased from US $ 2,651.40 million in 2004-2005 to US $ 6,762.49 million in 2013-2014, which means a growth of 155.05%. On the other hand India’s growth rate of imports with other ASEAN countries stood as 434.02% as imports increased from US $ 6463.26 million in 2004-2005 to US $ 34515.6 million in 2013-2014. It indicates that India’s trade relation with Singapore has got a new dimension. Chart-5 and Chart-6 shows India’s exports and imports with Singapore and other ASEAN countries for the last 10 years respectively.
The data revealed that there is always a scope for India to increase the trade relations with Singapore. Even the data for 2014-15- April to June shows that total export with Singapore stood as US $ 2,736.61 million which is again higher than any other ASEAN country. This period of time shows an amount of US $ 1,759.87 million for imports from Singapore resulted in a favourable trade balance which reflected AFTA.

Conclusion, Limitations and Recommendations

The ASEAN completed its existence of 46 years. ASEAN is expected to be an instrument for the promotion of peace, progress and stability in this part of the world. ASEAN countries are continuously trying to co-operate with each other in the search for solution to their own problems. ASEAN in its four decades of functioning has maintained the uninterrupted practice of frequent regional consultations, even in the field of the bilateral tensions. The process of consultations and consensus followed by the ASEAN to manage the residual conflicts, without upsetting the regional dynamics of peace, security and development could also be an important input for the progressed and sustained India-ASEAN trade. From the beginning ASEAN has a significant role in the Indian trade as it accounts for more than 10% comparing to India's total trade with rest of the world. For India there are several problems like over population, depletion of natural resources etc., there is always a possibility of substantial expansion of trade between India and ASEAN. Cooperation, comparative advantages and phased Free Trade programme (AFTA) can boost up the trade between India and ASEAN to the optimum level. India-ASEAN trade’s most difficult obstacle lies in the structural characteristic of the system. Though ASEAN provides the regional states a forum to discuss regional issues and voice national concerns. As we know there are similar types of goods export either as primary products or in processed form, discussions on preferential trading, energy cooperation, regional university, control of trafficking will help India to expand its trade with ASEAN countries. Moreover trade can grow when there are complementarities and also when there are areas of comparative advantages.

The close relationship shared by India and Singapore is based on convergence of economic and political interests. The process of economic reforms in India since the early 1990s created a strong basis for cooperation with Singapore, opening up possibilities for significant presence in each others’ economies. Economic and commercial ties between India and Singapore have expanded significantly, particularly after the conclusion of the CECA in 2005.

Singapore continues to be the single largest investor in India amongst the ASEAN countries. Though India has faced a negative trade balance with ASEAN there is always a possibility of substantial expansion of trade between India and ASEAN especially with Singapore. Cooperation, comparative advantages, lower intra-regional tariffs in the ASEAN and establishing a special relationship Free Trade Area (AFTA) can boost up the trade between India and ASEAN to the optimum level.

The study is limited to India’s trade with Singapore and other ASEAN countries on the basis of imports and exports only. Further analysis can be made on goods and services imported from and exported to between India and Singapore and other ASEAN countries.
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A COMPARATIVE STUDY ON DEPRESSION AND REASONS FOR LIVING AMONG MEDICAL AND NON MEDICAL UNDERGRADUATE STUDENTS IN CALCUTTA

Dr. Chandana Aditya
Ms. Arunima Datta

ABSTRACT

Depression, frequently associated with complex urban life, is a predictor of suicide and found to be related with several variables. Reasons for Living, one such variable, refer to a set of life sustaining belief and expectancies which act as cognitive barriers in committing suicide (Linehan et al., 1983).

Aim of the present study is to observe the nature and course of depression along with reasons for living among medical and non medical undergraduate students in Calcutta. 200 unmarried students of both genders (60 M and 60 F), having an age range of 18-25, who do not have family history of psychiatric illness but experience occasional depression, were included in the study, under medical and nonmedical courses (30 M and F from each course). Reasons for Living Rating Scale and CES Depression Rating Scale were used.

Results show a significant negative correlation of depression with family relations, coping belief, peer relation and future expectation in the entire sample. No significant difference in depression was found between male and female students. However, depression was higher among medical students.

Key words: Depression, medical and non-medical students, reasons for living.

Introduction

Depression, a very commonly discussed negative affective state is a by-product of complex urban life. It is a state of low mood and aversion to activity that can affect a person's thoughts, behavior, feelings and sense of well-being (Salmans, 1997). Depressed people can feel sad, anxious, empty, hopeless, helpless, worthless, guilty, irritable or restless. They may lose interest in activities that were once pleasurable, experience loss of appetite or overeating, have problems concentrating, remembering details or making decisions, and may contemplate, attempt or commit suicide. Insomnia, excessive sleeping, fatigue, aches, pains, digestive problems or reduced energy may also be present. (NIMH, 2012).

Medical students are exposed to a host of new, stressful experiences during their training, and they often process these moments in isolation. This leads inevitably to depression. Although it has been studied considerably, (Dyrbye, Thomas and Shanfelt, 2006) the effects of depression and burnout on attitudes and actions are still being realized.

Depression is more common among medical students, residents, and physicians than in the general population, though estimates of its prevalence vary. About 14% of medical students have symptoms of moderate to severe depression, according to a study published last September in Journal of the American Medical Association, JAMA (Schwenk, Davis and Wimsatt, 2010). In addition, roughly 5% of the 505 students surveyed revealed that they had suicidal thoughts at
some point during training. A survey published in Epidemiology and Health last November found that 40% of 120 medical students in Seoul, Korea, appeared to have depression (Jeong et al., 2010). Even medical students who don’t have depression could be suffering from burnout, a measure that includes depersonalization, emotional exhaustion, and feelings of professional inadequacy. According to a survey of about 2500 students from 7 US medical schools, about 53% of students met those criteria (Dyrbye et al., 2008). In addition, students with burnout are more likely to report having done something dishonest, like cheat, and are also more likely to seriously consider dropping out (Dyrbye et al., 2010).

Reasons for Living is a set of life sustaining belief and expectancies which may be prominent in non-suicidal individuals and act as cognitive barriers in committing suicide or may potentially influence the intensity of suicidal ideations in suicidal individuals (Linehan et al., 1983). It is stated that people with high amounts of reasons to live would not want to commit suicide.

**Literature Review**

Various studies have examined protective factors of reasons for living among young people in combination with known risk factors such as stress level and hopelessness (Dyck, 1987; Hirsch & Ellis, 1996). It has been suggested by Malone et al., (2000) that “a seldom-posed but important question is not why patients with depression want to commit suicide, but why they want to live.” They found in their study that the depressed patients who had not attempted suicide expressed more feelings of responsibility toward family, more fear of social disapproval, more moral objections to suicide, greater survival and coping skills, and a greater fear of suicide than the depressed patients who had attempted suicide. Scores for hopelessness, subjective depression, and suicidal ideation were significantly higher for the suicide attempters. Reasons for living correlated inversely with the combined score on these measures, considered an indicator of “clinical suicidality.” Neither objective severity of depression nor quantity of recent life events differed between the two groups.

Briton et al., (2008) concluded from their study, that clinicians working with at-risk older adults should be encouraged to explore their patients’ RFL. These cross-sectional findings point to the need for prospective research examining the associations among different RFL, hopelessness, and suicide ideation in depressed older adults.


d Khan and Farooq (2003) in their study on clinically depressed patients found that responsibility towards family was the strongest protective factor in both males and females against acting on suicidal ideas in our population. Besides this, females had greater fear of social disapproval as compared to males.

Indeed, few studies have investigated the protective factors against suicidal acts, but family connectedness and family and peer support, as well as moral or religious objections, have been repeatedly described as protecting against suicide (Molock et al., 2006; Lizardi et al., 2008; Matlin, Molock and Tebes, 2011). Additional protective factors include religious/spiritual coping (Dervick et al., 2011; Dervick et al., 2006), assertiveness and perceived social support (Dervick et al., 2006) and parent connectedness and academic achievement (Eskin et al., 2007; Taliaferro and Muehlenkamp, 2013).

**Objectives**

Present study aims to examine the level of depression and reasons for living in a sample of medical and non medical undergraduate and post graduate students in the city of Calcutta.

**Methodology**

A) **Sample:** 120 undergraduate students were selected in the city of Calcutta following the below mentioned criteria:

**Inclusion criteria**

Both males and females  
Age 18-25 years  
Not married

**Exclusion criteria**

Family history of psychiatric illness  
Clinically diagnosed psychiatric illness

B) **Tools:** 1) **CES D:** One of the most common screening tests for helping an individual to determine his or her depression quotient, the Center for Epidemiologic Studies Depression Scale (CES-D) was originally developed by Lenore Radloff (1977) of Utah State University. The quick self-test measures depressive feelings and behaviours during the past week.

2) **RFL-YA:** The RFL-YA (Gutierrez et al., 2000) comprises 32 items that are constructed to assess reasons young adults give for not engaging in suicide-related behaviors (i.e., reasons for living). Each item is rated on a 6-point scale ranging from 1 (not at all important) to 6 (extremely important). Responses on the items are averaged to obtain a total scale score
and five subscale scores; higher scores are indicative of stronger reasons for living. Factor analyses have supported the 5-factor scales, which include family relations (FR), peer relations (PR), coping belief (CB), future expectations (FE), and positive self-evaluation (PSE; Gutierrez et al., 2002). Estimates of internal consistency and concurrent validity of the total RFL-YA and the five subscales are acceptable (see Gutierrez et al., 2000; Osman et al., 1999). Specifically, scores on the RFL-YA have been shown to be correlated with the Positive and Negative Affect Schedule (PANAS; Osman, Gutierrez, Kopper, Barrios, & Chiros, 1998) in young adults (Gutierrez et al., 2002).

Findings, Analysis & Discussion

Result

Table 1: Mean and SD values for subscales of RFL-YA and CESD

<table>
<thead>
<tr>
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<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FR</td>
<td>4.9</td>
<td>0.99</td>
<td>4.7</td>
<td>1.09</td>
<td>4.9</td>
<td>0.8</td>
<td>5.2</td>
<td>0.69</td>
</tr>
<tr>
<td>PR</td>
<td>4.8</td>
<td>0.88</td>
<td>4.4</td>
<td>0.92</td>
<td>4.84</td>
<td>0.85</td>
<td>5.13</td>
<td>0.68</td>
</tr>
<tr>
<td>CB</td>
<td>5.03</td>
<td>0.92</td>
<td>4.7</td>
<td>0.92</td>
<td>4.88</td>
<td>0.83</td>
<td>5.23</td>
<td>0.74</td>
</tr>
<tr>
<td>FE</td>
<td>4.8</td>
<td>0.83</td>
<td>4.8</td>
<td>0.86</td>
<td>4.84</td>
<td>0.75</td>
<td>5.09</td>
<td>0.81</td>
</tr>
<tr>
<td>PSE</td>
<td>4.9</td>
<td>1.03</td>
<td>4.5</td>
<td>1.01</td>
<td>4.8</td>
<td>0.99</td>
<td>5.04</td>
<td>1.03</td>
</tr>
<tr>
<td>CESD</td>
<td>12</td>
<td>8.42</td>
<td>14.5</td>
<td>8.05</td>
<td>12.28</td>
<td>8.03</td>
<td>11.02</td>
<td>8.52</td>
</tr>
</tbody>
</table>

Table 2: Correlation values computed between scores of each of the RFL-YA subscales and CESD scores of corresponding groups

<table>
<thead>
<tr>
<th>RFL-YA subscales</th>
<th>Med M</th>
<th>Med F</th>
<th>Non-med M</th>
<th>Non-med F</th>
</tr>
</thead>
<tbody>
<tr>
<td>FR</td>
<td>-0.12</td>
<td>0.036</td>
<td>-0.30*</td>
<td>-0.25</td>
</tr>
<tr>
<td>PR</td>
<td>-0.24</td>
<td>-0.41**</td>
<td>-0.46**</td>
<td>-0.23</td>
</tr>
<tr>
<td>CB</td>
<td>-0.24</td>
<td>-0.15</td>
<td>-0.36*</td>
<td>-0.15</td>
</tr>
<tr>
<td>FE</td>
<td>-0.35</td>
<td>-0.34*</td>
<td>-0.53**</td>
<td>-0.36*</td>
</tr>
<tr>
<td>PSE</td>
<td>-0.51**</td>
<td>-0.42**</td>
<td>-0.51**</td>
<td>-0.55**</td>
</tr>
</tbody>
</table>

With df 45 to 50, significance value at 0.05 level is 0.288 and that, at 0.01 level is 0.372. In this table * indicates values significant at 0.05 level and ** indicates values significant at 0.01 level.

Table 3: t values computed for CESD scores for gender difference and study course difference groups

<table>
<thead>
<tr>
<th></th>
<th>Male-Female</th>
<th>Medical-Non medical</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>df</td>
<td>118</td>
<td>118</td>
</tr>
<tr>
<td>t</td>
<td>0.685</td>
<td>2.23</td>
</tr>
</tbody>
</table>

Significance values with df 100-125 are 2.36 (0.05) and 2.62 (0.01).

Analysis and Discussion

Table 1 shows the mean and SD values of each of the subscales of RFL-YA and CESD, computed gender wise, group according to their study courses pursued. Except for CESD, all the mean values range from 4.5 to 5.2; this is too small to be compared. However, scores show a more or less good consistency with SD values ranging from 0.68-1.03. As for CESD scores, females studying in medical course scored higher (M=14.5) than their male counterparts (M=12) and females in general stream of study scored slightly lower (11.2) than males (M=12.28). This means, none of the sample
groups are at risk of having depressive disorder during
the data collection of the present study.

When correlation values are considered from Table
2, it is found that almost all the subscales of RFL-
YA, across the sample groups (Med M and F; Non-
med M and F) bear significant negative correlation
with their corresponding CESD scores which means
as the subjects score higher in different aspects of
RFL, or they exhibit a strong reason for living, their
depression reduces. Exceptions, however, were found
in case of family relation in cases of both males and
females studying in medical stream and for females
studying in general stream. It is even found to be slightly
positive in females studying in medical stream. This
pattern is same for the coping belief aspect. Peer
relation is not significantly related to depression in
case of males from medical stream and females from
general stream, and future expectation did not vary
with the change in CESD score of males studying in
medical stream. Certainly enough positive self evalua-
tion is the strongest indicator for reduced depression as it varies inversely in significant proportion
with CESD score across all the sample groups.

When computed t test for gender difference groups
(male and female) and study course difference groups
(medical and general streams), the values are 0.685
and 2.23 respectively. None of them are significant
which means gender and choices of study course do
not have strong impact on level of depression for
the present sample.

Findings, based on correlation values are more or less
in the same line with the past studies ((Molock et al.,
2006; Dervick et al., 2006; Lizardi et al., 2008; Matlin,
Molock and Tebes, 2011, Dervick et al., 2011). However,
some of those studies were with different
sample groups. Even the finding was found to be similar
in clinical and elderly groups (Malone et al., 2000;
Khan and Farooq, 2003; Britton et al., 2008).

Conclusion, Limitations and Recommendations

Overall findings of the study suggests that irrespective
of gender and study course selected, undergraduate
students in the present sample exhibit same level of
depression and greater their positive self evaluation,
lesser their level of depression. Additionally, in females
pursuing both medical and general course better
expectations about future led to lesser depression.
Females in medical course also were also able lower
down their depression level with increasing amount
of peer relation. Male students of general streams
showed inverse relation with all five areas of RFL
with CESD score in a significant proportion.

However, more number of subjects in each sample
group may yield better result and it would possible
to compare means in all the five areas of RFL. The
present study also exhibited no significant difference
across the gender or study course which did not support
some of the past findings (for e.g. Jeong et al., 2010).
Further studies in this area may get different findings.
Studies can be conducted for different professional
courses other than medical profession, for e.g. in
corporate sectors, managers, call centre and BPO sector
and in militaries.

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ABSTRACT

Purpose- In past decades employees only bring their arms and brains to work, not their souls so organizations do not trigger the full creativity and potential of their employees, and in turn, employees do not succeed in developing themselves as holistic human beings. But in new era of twenty first century employee looks for meaning in his work not just efficiency and effectiveness. A shift in the consciousness of workers at all levels of the organization is beginning to occur as they seek to find more meaning, purpose and fulfilment in their work. A postmodern management practices is emerging-one that emphasizes spiritual principles and practices as opposed to the current prevailing modern management practices. Now top-most organizations are realizing that their success depends only on creating organization based on unity, justice, integrity, mutual respect and service and so on. For decades importance of these virtues have been denied in our organizations and developed a more materialistic view of man, one that ignores the deeper issues of seeking meaning in life and work. These new management virtues form the foundation of the characteristics of workplace spirituality.

This study examined the effect of workplace spirituality on work performance and organizational commitment of medical professionals of government and private hospitals of India. It was expected that workplace spirituality impact quality of care and organizational commitment positively in both the hospitals equally.

Sample and Method -The study was conducted on a sample of 253 medical professionals from a large public hospital (N=127) and a large private hospital (N=126) in north India using questionnaire method.

Finding- Correlation and stepwise regression analysis of the data revealed that the “workplace spirituality”, emerged as a positive predictor of “quality of patient care” and “organizational commitment” in both the hospitals equally.

Implication and Value- The study has important implications for Indian hospitals in the private and public sector which are currently facing problems of providing quality of care to their patients due to staff perceptions of inadequacy of their workplace environments and job conditions.

Keywords: Workplace Spirituality, Quality of patient care, Organizational commitment.
Despite dealing with the life and death related matters, trying to fulfil expectations of the patient, and rekindled the hope in them. One mistake from their side may cause death of someone. Therefore employees of this organization work under high public and administrative pressure, stress and uncertainty. But medical professionals are always on front to deal with the critical situations of patients. They struggle 24x7 hours like a knight to save the life of a patient.

In their duty and responsibility some time they have to avoid some of their family responsibilities also but they stand like a pillar to provide morale support to the their patients and care takers. Dealing with such states often needs tremendous energy and strength which is beyond what one is normally quipped with. So in this situation of crisis “spirituality” emerges as a source of immense comfort, hope and faith (Jackson, 2004).

So ‘Workplace spirituality’ act as life support system or “Sanjeevani” for the medical professionals and help them to keep mind and soul calm and balanced, so that they can handle critical situations successfully.

**Workplace Spirituality**

Workplace spirituality involves the effort to find one’s ultimate purpose in life, to develop a strong connection to co-workers and other people associated with work, and to have consistency (or alignment) between one’s core beliefs and the values of their organization (Mitroff and Denton, 1999). According to Wong (2003) strongly held spiritual values i.e. altruistic, love, care, affection, and meaning creation lead to high organizational outcomes. The importance of work spirituality is consistently growing as the spiritual cause leads to strategic benefits to the business units.

Research ensured the fact that spirituality imparts delight full impact on the job performance, job satisfaction and turn over reduction. According to Malone and Fry(2003) both spiritual and God’s values emphasize on love, care, innovation, affection, interconnectedness and better communication by creating an inner connection with work place that increases the levels of employees’ job satisfaction and accomplishment which resultantly increases the overall organizational productivity. Accordingly, workplace spirituality can be defined as “the recognition that employees have an inner life that nourishes and is nourished by meaningful work that takes place in the context of community” (Ashmos & Duchon, 2000).

So health personnel, especially those working at the grass roots level have the feeling that their contribution to people they deal with, is likely to help larger sections of the community and society. This add meaning and purpose to their job, so medical professionals perceive their profession as a calling to serve humanity. In this study we have focused on three dimensions of workplace spirituality. These three core dimensions include purpose in one’s work or “meaningful work” (individual level), having a “sense of community” (group level), and being in “alignment with the organization’s values” and mission (organization level).

Meaningful work. A fundamental aspect of spirituality at work involves having a deep sense of meaning and purpose in one's work. However, the spirituality view is that work is not just meant to be interesting or challenging, but that it is about things such as searching for deeper meaning and purpose, living one's dream, expressing one's inner life needs by seeking meaningful work, and contributing to others (Ashforth & Pratt, 2003). Similarly, Moore (1992) observes that work is a vocation and a calling as a way to create greater meaning and identity in the workplace.

Community. A critical dimension of workplace spirituality involves having a deep connection to, or relationship with, others, which has been articulated as a sense of community (Ashmos and Duchon, 2000). This dimension of workplace spirituality occurs at the group level of human behaviour and concerns interactions between employees and their co-workers. Community at work is based on the belief that people see themselves as connected to each other at mental, emotional and spiritual level (e.g. “esprit de corps”). The essence of community is that it involves a deeper sense of connection among people, including support, freedom of expression, and genuine caring.

Alignment with organizational values. A third aspect of spirituality in the workplace is when individuals experience a strong sense of connection with organizational values. Alignment with organizational values involves the concept that employees desire to work in an organization whose goal is to not just be a good corporate citizen, but an organization that seeks to have a high sense of ethics or integrity and make a larger contribution than the typical company to the welfare of employees, customers, and society. Alignment also means that individuals believe that managers and employees in their organization have appropriate values, have a strong conscience, and are concerned about the welfare of its employees and community (Ashmos and Duchon, 2000). Similarly, Hawley (1993) observed that part of living by one’s inner truth involves working in an organization with integrity and a purpose that is beneficial to others beyond simply making a profit.
Effect of Workplace Spirituality on Performance

Kinjerski & Skrypnek (2004) define the workplace spirituality as “the experience of employees who are passionate about and energized by their own work, find meaning and purpose in their work, feel they can express their complete selves at work, and feel connected to those with whom they work”. Many corporations also encourage the development of this new trend because they believe a humanistic work environment can create a win-win situation for employees, for employee’s co-workers, and that it is good for the organization (Wiersma, Dean & Fornaciari, 2009). If the employees are at liberty to bring their physical, intellectual, emotional and spiritual attributes to the workplace, they will become more productive, creative and fulfilled. It has also been proposed that organizations which create an environment that is responsive to their employees’ sense of purpose and values will have people who are more motivated productive and satisfied (Hawley, 1993).

Peters and Waterman (1982) found that organizations with some type of higher meaning have more motivated workforces. Other studies indicate that employees who feel their organization offers them a strong sense of connection and genuine sense of purpose also tend to be more creative and innovative in their work, and experience greater personal growth and development (Harman, 1992).

Meaningful work can also be expected to influence employee attitudes toward work. For instance, Jaques (1996, 1998) suggested that when individuals’ work is matched to their potential capability, they are more likely to achieve their full potential.

Workplace Spirituality and Organizational Commitment

Perceptions of employees about workplace spirituality help to explain their level of organizational commitment. In the management discourse, commitment is a central variable, given that more committed people tend to devote higher efforts to work, thus contributing to organizational performance. Organization commitment has been defined as a condition in which an individual feels a bond with their organization and wishes to maintain membership in the organization (Mowday et al., 1979). Meaningful work is expected to be related to an individual’s attitudes toward their organization. Since the spirituality concept of meaningful work is seen as a deeper and more personal concept, it can also be expected to positively impact employee attitudes toward their organization, including commitment.

Alignment with organizational values is also considered to be related to organization commitment. It has been proposed that organizations which create an environment where the firm identifies with and is responsive to employees’ input and sense of values will have employees who are more adaptable and will help the company succeed, have a greater sense of esprit de corps and are more strongly committed to helping the organization to succeed (Catlette and Hadden, 1998).

Trott (1996) proposed that spiritual well being, which includes a sense of community, will be positively related to cooperation and negatively related to turnover and absenteeism. Milliman et al. (1999) postulated that having a strong sense of community and strong purposeful organizational goals were related to greater employee commitment.

Brown (1992) states that a sense of community also leads to greater employee satisfaction with the organization.

Workplace Spirituality and Quality of Patient Care

Today quality of care means holistic care which is not only provide physical, mental, psychological but also spiritual care. Which is very essential for health of a patient, so it is totally depend on the hospital management and professionals to provide holistic care to patient. Patients identified affective dispositions such as empathy, caring, and good personal demeanour as elements of quality care (Larrabee & Bolden, 1993). Good communication skills and interpersonal competence also were identified by patients as key elements of quality care because they promoted individualized care and established good nurse-patient relationships (Radwin & Alster, 1999). Good quality nursing therefore means ‘a good experience for patients’ and was identified as a- ‘how’, not a ‘what’ with six core elements:

1. A holistic approach to physical, mental and emotional needs, patient-centred and continuous care.
2. Efficiency and effectiveness combined with humanity and compassion.
3. Professional, high quality evidence-based practice.
4. Safe, effective and prompt nursing interventions.
5. Patient empowerment, support and advocacy.
6. Seamless care through effective teamwork with other professions.

In ancient times, healers came mainly from the ranks of monks and nurses were nuns or members of religious orders. Doctors were highly respected for their capacity to plead with God and to bring about changes in the health of individuals. Prophets like Jesus, Buddha, and others were actively involved in healing the sick. They encouraged their followers also to serve and demonstrate compassion to the sick (Graber & Johnson, 2001).

Health care organizations have additional responsibilities of catering to the spiritual needs of patients and family members. Health care providers can offer spiritual therapies to patients which can actually help to cope and recover from their illness. Certain specialties like oncology, psychiatry and palliative care have been closely associated with spirituality. Physicians who have spiritual beliefs, integrate their beliefs into their interactions with patients. Health care providers cultivate meaning, purpose, balance, and wholeness in patient lives.

Some physicians consider medicine to be a vocation or a calling and consider themselves as instruments of a divine or higher power. Which provides them feeling of wholeness and fulfilment, so work takes new meaning and significance when it is seen as a calling, a sacred duty, a service opportunity or a way to serve God.

Physicians experienced satisfaction from medicine and for their ability to facilitate healing in the lives of their patients (Olive, 1995). Therefore it becomes more meaningful and subsequent increase in productivity and commitment of employees (Reave, 2005).

Beside physicians nurse also play very vital role in providing holistic care to patients. Nursing career is a profession that focused on people’s health and its environment confront on a daily basis with multiple occupational stressors (Harrison, et. al, 2002). In stressful situation the innate source which can help them is spirituality because it gives meaning and purpose to life (Faribors, 2010). Nurses attitude towards their work give a big impact on their behavior at work and quality of patient care. So nursing is considered to be essentially spiritual in nature. Nurses who integrate profession and spirituality can make them a good nurse ( Faribos, 2010).

It is essential that a patient should be able to perceive and experience compassionate, holistic care from the nurses (Carroll, 2001). As nurses spend more time with patients than physicians, they have more opportunities for providing spiritual care which involves a deep presence of, empathy, compassion, giving hope, love, emotional relationships and healing (Carroll, 2001). These studies confirms that quality of performance and commitment increases as a result of deeper meaning at work, as well as how spirituality at work can provide employees a sense of meaning and purpose.

Figure 1: The Theoretical Framework of The Study

Hypothesis
From Figure 1, we derive hypotheses as outlined below to test the relationship of the three dimensions of workplace spirituality with quality of patient care and organizational commitment.

H1a. The greater the experience of personal purpose and meaning in one’s work, the greater the quality of patient care and organizational commitment of the Medical professionals.
H1b. The greater sense of community at work, the greater the quality of patient care and organizational commitment of the Medical professionals.
H1c. The greater the alignment of one’s personal values with organizational values, the greater the quality of patient care and organizational commitment of the Medical professionals.

Method
Sample: The sample consisted of 253 medical professionals ranging from physicians to the nursing staff. Within the sample 126 participants belonged to a private hospital and 127 belonged to the public hospital.

Private Hospital: Apollo, Abdur Razzaque Ansari Memorial Hospital (ARAM) Located on the Ranchi-Hazaribagh National Highway No.33.

Public Hospital: Sir Sunderlal hospital, located in the campus of Banaras Hindu University, Varanasi, was selected as the central government hospital.
Measures
Scales used in the present study:

a) Workplace spirituality: The scale for measuring workplace spirituality in hospital consisted 15 items. The reliability coefficient of the scale was .93.

b) Quality of patient care: This scale was based on the dimensions of quality of patient care proposed by Kelly and Hurst (2006). Initially there were 11 items, each item was related to a specific health care service quality condition.

c) Organizational commitment: The uni-dimensional scale developed by Kalberg (1996) consisting of 6 items was used for this variable. The reliability coefficient of the scale was .75.

Table 1a Presented the correlation analysis of relationship between the perception of workplace spirituality by medical professionals and outcome variables, that is, quality of patient care and organizational commitment in the public and private hospitals.

<table>
<thead>
<tr>
<th>Antecedent variable</th>
<th>Public hospital</th>
<th>Private hospital</th>
</tr>
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<tbody>
<tr>
<td>Workplace spirituality</td>
<td>.536**</td>
<td>.345**</td>
</tr>
</tbody>
</table>

*public hospital (Table. 1a) result showed that perception of workplace spirituality by medical professionals of public hospital was found to be significantly positively correlated with the quality of patient care and organizational commitment (r = .53**), and (r = .34**).

Private hospital (Table. 1a) result showed that perception of workplace spirituality by medical professionals of private hospital was found to be significantly correlated with the quality of patient care (r = .47**) and organizational commitment (r = .19**).

Stepwise Regression Analysis

Table 2a Stepwise regression of quality of patient care with workplace spirituality in private and public hospitals.

<table>
<thead>
<tr>
<th>Predictor</th>
<th>R</th>
<th>R2</th>
<th>R2 Change</th>
<th>%</th>
<th>Beta</th>
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<tbody>
<tr>
<td>Workplace spirituality</td>
<td>.536</td>
<td>.288</td>
<td>.288</td>
<td>29%</td>
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<td>7.10**</td>
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<tr>
<th>Predictor</th>
<th>R</th>
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<th>R2 Change</th>
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<tbody>
<tr>
<td>Workplace spirituality</td>
<td>.472</td>
<td>.223</td>
<td>.223</td>
<td>22%</td>
<td>.47</td>
<td>5.96**</td>
</tr>
</tbody>
</table>

*p<.05; **<.01
In public hospital (Table 2a)- result showed that perception of workplace spirituality by medical professionals positively predicted 29% variance in quality of patient care with a beta of .53.

In private hospital- result showed that perception of workplace spirituality by medical professionals positively predicted 22% variance in quality of patient care with a beta of .47.

Table 2.b Stepwise regression of Organizational commitment with workplace spirituality in private and public hospitals.

<table>
<thead>
<tr>
<th>Predictor</th>
<th>R</th>
<th>R2</th>
<th>R2 Change</th>
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<td>.223</td>
<td>.223</td>
<td>22%</td>
<td>.47</td>
<td>5.96**</td>
</tr>
</tbody>
</table>

*p<.05; **<.01

In public hospital (Table 2b)- result showed that perception of workplace spirituality by medical professionals positively predicted 12% variance in organizational commitment with a beta of .34.

In private hospital- result showed perception of workplace spirituality by medical professionals positively predicted 4% variance in organizational commitment with a beta of .19.

Discussion

In this study we tried to find out the impact of workplace spirituality on quality of care delivered by medical professionals and organizational commitment. We have focused on three dimensions of workplace spirituality. So we hypothesized that “Workplace spirituality” is likely to have positive relationship with quality of patient care and organizational commitment in public and private healthcare organizations.

Result proved our hypothesis correct, that perception of workplace spirituality by medical professionals of public and private hospitals showed positive relationship with quality of patient care and organizational commitment. Studies have shown that workplace spirituality has the potential to provide employees a feeling of purpose, a sense of connection, and a sense of meaning at work (Giacalone & Jurkiewicz, 2003). Organizations with stronger sense of spirituality enable employees to exercise stronger values and ethical beliefs in their workplace and empower them to show more creativity and flexibility at work (Mitroff & Denton, 1999).

Many employees in today’s workplaces question themselves and their work, ask themselves about the essence and meaning of their work and search for a sense of purpose and meaning at work (Karakas, 2010). Neck & Milliman (1994), have found that when people find meaning in their activities and feel involved in heavily spiritual organizational climates, they become healthier and happier, where they act in a more committed manner, become more engaged and are able to apply their full potential to work. Krishnakumar and Neck (2002) found that the encouragement of spirituality in the workplace can lead to benefits in the areas of creativity, honesty, personal fulfillment and commitment which ultimately lead to increased organizational performance.

Conclusion

Effective health care organizations work with patients and staff holistically (including spiritually), build community inside and outside the workplace. They provide relationship centered care and make decisions based on these values, not merely the potential for profit. In order to implement holistic care and to pay attention to patients’ spiritual needs, it is necessary that the organization of the health care system be supportive for both - patients and personnel (Cavendish & Louise, 2004).

Blending spirituality into organizational life and making it an integral part of care is a challenging task (Craigie, 1998). Though this can be accomplished with vision, shared focus and determination.

Implication of the Study

This study indicated a positive association between three dimensions of workplace spirituality, work...
performance and organizational commitment of medical professionals. Nonetheless, this study indicates that providing maximum avenues for personal values, growth, and development benefits not only the employee, but also the organization. In fact, it may be fruitful to study the linkages between type of organizational environment and culture that is needed for employee well being and longer-term organizational effectiveness.

While there clearly are significant potential positive outcomes of workplace spirituality, the concern that organizations may attempt to manipulate or use the concept of spirituality at work as a tool to simply increase productivity must be acknowledged. As such, effective organizational change approaches are needed to implement spirituality at work philosophies if these benefits are to accrue to employees and the company.

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THE CONCEPT OF MANAGEMENT: A REVISIT, IN THE LIGHT OF MANAGERIAL PRINCIPLES AS REFLECTED IN THE ANCIENT INDIAN TEXTS

Dr. Baisakhi Ghosh

ABSTRACT

Introduction: The basic concept of Management has been reflected in the words of E. Peterson and E.G. Plowman when they defined Management as “A techniques by means of which the purpose and objectivities of a particular human group are determined, classified and effectuated.” A new trend is being set to revisit Ancient Indian Texts in the light of managerial principles.

Purpose of the Study: The purpose of this paper is to find out that our ancestors were not only management experts in the modern sense of term, but prudent and sagacious as they were they could realize and visualize the utility of certain principles, which in subsequent ages formed the basis of modern management techniques.

Methodology: Data is collected from secondary sources duly i.e. medieval period literature. Dharmasastra, Arthasastra, Smritigrantha, Manuscripts etc. Logical deductions are applied to interpret Data.

Findings and Conclusion: Management is an all-encompassing concept and not just a subject to be taught or injected through the lectures or workshops, but as the mindset it can be developed by anyone with basic education and a long period of trial and error methods as described by our ancestors.

The most ancient language of India presents the most modern thought of the world. The most eminent text of ancient India Dharmasastra and Arthasastra taught every events of life needs management for its success consciously or unconsciously.

Keywords: management principles, ancient Indian texts, Dharmasastra, Arthasastra.

Introduction and Objectives

The word ‘management’ is not only used in the corporate sectors but also in the academics. Though Sanskrit is always criticized for running back to the time but in this most ancient language, presents the most modern thought of the world. Our ancient sages have thought over different issues of life like dharma, artha, kama and moksa——the four goals of human life taught the need of management for the success. Sometimes it is conscious or sometimes it is unconscious, but it is there.

Management actually is the merger or mechanism of three Ms——Man, Material or Means and Money and the relation that is formed between these three for the success is management. Management is a complex process involving planning, organizing, coordinating, innovating and controlling the work of a team by a competent person.

These basic concept of management also has been reflected in the words of E. Peterson and E.G. Plowman. Therefore management is not just a subject to be taught or injected through the lectures or workshops but as the mindset it can be developed by anyone with basic education and a long period of trial and error methods.
In our quest to trace back modern management techniques to ancient Dharmaúâstra and Arthasastra texts. The point which baffles us at the very outset relates to the priority and varsity of such propositions. The protagonists of modern management theories will certainly raise hue and cry in view of the fact that those age worn texts can hardly contain any material having relevance to current managerial concepts. Despite this, classic onslaught of modern management Gurus, the fact remains that the basic tenets of modern management had their starting point embedded in the ancient Dharma and Arthasastra texts, in whatever, rudimentary form they might be. Our ancestors were not management experts in the modern sense of the term but prudent and sagacious as they were, they could realize and visualize the utility of certain principles which in subsequent ages formed the basis of modern management techniques.

It is, indeed amazing that our preceptors could feel the efficacy of various types of management like administrative, financial, ecological, personality, agricultural and others.

**Literature Review**

- The Dharmaúâstra texts are not authored by a single hand but it is a compendium of forty books which are classified under these classes as Srauta sutra-s, Grhya sutra-s, Dharma sutra-s and Sulba sutra-s and it is collectively titled as Kalpa sutra-s. The Dharma sutra-s especially the Apastamba, Gautama, Baudhayana and Vasistha are very important. In addition to this, the whole Smriti literature is the source of Dharma and Purana add to it. Therefore, whatever is Srutismritipuranotkata is Dharmaúâstra, the scope of which is very extensive.

For the proper understanding Dharmaúâstra the scholars' first choice is History of Dharmaúâstra by Dr. P.V. Kane (1956). For this paper, this world renowned book is taken as the first resort. In this book, the vows, the rituals, the duties of mankind are written under enlightenment of history.

- The Arthasastra was written by Kautilya. His another name was Canakya. He was considered as first management Guru. His managerial thoughts and ideas helped kings and rulers for centuries over centuries. All the powerful kings of ancient India like Asoka had learnt Arthasastra and practiced it to expand their kingdom to protect against the powerful enemies, to develop winning strategies, habits and practices. Canakya, in his world famous book Arthasastra had brought out some of the key business principles and strategies. Arthasastra is the oldest book on management available to the world was written by Kautilya in 400 B.C. It is not only a book of management but we can name this Vyavasthâpanadariúana as a whole. The book is masterpiece which covers a wide range of topics like state crafts, politics, military warfare, leadership skills, accounting system, taxation, civil rules, internal and foreign trade etc. It also covers various technical subjects including medicine, gemmology, metallurgy, measures of length, tables of weights, divisions of time etc. The book provides a process of building a nation on sound economics, based on spiritual values. The study and practical application of this book lost its importance since the British rule.

Professor Shama Sastri rediscovered this book (1905) and he wrote its first English translation.

Professor L.N. Rangarajan edited, rearranged, translated and introduced this book in 1992 in a new manner.

**Findings, Analysis and Discussion**

This paper is confined to the thoughts of time management and personal management of Dharmaúâstra and Industrial management of Kautilya Arthasastra.

Managerial principles as depicted in the Dharmaúâstra

The term Dharma has a number of connotations. It is now accepted in a sense of development and disciplines himself, the whole society will automatically be developed and thus Dharmaúâstra guiding on personal duties, teaches about personality management. The Srautasutra-s inform about the rituals, the Grhyasutra-s instruct about household duties, vows etc., the Dharmasutras focus on religious performances and the Sulbasutra-s held all the three in very technical and mathematical manner and thus this journey of personality development starts with ‘I’ and through family, then community and ends with the society. The sole aim of Dharmaúâstra is to produce the generations of citizens who are socially conscious, spiritually well trained and morally upright, but all this was done under the grab or religion and that too without beating the drums of management. And thus now, it becomes our responsibility to unveil the outer covers and to search for the managerial principles. There are number of courses in different universities of the world which produce a good number of doctors,
engineers, architects and qualified trained managers but there is no course in any of the universities to produce noble human being and thus Dharmasastra accepted this task as the self imposed responsibility. The text of Dharmasastras are the behavioural texts, therefore there are number of lists of Do's and Don'ts for individuals. Right from the sunrise to sunset and again from sunset to sunrise, the daily timetable is prescribed by Dharmasastra. This is the time management for all the 24 hours, 365 days and throughout the life. Therefore, “early to bed, early to rise makes a man healthy, wealthy and wise” is not only the proverb but it is the principle of time management and that too is conformity with the concept Zta, the physical order of the universe.

**Personality Management**

Personality management has got so many angles. Our ancestors have thought over the topic for centuries together and this personality building cannot be achieved from the one week workshop or a ten days training programme. Here one example was given as a reference of the above statement. The Indian philosophy tells the four goals of life: Dharma, Artha, Kama, Moksa. Among them, Dharma is the part of Karma, pilgrimage, Vratas and Santis also form a part of dharma. The Karmana is a very good action management. It is the principle in which cause and effect are inseparably linked in the moral sphere as assumed in the physical sphere by science. A good action has its reward and a bad action leads to retribution. If the bad action do not yield their consequences in this life, the soul begins another existence in the new environment undergoes suffering for its past deeds. There are the managerial skills to foresee the consequences and to try toward the ills so that they should not affect the future plans of the company or personal life. The pilgrims etc though have some minor benefits of reducing sins etc. The main objective is that of recreation to the enjoyable break in work is more productive. Thus we find that many private companies offer tour passes to their employees with their spouses as an incentive.

The Utsavas ever are the co operative events and we are aware that event management is a flourishing career now-a-days. With all these Dharmasastra deals with personal management, time management and event management.

**Managerial Principles as Depicted in the Arthasastra**

As in the paper it has been mentioned that Kautilyan thoughts are universal in nature and their application can resolve many problems that confront us today. Though Kautilya is mostly known as ‘kutilmati’ means crafty administrator who would do anything to actualize his dreams but his thought on the treatment to the conquered countries reflects his noble and selfless mind. So there is a lot that today’s corporate world can learn from these concepts from the Arthasastra.

In the case of Arthasastra, leadership has specific reference of king making. A king or a leader should not get excited due to sudden gain or dejected due to unforeseen loss (Arthasastra, 1.6.1 and 4).

Under varta comes the industrial management. Industry is the main flow of wealth. Kautilya has rightly marked the principles of creating wealth.

The view of modern economists are ——let your money go out for creating new money. Our ancestors understood that the creation of wealth is through the network of society and hence has to be given back to the society. This concept is presented before us by the Dharmasastra a by the term samaja[Ga. According to Dharmasastra we have to repay the four types of Gs means loans in the form of Deva, Pit[, je, and samaj.

The debt that if one takes from the society then gives some share of your income in the form of coins or kinds. If you pay through government agencies this is tax. If one parts with some parts of one’s wealth then it is donation or charity. India has always been a socially responsible country. In our culture, we are taught to give back more than what we get. Working for the upliftment of the society is considered to be a noble virtue. We find some kind of social responsibility in various national and international organizations like UNICEF, Common Welter, and Tata group of companies. The word ‘currency’ which suggests to flow or even dravya from the root ‘dru’ means to flow- suggests that the wealth should not be static and this is an important principle of wealth management.

Regarding the wages, Kautilya has laid down ground rules very strictly for the payment of salaries and wages to the state employees and thereby the private employees. One quarter of the state revenue was earmarked to be spent on payments and wages. High salaries were given to prevent discontent among the employees and ensure efficiency. He also laid down the salaries in the form of kind if the treasury is not full but he was very keen that the wages should be paid for the work done not for the withheld work. He had the perfect system of information and control.
Another issue well handled by Kautilya was production. The production can be viewed from various angles. The quality and quantity are two main issues but the production cost is also very important for a company or an enterprise. The cost of production in present day public enterprise shows that the material costs constitute about 55% of the total cost. In Arthasastra he explains at length how the stores have to be managed and the punishment which the different functionaries were required to undergo for mismanagement of stores.

Another important issue which affects the production is the relation with labour. Tanmay Sinha (2003) categorically presents the policy regarding the issues in the Arthasastra. Kautilya’s policy includes:

1) The wages were decent and related to productivity and performance.
2) The payment of wages was also related to the economic condition of the state.
3) Independent labour had to pay a higher price through fine.
4) Back of quality production was taken very seriously.
5) For different categories of employees there were different scales of wages.

Arthasastra also gives a thoughtful guidelines in an important area that is women’s employment. Even during the fourth century when a woman did not have adequate social rights, Kautilya as a revolutionary thinker included women’s employment in his plan for an ideal society. Tanmay Sinha (2003) narrates, in Arthasastra while setting up the rules the chief textile commissioner has been advised to provide employment to women to the extent of allowing them to work from their own houses.

Conclusion and Recommendation

In our ancient sastra texts especially arthasastra there is a conscious attempt in, however, embryonic form might be to convert the resources available to the monarchy into a decisive force to deliver maximum good to the vast populace. It may be said that though Indian culture has a strong spiritual base, the ancient sages have not ignored the practical life. They were very keen about the management of life as a whole. The means and ways may differ according to the field of work but the final aim was to live happy, healthy and contented life and let others also to live the same.

At present Sanskrit is mostly criticized language for its running back to the time of Vedas and not keeping face in the modern time. But if anybody thoroughly goes to the Sanskrit text, he or she will surely agree that the most ancient language of India presents the most modern thoughts of the world.

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WASTE MANAGEMENT BY PELLETIZATION OF IRON ORES FINES IN INDIAN CONTEXT

Rajib Chakravorty

ABSTRACT

India has adequate reserves of iron ore, but all of them are not ideal for use directly for iron making by the conventional blast furnace or alternative sponge iron route. The excessive fines generated from the mines or iron ore crushing units mostly go to waste or have to be sold at low prices. To face the rising price of calibrated ore and to meet the ever increasing demand for steelmaking by the next decade, utilization of wastes in the form of ore fines generated is an efficient alternative in this context and pelletization seems to be the preferred technology. Iron ore pellet is an agglomeration of fines which possesses better and uniformity of properties compared to the parent ore.

The present paper aims an analysis of these factors for existing technologies and examines some aspects of pelletization under Indian context.

Key words: iron ore, fines, wastes, pelletization.

Introduction

Annual production of steel in India is expected to reach close to 200 million tonnes mark by the year 2020 making India world’s second largest steel producer. The current position is India has about 28.5 billion tonnes of Iron ore reserves. Around 60% of Indian ore mined is in the form of fines with relatively lower grade of iron. India is amongst the highest consumers of CLO (calibrated lump ore) for its steel production. About 25% - 30% of India’s steel production is through sponge iron route which is excessively dependent on CLO as feed. With the projected steel production, requirement of iron ore is expected to be around 350 to 400 million tonnes per year. At this rate of consumption, the available good quality reserves would probably not last more than a few decades. Hence improving the resource base and exploitation of mineral resources remains one of the most important geological and economical tasks in India and is the need of the hour.

The conventional iron ore processing generates slimes to the tune of 10 to 15% of run-off-mine (ROM). It is estimated that more than 600 million tonnes of Iron ore fines dumps are unutilized.

The reasons behind utilization of Iron ore fines available across India needs to be clearly assessed. Fines and slimes occupy huge space and cause environmental and ecological problems. It is essential to beneficiate and recover the additional iron values from these fines & slimes, not only to earn additional revenue to iron ore industries but also from the view point of conservation of mineral wealth.

Beneficiation process is generally customized as per the ore mineralogy and has to be established through laboratory and pilot scale tests. The plant has to be located close to the mine head or at a place with good connectivity from mines, sustainable source of water & power, safe and easy disposal of tailings. Beneficiated concentrate would need to be further processed for facilitating its use in Iron making process.

Necessity of Pelletization

Pelletization is the process of agglomeration where ultra fines of the order of microns are rolled into green balls 9-16 mm before subjecting to a thermal regime for proper induration. These pellets having superior properties compared to lump ores, can be stored for a prolonged period and transported over long distances without any adverse effects on the
properties. The present Indian raw material scenario offers an opportunistic disposition towards pellet making owing to the availability of large quantities of sub grade fines, slimes and wastes, etc; at different mine heads. Beneficiation followed by pelletization appears to be the only possible route for salvaging these otherwise waste but valuable mineral. With the sharp rise in the price of calibrated lump ore, it is imperative for the coal and gas based Direct Reduction or Sponge iron units to switch over to the use of iron ore pellets from use of lump ores. At present, the total installed capacity of pellet plants in India is about 18 Mt which is a world share of 4.5%. Currently all the plants operate on hematite ore.

India has adequate reserves of iron ore. But the country has inadequate infrastructure for catering to the iron ore demands of all the DRI or steel plants. The excessive fines generated from the iron ore crushing units are mostly going waste. To curb the shortage of iron ore and meet the ever increasing demand for steel i.e. 100 Mt by 2020 as indicated by the Steel Ministry, pelletization technology is the only route that appears dominating. The steep rise in the prices of iron ore due to the upcoming of large number of sponge iron plants has necessitated going for pelletization technology. This gap is proposed to be filled up by utilizing fines below 5 mm which do not find market and are sold at a meager low price. In addition to this, there is a large export market for pellets to China, Korea, Japan, etc;

Theoretical Background

The feed for Iron Making should form a permeable bed of material, permitting gas flow through it uniformly at a high rate. Powdered iron ore concentrates are not suitable in their as-produced form because the fine particles tend to pack into non-permeable bed and also they are likely to be carried away as dust by the high gas flow rates. The powdered ore must be metallurgically treated in order to agglomerate the fines into larger particles that will improve the permeability of the furnace burden, increase the rate of reduction and reduce the amount of material blown out of the furnace as dust. Pelletization is the process of agglomeration where ultra fine powders of the order of microns are rolled into green balls 9-16 mm in diameter subjecting to a thermal regime for proper induration. These pellets having superior properties compared to the lump ores can be stored for a prolonged period and transported over long distances without any adverse effects on the properties. The present Indian raw material scenario offers an opportunistic disposition towards pellet making owing to the availability of large quantities of sub grade fines, slimes and wastes, etc; at different mine heads. Beneficiation followed by pelletization appears to be the only possible route for salvaging these otherwise waste but valuable mineral. With the sharp rise in the price of calibrated lump ore, it is imperative for the coal and gas based Direct Reduction or Sponge iron units to switch over to the use of iron ore pellets from use of lump ores. At present, the total installed capacity of pellet plants in India is about 18 Mt which is a world share of 4.5%. Currently all the plants operate on hematite ore.

Previously before independence, the emphasis was on production of coarse lump ores for smaller blast furnaces and quality was not an important factor. Fines as a result of manual mining were dumped in the minesite. In the 2nd stage till 1991, semi mechanized to mechanized mining of medium capacity was started. Mining cut off of ~ 60% was quite high and a large quantity was discarded as sub grade material. After liberalization the Government; insisted on conservation and mining cut off reduced to some extent. However, the steel requirement in India has increased manifold which necessitates that the fines be made use of in the form of superior agglomerate. The fine ores and tailings need to be beneficiated and ground to even finer sizes to liberate which makes it less conducive for sinter making and hence pelletization.

Properties and Advantages of Pellets

Advantages Of Beneficiation

- Utilization of available dumps
- Reduction in smelting cost due to reduction in quantity of feed processed
- Unwanted material is discarded at the site of ore processing reducing logistics related costs and concerns
- Consistency in quality and uniformity in size of product obtained after processing improving the efficiency of smelters

The limitation in the utilization of beneficiated ultrafine concentrates in Sintering could be overcome through the process of Pelletization

The pellets are of spherical shape which gives good bed permeability. Also the larger surface and increased time of residence per unit weight of iron gives better and longer gas/solid contact and improved heat exchange. Pellets have high iron content and more uniform chemical composition resulting in lower slag volume and even lower flux requirements in furnace. There are several advantages of using the iron ore in this form. By using pellets made out of mineral fines, the rotary kiln can produce 25% more without any
changes in the design. The specific consumption of coal also comes down by 10% and the kiln campaign life also increases by 60%. As there will be no accretion and no fused lump formation, the refractory repairing cost has been found to reduce by 50% and the metallization is also better compared to coarse lump ores. Normally, the fines in the finished product are 35-40% which comes down to ~5%. Environmentally and energy wise, there will be benefits associated as handling and transportation loss is less and electricity and maintenance cost are reduced by 50% as there will be no need for crushing and screening of iron ore lumps.

Table 1: Pellet Properties

<table>
<thead>
<tr>
<th>Properties</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Size Range</td>
<td>Min 85%, + 9mm to 16 mm</td>
</tr>
<tr>
<td>Compression Strength</td>
<td>Min 200kg</td>
</tr>
<tr>
<td>ASTM Index</td>
<td>Min 94%, + 6.3mm Max 5%, - 500µm</td>
</tr>
<tr>
<td>LTBT</td>
<td>Min 80%, + 6.3mm Max 7.5%, - 500µm</td>
</tr>
<tr>
<td>Swelling</td>
<td>Max 20%</td>
</tr>
</tbody>
</table>

Solid Waste Management Other Than Mine Head

The main raw material Iron Ore is required in Lumps and in sizes which ranges between 5mm to 18mm. To produce these sizes ore crushing and its screening is required. The problem that this throws up is what to do with the ore which are below the size of 5mm? Majority of the answers to these problems lies in exporting these ore to China. But China does not import Iron ore below 60% Fe content. Another problem we have to contend with is handling the fines generated during the production process of DRI (directly reduced iron or sponge iron). The solution lies in developing and adapting the most effective and relevant technology in the near future to convert all the iron ore fines available to the most convenient and usable shape or form. Nothing else has to be done apart from converting all the fines into pellets. Sponge iron fines generated during process (25 to 40 %) affect the profit margins and environmental conditions mostly for the soft variety of minerals. The low metallization due to poor quality of iron ore available in the market affect the steel yield. Further, high volumes of ash and char of the coal generated every day become a threat for environmental protection which can be countered to certain extent by installing power plant and using fly ash for bricks.

High volumes of iron ore fines, coal fines generated in the plant raw material handling system, occupy space that create land pollution and waste disposal problem. In the solid waste or fines management, a very good practice may be to pelletize the fines for the cause of environment and economics. Recent steep rise in the prices of iron ore, due to the opening of large number of sponge iron plants has necessitated going for pelletization technology.

Inside the pelletization plant or area itself, large amount of undersize and green pellets are generated, which as a better practice today is recycled back to main circuit.

Conclusions

The non availability of calibrated lump ore at a favourable price coupled with the large quantities of fines have brought out the necessity of using fines in the form of pellets in the DR processes which has acted as a blessing as mining losses as well as environmental aspects are well tackled by pelletization apart from giving better production results. With huge expansion of existing mines and opening of bigger mines, it is expected that sufficient iron ore fines shall be available for pelletization. Pellets with their superior properties should be chosen as a sustainable means of waste utilization.

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MOBILE PHONE INVOLVEMENT AMONG COLLEGE STUDENTS: EXPLORING THE ROLE OF GENDER AND PERSONALITY

Dr. Shobha.A.Menon

ABSTRACT
The mobile phone as a technological device has become a part and parcel of our life. Some researchers consider young people’s obsession with mobile phones as a form of addiction while others prefer to use milder terms like involvement. Mobile phone usage is influenced by factors like gender, age and personality traits. This study investigates gender differences in mobile phone use and involvement among college students. It also explores the impact of two personality variables namely self-esteem and need to belong on mobile phone involvement. Results lend partial support to the hypothesis that mobile phone use would be higher among male subjects than female subjects. However there are no significant gender differences in mobile phone involvement. Further need to belong is found to be a significant factor in influencing mobile phone involvement in both males and females but self-esteem does not have significant effects. Results are discussed with reference to findings of previous research and recommendations are made for future research.

Key words: Mobile phone involvement, gender, need to belong, self-esteem.

Introduction
Human beings have made tremendous technological advances. Each new technology makes human life easier and hence we are very quick to adopt newer technologies. The mobile phone is one such gadget which has become a part and parcel of our life. One of the reasons for the extensive use and adoption of mobile phone technology is the fact that a number of gadgets are embedded in modern mobile phones. Hence mobile phones are used not only to make and receive calls and messages but also to put reminders for important activities play games, use calendar feature, listen to and record music, set up alarm and a ready source of camera for taking pictures in various situations.

Review of Literature
With more and more use of mobile phones by the younger generation, researchers have evaluated the impact of the same on the life of the users. They have also evaluated how the patterns and extent of mobile phone usage is influenced by factors like gender, age and personality traits. Devís et al. (2009) found that boys spend more time on mobile phone use than girls. However others have found no differences in the amount that each gender uses their mobile phones (Peters, O., et al., 2003; Rees & Noyes, 2007). Some other factors have also been found linked to the extent of mobile phone usage such as marital status and work status, income etc. (Rice & Katz, 2003). However others like Prezza (2004) proposed that gender, socio-economic status etc. are not associated with mobile phone usage among youngsters.

One of the approaches to understanding mobile phone behaviour is the use of a personality perspective to improve our understanding of psychological factors underlying mobile phone use. (Bianchi & Phillips, 2005; Butt & Phillips, 2008). This approach looks at the role of dispositional factors or internal factors which drive behaviour. Research studies which have used the five factor model of personality (Costa & McCrae, 1992) to explore the psychological profile of mobile phone users found that the most consistent personality predictors of mobile phone behaviour are agreeableness.
and extraversion (Bianchi & Phillips, 2005; Butt & Phillips, 2008; Ehrenberg et al, 2008). According to Bianchi & Phillips (2005), extraverts spend more time using their mobile phone overall, throughout the week, and for addictive use. In particular, young extraverts are likely to be frequent mobile phone users whereas addicted/dependent users tended to be young, extraverted, and have lower self-esteem. Ehrenberg et al. (2008) found that extraverts, as well as individuals high on neuroticism, reported frequent use of text messaging. Data suggest that majority of the mobile addicts are teenagers, whose shyness and low self-esteem make them succumb to aggressive publicity marketing as a means to get in touch with people without having to meet them (Takao et al., 2009).

Social motivations underlie much social behaviour and guide the way people seek to interact with others. People actively decide why, when and how to use objects like telecommunication devices to meet a specific need (Higgins, Strauman & Klien 1986; Pittman, 1998). Two among the five commonly agreed social motives are self-esteem (Leary, Tambor, Terdel, & Downs, 1995) and belonging (Baumister & Leary, 1995). Self-esteem is related to an individual’s perception of their worth as a person. Youth in particular base their self-esteem on their relationships with others (Rosenberg, 1965). Research indicates that self-esteem influences people’s perceptions of how they have been treated by others and affects a person’s interpretation of control understanding and trust (Leary et al., 1995). The need to belong is the need to form strong stable relationships and to engage in activities which promote the formation and maintenance of social bonds (Baumister & Leary, 1995). People with a strong need to belong engage in behaviours which develop personal contact and cultivate social relationships in order to feel connected to other people. People with a high level of belongingness are better adjusted and those who lack a sense of belonging have poor mental wellbeing and low self-esteem (Baumeister, 1991). Self-esteem is important for overall psychological health, hence the relationship between self-esteem and need to belong is a key consideration when examining much social behaviour (Baumeister, Tice, & Hutton, 1989).

People use mobile phones as a status symbol hence its ownership may enhance an individual’s self-esteem (Ozcan & Kocak, 2003). Bianchi and Phillips (2005) reported that problematic mobile phone use behaviour is related to low self-esteem, others (Ha et al. 2008) found that low self-esteem predicted excessive mobile phone use. However other authors report no relationship between self-esteem and the amount of mobile phone use (Butt & Phillips, 2008; Ehrenberg et al., 2008). Positive self-esteem is related to the formation of close bonds with others (Lible et al., 2004). A feeling of belonging is related to high levels of self-esteem (Gailiot & Baumeister, 2007). Since mobile phones promote connection to others (O Peters & ben Allouch, 2005; Wei & Lo, 2006), we can expect that both need to belong and self-esteem relate to young people’s mobile phone behaviour.

This study examines the gender differences in mobile phone use frequency and involvement. It also studies the role of two personality factors namely self-esteem and need to belong on mobile phone involvement.

**Method**

**Hypothesis**

It was hypothesized that

- Mobile phone use would be higher on all the six parameters among male subjects than female subjects.
- Mobile phone involvement would be higher among male subjects than among female subjects.
- Mobile phone involvement would be higher among those with low self-esteem.
- Mobile phone involvement would be higher among those with a high need to belong.

**Sample**

The sample consisted of 250 college students (125 male and 125 female) pursuing various undergraduate programmes in colleges located in Mumbai. The age of the subjects ranged from 18 years to 21 years.

**Tools and procedure**

Subjects were asked to provide their personal demographic details. Mobile phone use was measured using 6 open-ended questions covering six parameters namely

1. Average number of calls made
2. Average number of calls received
3. Average number of text messages sent
4. Average number of text messages received
5. Average amount of time spent
6. Average amount of money spent.

Mobile phone involvement was measured using the Mobile Phone Involvement Questionnaire (Walsh et al., 2008) having 8 items scored from 1 strongly disagree
to 7 strongly agree. Self-Esteem was measured using a scale developed by Rosenberg (1965). The scale has 10 items and is scored from 1 strongly disagree to 4 strongly agree. Need to belong was measured using a scale developed by Leary et al. (1995) having 10 items and scored from 1 strongly disagree to 5 strongly agree.

The researcher approached the subjects during lectures and explained the purpose of the study. Copies of the questionnaire were distributed and clear instructions were given. The subjects then filled up the questionnaire with the experimenter clarifying meanings of terms as and when required. On an average the questionnaires took about 20 minutes to be completed which was followed by short debriefing session.

Data Analysis
Total and mean scores were calculated for all the six parameters of mobile phone use. Total and mean scores were also calculated mobile phone involvement, self-esteem and need to belong. T-tests were computed to find out gender differences on various parameters of mobile phone use namely average number of calls made and received, number of text messages sent and received as well as amount of time and money. T-tests were also computed to measure gender differences in mobile phone involvement, self-esteem and need to belong. Regression analysis was performed to study whether self-esteem and need to belong significantly influence mobile phone involvement in both male and female subjects.

Results and Discussion
The findings showed significant gender differences in mobile phone use with reference to two parameters namely number of calls made (t=4.029, p<0.000) and received (t=3.400, p<0.001). As hypothesized the average no of calls made by male subjects (M=11.50) was higher than that of female subjects (M=5.98). Similarly the average no of calls received by male subjects (M=18.54) was higher than that of female subjects (M=8.89). On the other parameters namely average number of messages sent and received and amount of money spent also the results were in the same direction with male subjects scoring higher but these differences were not significant. However female subjects seem to be spending more time on their mobile phones than male subjects but these differences are not statistically significant. These findings are similar to those of Devis et al. (2009).

There were no significant gender differences with reference to mobile phone involvement however female subjects (M=32.65) are higher on mobile phone involvement than male subjects (M=31.54). Thus surprisingly while mobile phone use is higher among male subjects than among female subjects involvement scores are in the opposite direction. Thus there was no support for the hypothesis that mobile phone involvement is higher among male subjects. These results are rather peculiar because mobile phone use is higher among male subjects than female subjects but female subjects are more involved with their mobile phones than male subjects. These results are likely to be influenced by personality factors like self-esteem and need to belong.

Results indicated that self-esteem scores are higher among female subjects (M=19.60) than among male subjects (M=18.48). Need to belong is higher among female subjects (M=34.01) than among male subjects (M=32.46). However these results are not significant. This study aimed at finding out the relationship between self-esteem and mobile phone involvement. Results of sequential regression (Table 1) indicated that need to belong is a significant predictor of mobile phone involvement.

<table>
<thead>
<tr>
<th>Model</th>
<th>Change Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>RSquare</td>
</tr>
<tr>
<td>1.</td>
<td>.248(a)</td>
</tr>
<tr>
<td>a. Predictors(Constant), Need to belong score</td>
<td></td>
</tr>
</tbody>
</table>

Results indicated that a positive correlation existed between need to belong and mobile phone involvement, however the correlation was not very strong. These results indicate that for young students the mobile phone is more than a communication device. It is quite likely that they feel left out without their mobile phones. As discussed earlier people may also associate a certain status with mobile phone use and hence those who do not have mobile phones or are not actively using them as a means of communication may feel left out. The advantage that mobile phones afford young people is privacy in their communication.
Using mobile phones they are able to communicate to friends about their plans, college students use phones to schedule meetings with close friends and to plan leisure activities as well as to communicate about lecture schedules and submission deadlines. This means a young person who does not use it may remain cut off from others in the group. This would mean that mobile phone users especially young college going students satisfy their need to belong by keeping in touch with their friends using their mobile phones.

Conclusion

This study throws light on the role of gender and personality variables on mobile phone use among college students. Results indicate that male and female subjects differ from each other significantly on two dimensions namely number of calls made and received. Males use mobile phones to make and receive calls more than females. However mobile phone involvement is higher among females than among males. This may be because female subjects especially the young undergraduate students who comprise the sample of this study carry a mobile phone for purposes other than merely making and receiving calls. Research indicates that having a mobile phone gives women a sense of security. They may not use the mobile phone frequently hence use is lower but they keep it readily in consciousness and easily available in case of emergency hence involvement is high (Carroll et.al,2002). The mobile phone involvement scores of both males and females are in the mid range and not indicative of any pathological addiction.

This study looked at the role of two personality factors namely self-esteem and need to belong on mobile phone involvement. Results indicated that while need to belong can be a predictor of mobile phone involvement, self-esteem is not significantly related to mobile phone involvement. Its relationship to personality variables points to the fact that the mobile phone satisfies many social motivations like fulfilling an individual's need to belong. Thus the mobile phone is much more than a mere communication device. A positive finding is that though mobile phones have moved beyond being mere communication devices they have not become addictions. It is just that young people are involved with their mobile phones. This means that authorities have no need to be concerned about mobile phone addiction at least among a sample of this age group. One of the limitations of this study is that it covers only two personality factors; further research must include more variables to gain a better understanding of the role of personality on mobile phone use.

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