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The International Journal for Business & IT

D I A S

ARTICLES

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Investment Preferences and Investment Objectives.....Pg. 37

DELHI INSTITUTE OF ADVANCED STUDIES

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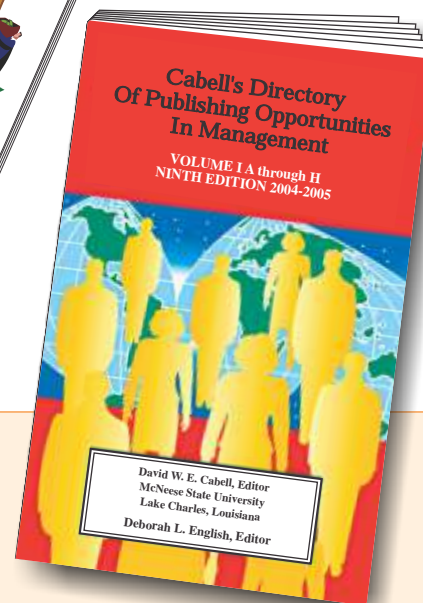
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DIAS Technology Review
The International Journal for Business & IT
Editorial Board

A BI-ANNUAL JOURNAL OF DELHI INSTITUTE OF ADVANCED STUDIES

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ARTICLES

From The Editor's Desk

"Ethics in business is extremely important; your reputation is all you have in life"

Sir Freddie Laker

Effective Corporate Governance practices are sine quo non in present era of liberalization, privatization and globalization for sustainable business growth. It becomes imperative for the organizations to establish sound governance practices for enhancing long-term value to shareholders and their stakeholders alike. The organizational concern is just not limited, to the formulation of the procedures but also there is pressing need of effectual implementation. This can only be enabled when individuals at the helm possess the requisite courage, strength of character and ethics. As it is truly stated by Aristotle, *"it is better to be governed by good men than by good laws".* The first article of this edition deals with the pertinent issue, **"Assessment of Good Governance in Delhi"** which aims at understanding the perceptions of stakeholders about good governance practices. Perspectives of all stakeholders have been taken from nine government departments/agencies having maximum public interaction.

In the present day competitive scenario, when products are perceived by the customers as value delivery vehicles, it has become very challenging for the organizations to cope up with the varied demands and expectations of the customers. Marketers have realized that only customer centric approach can help them in gaining strategic advantage over their competitors. Providing quality products and delivering value to customers are used by the organizations as best weapons for achieving sustainable growth. The next article in the journal **"Mediating Role of Value Delivery in Value Delivery-User Satisfaction Relationship in Organized Retail Stores."** emphasizes on the need of value delivery and its impact on customer satisfaction.

Value delivery focused approach of the organizations has inspired them to establish an effective Quality Management System (QMS). Implementation of this system is possible only when the culture of the organizations is receptive to it. The article **'Inter Linkages between Organizational Culture and Quality Management System"*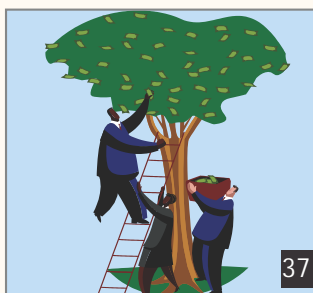* investigates the relationship between cultural values and implementation of quality management principles in Indian auto component manufacturing SMEs.

In the current scenario, investors opt for investing in several channels like corporate stock, life insurance, bank fixed deposits, real estate and various government investment schemes etc to maximize their returns by diversifying risks. Selection of investment instrument by an investor depends upon the risk bearing capability and objective of investment, along with his awareness of an investor. The article, **"An Elucidation of Investment Preferences and Investment Objectives of Individual Stock Investors"** studies the influence of five key attributes. These include Safety of Principal, Liquidity, Stability of Income, Capital Growth and Inflation Resistance on the choice of investment avenues with particular reference to the investors of Punjab.

Safety culture plays an important role in creating and maintaining safe and secure working environment. In order to evaluate the safety culture of an organization, critical safety factors that influence human behavior, attitude, perception, and performance are identified and studied. The last article of this edition, **"Mixed Nationalities Impact on Safety in Container Ships"** discusses the important safety factors in the shipping industry, particularly in container ships.

In the new technological era scientists are foraying in the direction of equipping machines with intelligence so that not only they work as programmed but also learn from own experiences. The last article, "Web Based Artificial Intelligence Agents" looks at three AI agents that can be effectively used online in different domains such commercial, military, or individual.

We hope that the articles included in this issue will add value to the academic endeavors of the readers. We also seek their feedback and suggestions which will help us in regular and continuous upgradation and improvement of the content of the journal.

Regards,

Vibha

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Assessment of
Good Governance in Delhi:
A Study of Stakeholder's Perception

Surender S.Ghonkrokta, Anu Singh Lather

ABSTRACT

The changing social, political and economic scenario in the world as well as in India has brought about changes in the aspirations and expectations in governance. Assessment of good governance is essential to keep the development relevant, purposeful and focused. Good governance helps create an environment in which sustained economic growth becomes achievable. Conditions of good governance allow citizens to maximize their returns on investment. Delhi as a cosmopolitan city represents a large section of citizens of the country and as a capital city state is unique in governance. The concern for good governance in Delhi becomes even more important because as capital it is the face of the country to the world and reference for the rest of the country. With this premise the present study aimed at assessing the perception of stakeholders about the good governance in Delhi. Views and perceptions of all stakeholders are taken for nine government departments/ agencies with which citizens have maximum interaction. Stakeholders are classified in five categories and studied for their response in three different age groups and both the genders equally. The result indicated that except official categories, the rest of the stakeholders did not agree that identification of initiatives and priorities was satisfactory. Only two agencies are perceived to have system in place to the satisfaction of stakeholders. There was uniformity in the opinion expressed by stakeholders in all age groups and both the genders with few exceptions that much more is required to be done to improve transparency, accountability and efficiency of the administrative system. These results indicated that stakeholders intend to have more participation in identification of priorities, more transparency and improvements in the system.

Keywords: Good Governance, Stakeholders, Perception, Accountability, Assessment

INTRODUCTION

The citizens across the globe expects from their nation state and its organs to perform at its best for their development. Good governance helps create an environment in which sustained economic growth becomes achievable. It does not occur by chance. It must be demanded by citizens and nourished explicitly and consciously by the nation state. India has always believed in practice of good governance and its traces can be found in our epics where Lord Ram followed accountability, responsibility, responsiveness, and transparency in his regime. Also Mahabharata is presumably the first Indian treatise on the science of governance. There is one huge Rajdharama section discussing various aspects of governance. The focus on good governance has amplified since globalization because of two major reasons. One, it contributes to the economic development and second it helps in building the image of the nation state in front of the rest of the world. Not only the implementation of good governance is important but also there is a need to assess the directions and quantum of the efforts made by the government. A very important question, which is needed to be answered before any evaluation of such activities is undertaken, is, 'Do the citizens perceive that the actions/initiatives were required/ needed'? And if it is needed, then "what will be the shape and priority." Only after this question has been answered, the issue of evaluation will come next, essentially to know if enough has been done in various fields. In the final reckoning, government must not only appear to be but should also be measurably effective. Economic growth not necessarily results in equitable human development and resources. Polarization of resources, both national and human can lead to greater economic and social disparities. To counter this polarization, assessment, analysis and action are critical managerial inputs in every human endeavour. Correct assessment of systems and processes is important for policy and program development. Improvement and additions to good governance initiatives, if any, can be done only after true assessment of all these initiatives is done. Any attempt at measuring good governance must have clear ideas about indicators to assess the effectiveness of inter play among these regimes. Some of the results of these interplays may not be too easily discernible and measurable. Yet, the overall impact can be measured by creating a tool, which can measure the physical target achievement as well as attitude and perception of the citizens. All stakeholders must have a consensus on what indicates good governance. There are different types of indicators. Firstly, there are input/output level indicators, which generally assess performance quantitatively. This may not help in behavioural processes. Secondly there are outcome/impact level indicators meant to assess the effectiveness of the efforts made. These can be used in summative evaluations at the end of long-term efforts. Thirdly there are condition-stress-response indicators. They measure the ground realities (condition), the challenges (stress), systematic approaches employed to meet these challenges (Response). Third type of indicators are more important for evaluating the good governance as it cannot be measured quantitatively as attitude, perception and views are assessed to know the effectiveness of the governance.

This study aims at assessing the good governance in Delhi because it is the seat of federal governance and also houses Embassies/High Commissions of different countries. However this city-state (with less than 7% of people living in rural areas) has an elected state government headed by the chief minister. Delhi has a unique system of governance and multiplicity of authority. Municipal Corporation of Delhi and the New Delhi Municipal Council deals with matters like sanitation, house tax, building constructions but issues like electricity, water, sewer etc are with Delhi government and policing, land etc with central government. The seat of the union government i.e. New Delhi area which is about 3.0% of the total area of the state is administrated by a Municipal Council having a majority of official members. Similarly Cantonment Board administers another 3.0% of it, which is an official body with nominal elected presence. Municipal Corporation of Delhi, which has elected representatives as councillors, has major power vested with Municipal Commissioner, a government official. Government of Delhi has its own elected MLA's but powers of the government are limited. The police (which is responsible for law and order), land and its handling agency, Delhi Development Authority, and top level personnel matters, pertaining to top Indian Administrative Services, Delhi Andaman Nicobar Island Civil Services, Public work Department and Health services are with the central government.

Delhi had been a district till 1997 when it was divided into 9 revenue districts. Delhi caters not only to its residents, but also to an unusually large number of outsiders who visit Delhi for social, economic and political reasons. Delhi attracts large number of foreign visitors. Its historic past also contributes towards increased floating population. A large number of people also visit Delhi from the satellite towns and the neighboring states for trade, tourism and employment. Delhi is also probably the biggest business centre of North India. Health care and studies are other reasons, which contribute towards the floating population. The annual growth rate of population of Delhi during 1991-2001 was 4.18 percent, almost double the national average. The main reason for this unprecedented growth is the migration of population from different parts of the country to take advantage of livelihood opportunities offered by Delhi. Delhi is one of the states with the highest per capita income in India. In 2002-03, per capita income was estimated at current prices at Rs. 47,441which has reached Rs. 1,21,000 in 2009-10. The main contribution for this increase is growth in service sector. Delhi has a legacy of 7 historical cities and thus has a unique heritage and vibrant culture, which represents different religions, regional classes and creeds. This specialty is extended to its cultural values and climatic conditions as well. Delhi is characterized by inhabitants living in large number of unauthorized colonies, urban villages, resettlement colonies, the walled city and other residential pockets. Delhi is predominantly dependent on road transport due to distances and metro for specific routes it provides. Buses constitute only 1.2 percent of the total vehicular population but cater to about 60 percent of the total travel demand while personal vehicles account for about 30 percent. The growth in population and floating population has been putting pressure on services in the city. Poverty and disparities in incomes are more glaring in Delhi. In 1999-2000, it was estimated that 1.15 million people i.e. 8 % of Delhi's population lived below the poverty line. Delhi Human Development Report 2006 states that Delhi government has

planned to reduce the population of people living below poverty line to half i.e. 4 % by 2015 but still since population will also be doubled by 2015, the number of people below poverty line will remain the same. Delhi being a big metropolitan has bigger problems due to large, fast increasing and migrating population. The problems have multiplied over the years as planning did not match the expectations and requirements of the citizens. Economic activity did bring in expansion and growth, but at the cost of environmental degradation and living space. Per capital income of Delhi citizens increased followed by increase in purchasing power and living standard, but filth and squalor also multiplied with all associated problems. Typical governance structure and status of Delhi also did not help in mitigating the miseries, but enhanced confusion and inactivity. Since responsibilities were not clearly demarcated, accountability suffered.

LITERATURE REVIEW

United Nations has listed 132 indicators as indicators of sustainability and has categorized these in social economic, environmental and institutional categories (Bell and Morse, 1999). These measurements of sustainability are not confined to few quantitative parameters but consist of wider qualitative indicators. These qualitative indicators can also be placed under three categories. In fact these are initiatives, which are essential and can be thus measured for attainment of sustainable development. Even if we never use a single indicator the process (of their development) has given us so much that one learns during process itself (Meter, 1999). Indicators are a logical device to use in sustainable development, especially given their long record of use in fields such as economics, social accountability and environmental science (Bell and Morse, 1999). Kaufmann et al. (1999) highlight a number of reasons why it is useful to gather data on governance perceptions although the data collected is inherently subjective. For example, perceptions may often be more meaningful than objective data, especially when it comes measuring the public faith in institutions.

The concept of good governance has been clarified by the work of the U.N. Commission on Human rights (2001) in its resolution 2006/64. The commission identified the key attributes of good governance as: Transparency, Responsibility, Accountability, Participation and Responsiveness (to the needs of the people). Resolution 2000/64 linked good governance to an enabling environment conducive to the enjoyment of human rights and 'prompting growth and sustainable human development'. Thus resolution links good governance to sustainable human development and emphasis on accountability, participation and the enjoyment of human rights. UNESCAP (United Nations Economic and Social Commission for Asia and the Pacific) has identified that Good Governance has 8 major characteristics. It is participatory, consensus oriented, transparent, responsive, effective and efficient, equitable and inclusive, follows the rule of law and ensures accountability.

Court et al (2002) concluded that measuring issues of governance poses challenges that are not encountered in the economic or social development fields. While it is easier to provide firm indicators of such things as economic growth or primary school enrolment, it is much more difficult to find and agree upon indicators of a political macro phenomenon like governance or political rights. Perhaps because it is a broad and complicated concept, there exists no regular, systematic and cohesive data collection effort centered on the concept of governance. All these indicators are not inclusive. Involvement of stakeholders is very essential to know the indicators. Still indicators may appeal to a mind set for measurement yet they do not appeal to the popular imagination and this must limit their appeal to real people-the global community that is the target for the sustainability project (Bell and Stephen, 2003).

There is no consensus on the elements or indicators of good governance as different agencies have identified different elements as per their need, requirement and experience. In contrast there is a broad agreement inside and outside India on indicators of bad governance. (Human Development Report, 2003) Major among these is incidence of competition co existing with high level of mass poverty, illiteracy, and under-development and increasing criminalization of politics. In the good governance discourse, democracy emerges as the necessary political framework for successful economic development, and within this discourse democracy and economic liberalism are conceptually linked: bad governance equals state intervention; good governance equals democracy and economic liberalism (Abrahamsen, 2004). Development is a planned change process, which basically entails deviations from the present situations and balances. To achieve sustainable development, it is essential that such development takes place in a way and by making such adjustments to the human activities so as to sustain and consume the natural wealth. Term social development and sustainable development are being used interchangeably only because it has been realized that development in society is long lasting only if it does not disturb the delicate environmental balance. This means that all natural assets including human, deserve to be given their rightful place and treatment and cared for whenever such planned change of development takes place. Under the circumstances, effective governance within the available frame of resources and capabilities is the solution to minimize the managerial stress and maintain an adequate level of urban services and facilities. The response to these challenges lies in good governance. Good governance makes accountability, transparency, participation and rule of law mandatory administrative functions. They are vital pre – requisites for sustainable development also. Government has to function in a more missionary, egalitarian and energized manner (Barthwal, 2003).

As part of the World Governance Survey (WGS) project, a comprehensive assessment of governance at the national level in India was conducted in 2001. 177 experts from four states – Andhra Pradesh, Bihar, Delhi and Kerala; completed a questionnaire providing their ratings and comments to 30 indicators of governance. The findings do suggest that even in a country of the diversity and complexity of India it is feasible and valuable to carry out such governance assessments. Nevertheless, due to some methodological challenges, findings are indicative rather than conclusive. The survey does highlight some bright spots, including high levels of freedom of expression and association; high levels of political

competition; a respected bureaucracy; and a military that accepts its subordination to civilian government. However, there was an overarching concern that policy-making is rather divorced from the people – especially the poorest members of society. Democracy in India is more impressive in form than substance. More specifically, the survey found that corruption was the most important governance challenge in the country (Court, 2003). This kind of surveys are necessary to have assessment of the aspirations of the people and to identify the problem areas for course correction.
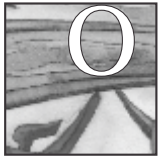
O BJECTIVES OF THE STUDY

•To assess the perception of stakeholders about good governance initiatives.

•To understand the perception of stakeholders about the good governance initiatives of nine government departments of Delhi.

HYPOTHESES

H1. There will be significant differences in the policies and procedures of government agencies of Delhi state as perceived by stakeholders.

H2. There will be no difference in the good governance assessment of different Delhi state agencies as perceived by different categories of stakeholder i.e. general public/citizens, political persons/elected representatives, legal professional/judiciary/advocates, bureaucracy/officials and media & communication professionals on characteristics of good governance.

H3. There will be no difference in the good governance assessment of different Delhi state government agencies as perceived by the stakeholders of different age groups i.e. young adults (18-35 years), middle aged (36-55 years and elderly (56 & above years) on 8 characteristics of good governance.

H4. There will be no difference in the perception of the stakeholders of both the genders on 8 characteristics of governance.

M ETHODOLOGY

To achieve these objectives, the effort was made to have a comparative analysis of the policies and procedures of the different government agencies on certain identified indicators or characteristics.

There are different departments and agencies of government of India, Delhi government and local self-governments like Municipal Corporation of Delhi, New Delhi Municipal Corporation, Delhi Cantonment Board which are collectively responsible for upkeep of the city. Some departments directly affect the lives of the citizens of Delhi on day to day basis. The following nine departments/agencies have been selected which have an impact on a large number of its citizens who have to visit the field offices of these agencies for one purpose or other. The selection of agencies was based on a general survey conducted asking people to respond to a single

question that in their view which agency of the government affect their day to day lives in a major way and so they have to deal with the agency more frequently. In response, people named the field units of the agencies like local electricity Sub-Stations, zonal office of Municipal Corporation of Delhi, Motor Licensing Officer's office of transport department, Station House Officer's office of police, Sales Tax Office of Value added Tax Department, Sub-Registrar office of Deputy Commissioner, Revenue or Rationing Shop/Ration card office. However it was thought appropriate to consider Department as a whole instead of Individual Branch of the Department as Department is responsible for controlling the policies and its implementation. Health and education are two of the major areas which could not be considered for study even when survey had identified these. The main reason for not considering these areas is that the services in these two areas are provided by public and private sectors equally. It would have been difficult to separate the efforts of government and private players in these fields. After initial exercise of identification of selection of government agencies was completed, these 9 departments were listed. These nine agencies/department of state of Delhi are

S. No.	Agency
1.	Delhi Development Authority (DDA)
2.	Delhi Police (DP)
3.	Delhi Jal Board (DJB)
4.	Food and Civil Supply Department (FCS)
5.	Municipal Corporation of Delhi (MCD)
6.	Revenue Department (RD)
7.	Trade and Taxes Department (TTD)
8.	Electricity Department (ED)
9.	Transport Department (TD)

All stakeholders were kept in five major categories.

S. No.	Stakeholders Category
1.	General Public/Citizen (GP)
2.	Political Persons/Elected Representatives (PP/ER)
3.	Legal Profession/Judiciary/Advocates (LP/JA)
4.	Bureaucracy/Officials (B/O)
5.	Media and Communications (MAC)

All respondents are considered in three age groups.

1. Junior Age Group - 18-35 years (JAG)

2. Middle Age Group - 36-55 years (MAG)

3. Senior Age Group - 55+ years (SAG)

Five respondents for each category of gender, age group and stakeholder groups were taken. Sample size was 1350.

A 2 (Gender) X 3 (Age groups) X 5 (Stakeholders) X 9 (Agencies) factorial design was planned to conduct the study.

Sample Size:

A total sample of 1350 was taken for the study. The stratified random sampling was applied for sampling where 5 respondents each were taken for nine different agencies in five different stakeholder groups, 3 different age groups and from both the genders.

Tool

A questionnaire (Annexure II) was developed for assessment of the perceptions of the stakeholders. The questionnaire measured the responses on five point scale ranging from Strongly agree-5, Agree-4, Undecided-3, Disagree-2 and Strongly disagree-1. These statements were to evaluate the organization if its policies and procedure are consensus oriented, equitable and inclusive, participatory, effective & efficient, follows the rule of law, transparent, responsive and accountable. The survey form has eight characteristics each containing ten questions or statements. So the score for each characteristic can vary from 10 to 50 and 30 was a midpoint score between agreement and disagreement. In case of overall assessment of good governance, there were 80 statements altogether. So, the scores will vary from 80 to 400. 240 was a midpoint score between agreement and disagreement.

Validity and Reliability

The validity test was done by taking comments from 7 specialists in the field representing 5 categories of stakeholders. There were 2 officials, 2 educationists, 1 from legal field, 1 from media and 1 from political field. Face validity was assessed after getting the questionnaire examined from experts. Test-retest reliability was checked, giving 45 days gap with 30 separate set of stakeholders. Pearson co-relation co-efficient was calculated. The correlation coefficient for Consensus Oriented was found to be 0.882, for Participatory it was 0.862, for Follow the Rule of Law coefficient was 0.859, for Responsiveness coefficient was 0.881, for Equitable and Inclusive coefficient was found to be 0.848, for Effective and Efficient coefficient was 0.881, for Transparency 0.772 and for Accountability correlation coefficient was found to be 0.896. All these correlations were found to be significant at 0.01 level of significance. Overall Pearson correlation co efficient was 0.868, which is high enough to substantiate the reliability of the questionnaires.

R ESULTS AND DISCUSSION

Analysis of Variance was applied to see the perceptual differences of various categories of stakeholders in various age groups and both the genders about the nine basic departments of Delhi. Table 1 shows that there is significant difference in the perception of stakeholders about different departments and also perceptions of various groups of stakeholders vary significantly. However the stakeholders from various age groups and both the genders do not differ in their perceptions. People perceive that these agencies have differences in performance on collective parameters of governance. There is significant difference in the perception of the stakeholders. The Stakeholders feels that Delhi Jal Board is much better than other departments on good governance followed by Electricity

Department, Transport Department, Trade and Taxes Department, Revenue Department, Delhi Police and Municipal Corporation of Delhi. The least rated departments by stakeholders are Delhi Development Authority and Food and Civil Supply Departments (Table 2). Delhi Jal Board and Electricity department are only two agencies which are good governance agencies in the opinion of the stakeholders. Rests of the seven agencies are not good governance agencies.

Amongst the stakeholders' perception (Table 3) about good governance, the Bureaucrats scores the highest followed by General Public, Media, Legal Professionals. The Political Persons and Elected Representatives perception scores are the lowest on overall good governance parameters. This may be so because the Bureaucrats are somewhere the part of the same system while the Political Persons and Elected Representatives are answerable to citizens for the efficient delivery of the services provided by these departments to the public. Moreover the party in opposition is always critical of services maintained by the ruling party.

Looking to the results of Department wise perception of Males and Females (Table 1, Department X Gender), males found Delhi Police, MCD, Trade and Taxes, Electricity Department and Transport better governed as compared to females. Females found Delhi Jal Board, Delhi Development Authority, Food and Supply, and Revenue Department to be better governed as compared to males (Table 4). Further the scrutiny of means (Table 4) revealed that males feel Electricity Department to be best governed department followed by Delhi Jal Board, Transport, Trade and Taxes, Delhi Police, Municipal Corporation, and Revenue Department. According to Males the least governed departments are Food and Supply and Delhi Development Authority. However according to Females, Delhi Jal Board is the best governed department followed by Revenue, Food and Supply, Electricity, Trade and Taxes, and Transport Department. They feel Municipal Corporation to be the least governed department followed by Delhi Development Authority, and Delhi Police. In all both Males and Females unanimously feel that Delhi Jal Board follows the best good governance practices followed by Electricity Department and Delhi Development Authority and Municipal Corporation of Delhi are the worst of good governance practices.

In case of different age groups (Table 5), the mean score is less than 240, which is indicative that all age group people are uniform in expressing their opinion that in overall ratings, agencies do not qualify to be accepted as good governance agencies. However, young persons for Delhi Jal Board, middle aged for Delhi Jal Board, Trade and Taxes and Electricity have a mean score of more than 240, which shows that middle aged have still accepted that at least few agencies have good governance system. In table of mean (Table 5), it is very striking that elderly person have not rated any one of the agencies in their assessment as to qualify to be good governance agency. They appear to be disillusioned with all the agencies. Table 5 shows that for all of agencies, there is marginal differences in mean scores for three different age groups except in case of Food and Civil Supplies where respondents have showed the department at very low in its evaluation of characteristics of good governance, In case of six agencies out of nine, middle aged have given highest mean

score, which explains that middle aged have still appreciated the agencies more than younger or older lot on assessment of characteristics of good governance.

Looking to the results of gender wise perception of stakeholders, it is found that all the stakeholders have mean score of less than 240 except (Table 6) for the category of officials/bureaucrats. Female ordinary citizens have a very high mean score (249.60), which is indicative that they find the functioning of these agencies good. Apart from this, official females have also mean score above than 240, which means that as their assessment the administration is good calculated on eight characteristics. Females have rated high on good governance, males have rated it very low. Political person's category is opposite to this, while both males and females have mean score much below 240, females have rated agencies very low on good governance. Out of five stakeholders' categories, females in four categories have more mean scores as compared to males.

In case of different age groups and gender, elderly males (Table 7) have scored the least (224.13) while elderly females have scored highest (243.95) which shows that opinion of the males and females in elder age group is opposite to each other group.

In case of three ways interactions (Table 8), young males for Delhi Development Authority, Delhi Police, Municipal Corporation of Delhi, Revenue Department, Trade and Taxes, Electricity and Transport Department have mean score more than 240 which is indicative that young males have opinion that these seven agencies, out of nine, have governance which can be termed as good based on eight characteristics of good governance. Middle-aged males have mean score more than 240 only for Delhi Jal Board, Electricity and Transport Departments. In contrast, elderly males have not rated any department more than 240, which means they do not agree that any of these agencies can be termed as good governance agency. In young female category, only Delhi Jal Board has mean score more than 240. Middle-aged females have assessed Food and Civil Supplies, Revenue Department, Trade and Taxes and Transport Department as good governance organization as mean score here is more than 240. Elderly female category has rated all agencies more than 240 except Trade and Taxes, which means they are convinced that good governance is adopted. So young males and elderly females are two categories who have agreed that good governance practices are being followed in government agencies except that young males have little reservations about Delhi Jal Board and Food Civil Supplies while elderly females have reservations about Trade and Taxes. Young males for Municipal Corporation of Delhi, middle aged females for Trade and Taxes, middle aged males for Electricity Department and middle aged males for Delhi Jal Board have crossed even mark of mean score of 250, thus, these categories have evaluated these four agencies as quite high on good governance. In contrast, young males have rated Food and Civil Supplies very low, as it did not reach even 150 points.

CONCLUSION

The exercise of development of questionnaire and evaluation of reliability and validity confirms that these eight indicators are sufficient and essential elements for assessment of good governance. Thus as a result of this study not only a valid and reliable tool/questionnaire has been designed but it also confirms the contention of UNESCAP (United Nation Economic and Social Condition for Asia and the Pacific) that the identified eight major characteristics of good governance are valid for India also.

The study testifies that there are differences in the policies and procedures of government agencies of Delhi state as perceived by stakeholders. The agencies of government of Delhi have been evaluated on its overall performance and evaluation on good governance as below

(I) Delhi Jal Board, (II) Electricity Department, (III) Trade and Taxes Department, (IV) Transport Department, (V) Revenue Department, (VI) Delhi Police, (VII) Municipal Corporation of Delhi, (VIII) Delhi Development Authority, (IX) Food and Civil Supplies.

Delhi Jal Board and Electricity Departments are at the top on assessment of good governance indicators and performance. Delhi Development Authority and Food and Civil Supplies are at the bottom in the good governance. The reason for this can be that every citizen has to deal with Delhi Jal Board, and Electricity Department, so these two agencies are always under pressure from stakeholders and in the eyes of storm. This has done some good for the working of the departments as on individual and collective characteristics, the functioning of these agencies improved. The constant pressure of responding to grievances and complaints forced these two agencies to improve their efficiency and interaction with public. Delhi Development Authority and Food and Civil Supplies have to handle only limited number of persons, only those persons who have flats/ properties purchased from DDA or poor people who rely on their food requirements on food and supplies department. Thus these agencies are not in a position to improve above a certain point. Municipal Corporation of Delhi appears to be a deviation to this assumption as this agency deals with almost all citizens, but have been ranked lower. This may be because Municipal Corporation of Delhi is too big and unmanageable and it becomes difficult to implement good governance practices. The services of sanitation and upkeep of colony parks roads etc. which has impact on each and every one has not shown any improvement. This also applies to sanitation and other improvements which are expected from Municipality. Same is true for the deliverables expected from agencies like transport, Taxation, Revenue departments as all deliverables are within the control of these agencies and dependent on efficiency of these departments. This is a positive result as it makes clear that public do appreciate the genuine problems faced by agencies. They do not have exaggerated and false expectations and aspirations. At the same time they expect that service be delivered where there are not externalities involved. To sum up, agencies which respond or react to the problems of the stakeholders, their efforts and attempts are appreciated by everyone.

This study also agrees that there is difference in the good governance assessment of different Delhi state agencies as perceived by different categories of stakeholders' i.e. general public/citizens, political persons/elected representatives,

legal professionals, bureaucracy/officials and media & communication professionals on 8 characteristics of good governance. This is so because all five type of stakeholders have differences in their experiences, knowledge, information and expectations from any government agency. These differences are reflected on their evaluation and assessment of these agencies on governance. Only officials are of the opinion that agencies of government of Delhi qualify to be good in governance. Other stakeholders i.e. politicians, legal professionals, media professionals and ordinary citizens do not agree that governance is good. The reason for this can be because officials are aware of the thought which goes behind the policy formulation or its implementation. Other stakeholders are only concerned about the results while they are not involved in the prioritization of works/initiatives. Officials are also a part of governance structure, thus may be defensive of the administrative system.

The study does testify that there is no difference in the good governance assessment of different Delhi state government agencies as perceived by the stakeholders of different age groups. The stakeholders of different category had different opinion but within that particular stakeholder group they responded in the same way even if they belong to different age group. This is significant as we always assume that due to generation gap the perception of the people in different age groups differs. However, middle age group has shown more consistency and uniformity in their responses. This may be due to the fact that younger generation have more expectations and aspirations which agencies are not able to meet. Older stakeholders get impatient and frustrated when they see no improvement in governance over a period of time.

The study does confirm that there is no difference in the perception of the stakeholders of both the genders on 8 characteristics of governance as the results are not significant on overall basis. This confirms that gender has no discrimination in evaluating or assessing governance. Both the sexes are equally unbiased in their perception that governance needs to be improved.

M ANAGERIAL IMPLICATIONS

The study indicates that stakeholders are unanimous that more participation and involvement of public is required in setting up priorities in process of making implementation strategies and also during actual implementation. There is a need to have attempts to reach consensus and follow rule of law. Policies need to be more equitable and inclusive, and implementation, effective and efficient. The administration should be more responsive, transparent and accountable. By rating the initiatives taken by some departments at different level, stakeholders have indicated that irrespective of age or sex, they do appreciate if any good initiative is taken by any department. Stakeholders, by rating Electricity and Jal Board higher have also made it clear that it is not the shortage in supplies they are not satisfied with, but it is service delivery and management against which they have grievances. Public do not accept reality and appreciate genuine difficulties. Another very important finding is that government official category had no complain about participation and awareness about government procedures and policies. This only indicates that still the decisions are taken by people who are managing the governance system and general public is not adequately involved and also aware of procedures and policies. Government needs to do more to have actual participation before any policy or procedures are finalized. Public needs to be associated in prioritizing expenditure, setting of processes and procedures. Once these procedures are final, adequate awareness generation and education of stakeholders is necessary. These procedures need to be simple, easy and known to all stakeholders. More decentralization of planning process and also involvement of stakeholders in implementation is required. Participation of the public, which was achieved to some extent through initiatives like Bhagidari movements, stakeholder's survey etc. needs to be strengthened further by including other classes as well and also by involving grass root level units/stakeholder bodies in decision making. The observations of Sh. Bimal Jalan (2004), former Governor of Reserve Bank of India are apt when he claims that the results on the ground in terms of social and economic development since independence are rather disappointing and this has happened when we have rich human and other resources, comparable capacities and capabilities which are second to none in the world. Government cannot meet people's aspirations unless their decision makers are prepared to look afresh at service delivery system, poverty and administrative management system. Such change in perspectives must be accompanied by change in their attitudes, leadership styles and goals. Harmonizing the attitudes, structures and processes of government with the aspirations and needs of its citizens is the first step.

ANNEXURE I

Table 1: Summary of Analysis of Variance for Assessment of Good Governance

Source of Variation	SS	df	MSS	F	P
Department A	74689.3	8	9336.15	4.23	>.01
Stakeholders B	29308.5	4	7327.12	3.32	>.01
Department X Gender	80806.4	8	10100.8	4.58	>.01
Department X Age Group	135527	16	8470.42	3.84	>.01
Stakeholder X Gender	76809.1	4	19202.3	8.71	>.01
Gender X Age Group	41546.5	2	20773.2	9.43	>.01
Department X Gender X Age Group	122783	16	7673.96	3.48	>.01
Department X Stakeholder X Gender X Age Group	238920	64	3733.13	1.69	>.01

Note: Only Significant results are shown

Table 2: Showing Means of Department wise Perception on Good Governance

	Delhi Development Authority (DDA)	Delhi Police	Delhi Jal Board (DJB)	Food and Civil Supply Department (FCS)	Municipal Corporation of Delhi (MCD)	Revenue Department (RD)	Trade and Taxes Department (TTD)	Electricity Department	Transport Department
Dept Wise Means	229.46	234.88	241.01	215.48	232.48	236.87	237.76	240.74	237.8

Table 3: Showing Means of Stakeholder wise Perception on Good Governance

	General Public	Political Persons	Legal Profession	Bureaucracy	Media and Communication
Stakeholders Wise Means	236.21	228.19	230.08	241.37	234.42

Table 4: Showing Means of Department X Gender Interaction

	Delhi Development Authority (DDA)	Delhi Police	Delhi Jal Borad (DJB)	Food and Civil Supply Department (FCS)	Municipal Corporation of Delhi (MCD)	Revenue Department (RD)	Trade and Taxes Department (TTD)	Electricity Department	Transport Department	Gender Wise Total Means
Male	227.24	237.14	239.32	192.2	236.52	235.02	238.18	242.9	238.61	231.9
Female	231.69	232.62	242.7	238.77	228.45	238.72	237.34	238.58	236.98	236.21
Dept Wise Total Means	229.46	234.88	241.01	215.48	232.48	236.87	237.76	240.74	237.8	

Table 5: Showing Means of Department X Age Group Interaction

	Delhi Development Authority (DDA)	Delhi Police	Delhi Jal Borad (DJB)	Food and Civil Supply Department (FCS)	Municipal Corporation of Delhi (MCD)	Revenue Department (RD)	Trade and Taxes Department (TTD)	Electricity Department	Transport Department	Gender Wise Total Means
18-35 years	232.16	237.64	240.74	173.52	237.66	236.3	237.86	238.14	238.42	230.27
36-55 Years	230.86	234.4	243.38	237.12	224.26	239.08	244.7	244.9	242.1	237.87
Above 55 years	225.38	232.62	238.92	235.82	235.54	235.24	230.74	239.2	232.88	234.04
	229.47	234.89	241.01	215.49	232.49	236.87	237.77	240.75	237.8	

Table 6: Showing Means of Stakeholder X Gender Interaction

	General Public	Political Persons	Legal Profession	Bureaucracy	Media and Communication	Gender Wise Total Means
Males	222.82	238.34	227.52	237.12	233.71	231.9
Females	249.6	218.03	232.64	245.62	235.13	236.21
Stakeholders Wise Total Means	236.21	228.19	230.08	241.37	234.42	

Table 7: Showing Means of Gender X Age Group Interaction

	Males	Females
18-35 Years	232.99	227.55
36-55 Years	238.6	237.12
55 Years and above	224.12	243.95

Table 8: Showing Means of Department X Gender X Age Group Interaction

	Males			Females		
	18-35 Years	36-55 Years	Above 55 Years	18-35 Years	36-55 Years	Above 55 Years
Delhi Development Authority (DDA)	241.48	234.24	206	222.84	227.48	244.76
Delhi Police	251.48	236.6	223.36	223.8	232.2	241.88
Delhi Jal Board (DJB)	239.72	250.24	228	241.76	236.52	249.84
Food and Civil Supply Department (FCS)	122.52	231.8	222.28	224.52	242.44	249.36
Municipal Corporation of Delhi (MCD)	255.36	228.72	225.48	219.96	219.8	245.6
Revenue Department (RD)	248.64	229.68	226.76	223.96	248.48	243.72
Trade and Taxes Department (TTD)	249.12	236.44	229	226.6	252.96	232.48
Electricity Department	241.44	256.4	230.88	234.84	233.4	247.52
Transport Department	247.16	243.32	225.36	229.68	240.88	240.4

ANNEXURE II

ASSESSMENT OF GOOD GOVERNANCE

Sex: Male   ☐

             Female   ☐

Age Group: Young adults   (18-35 years)   ☐

             Mid. age adults   (36-55 years)   ☐

             Senior adults   (55 years & Above) ☐

Profession of Stakeholder

General Public/Citizen   ☐

Political persons,/Elected representatives   ☐

Legal Professional /Judiciary/Advocates   ☐

Bureaucracy/ officials   ☐

Media and Communication   ☐

Strongly Agree-SA, Agree-A, Undecided-UN, Disagree-DA, and Strongly Disagree-SD

(a) Consensus Oriented	SA	A	UN	DA	SD
Policies of the Department have been developed on consensus.					
Views of Public/Stakeholders have been taken while framing polices.					
The policy of the Department reflects the mediation of different interest groups.					
Policies confirm to the aspiration and needs of all the stakeholders.					
Procedures and rules are framed in confirmation with mutually accepted norms.					
Decisions in the Department are taken keeping in view the needs/requirement of all.					
Decisions taken in the Department are based on broad consensus.					
Activities and actions of the Department are always in the best interest of the whole community.					
Implementation of policies of the Department helps in sustainable human development.					
Decisions taken in the Department are based on the understanding of historic, cultural and social context.					
b) Participatory					
All Stakeholders are involved in decision making process.					
Procedures/practices are evolved through participation process.					
Department takes up activities which are recognized on priority basis by the community.					
Department aims at community self-determination.					
Department engages the community in an active way in solution of the problems.					
Department moves at a pace that is comfortable for the community.					
All the activities in the Department involve participation in organized way.					
Stakeholders are well informed about activities of the Department before they are involved in decision making.					
The decision making bodies are created based on representations of various stakeholders.					
The suggestions & recommendation of organized civil societies are valued in the Department.					

		SA	A	UN	DA	SD
c)	Follow the Rule of Law					
	Department respects Human Rights & Fundamental freedoms.					
	Department has a well developed Grievances redressal system.					
	Department ensures that deadlines are met for all activities					
	Department follows rules & procedures strictly.					
	Department provides Legal remedies which are available at all levels.					
	Department ensures that there is protection of Human rights.					
	Minorities are adequately protected in the Department.					
	Work force of the Department is impartial in its dealings.					
	There exists an Independent appellant authority in the Department.					
	There are impartial decision making processes and procedures in the Department.					
d)	Responsiveness					
	Department has regards for public comfort and conveniences					
	Disposal of application/requests is quick.					
	Department has reduced the number of sections with which the citizen has to deal with.					
	Handy details of information on benefits/procedures are available to the citizen.					
	Staff is extra responsive and goes beyond the fixed activities to help the citizen.					
	The staff exhibits genuine sincerity and commitment towards development of vulnerable and backward sections.					
	Good institutions and procedures exist in the Department.					
	Department serves all stake holders without any discrimination.					
	Redressal of grievances is within reasonable time frame.					
	Department allocates budget as per the priority identified and needs of the stakeholders.					
e)	Equitable & Inclusive					
	There is equal opportunity for women.					
	Policies of the Department have universal coverage for the poor of all section.					
	Department focuses on most vulnerable groups (SC/ST/minorities).					
	Policies of the Department are targeted towards disadvantaged (aged, disabled & children).					
	Department is always willing to consult and involve backward and illiterate people.					
	There is equal treatment to all within the Department.					
	All stakeholders feel that they have a stake in the Department.					
	Vulnerable groups feel comfortable in dealing with the Department.					
	There is freedom of association in the Department for all the age groups.					
	There is no discrimination based on caste, creed or race.					
f)	Effective & Efficient					
	Projects/works are finished in time.					
	Department is prompt in delivering services.					
	There is decentralization of Power at all levels.					
	Systems and Procedures are well developed.					
	Computerization and automation in the Department are in advanced stage.					
	High level of controls are exercised on expenditure.					
	There is proper allocation of functional duties & responsibilities.					
	Workload in the Department is distributed fairly.					
	Delegation of powers at field office/Head office level is appropriate.					
	Quality control systems do exist at all levels and for all services.					
g)	Transparency					
	Decisions are taken as per laid down rules and procedures.					
	Enforcements/actions are as per rules and procedures.					
	Stakeholders have accessibility to Information.					
	All information is available in easily understandable form and medium.					

		SA	A	UN	DA	SD
	Citizen charter contains all relevant information.					
	The Right to Information Act is being enforced properly.					
	There is a lot of transparency in dealing with citizen.					
	Staff is adequately trained in communicating or dispersing information.					
	There is a freedom of expression in the Department.					
	Department adheres to work ethics.					
h)	Accountability					
	There is clear cut demarcation and fixation of responsibilities.					
	The decentralization of power is adequate and appropriate.					
	Department is fulfilling its duties and obligations as expected.					
	Grievance redressal mechanisms are effective and responsive.					
	Legal remedies are available at all levels.					
	Public officials feel responsible to inform and explain about their actions.					
	There are norms to impose sanctions and punish power holders who violate public duties.					
	There are minimum Corruption opportunities.					
	Corruption cases/ numbers are almost nil.					
	There is less/no misuse of power.					

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Mediating Role Of Value Delivery

In Value Delivery-user Satisfaction Relationship In Organised Retail Stores In City Of Ludhiana (Punjab)

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ABSTRACT

The Indian retail industry has scaled impeccable growth over the last decade with an amiable acceptance to organised retailing formats. The industry is maturing towards modern concept of retailing, cornering the conventional unorganised family-owned businesses. As per US-based global management consulting firm, A T Kearney, India has been ranked as the fourth most attractive nation for retail investment among 30 emerging markets. The retail consumer is becoming very perceptive and challenging in the context of day to day lifestyle. As a result there is stiff competition among Indian and foreign retailers to attract customers and retain them. In this tug-of-war, quality retailing, delivering value to user has emerged as the solution. The retailer who provides quality products and services along with a quality shopping experience keeping in mind the value framework succeeds in the long run. The performance of organized retailing primarily depends upon service delivery & quality of service delivery. In all service firms, customers' perceived value delivery is taken as an important element of business success. This paper empirically examines the value delivery-customer satisfaction relationship in organised retail outlets in Punjab's commercial capital, Ludhiana. Results indicate that value delivery has a significant impact on customer satisfaction.

Keywords: Value Delivery, Customer Satisfaction, Value Framework

INTRODUCTION

The retail sector has been at the helm of India's growth story. The sector has evolved dramatically from traditional village fairs, street hawkers to resplendent malls and plush outlets, growing from strength to strength. According to the Indian Council for Research on International Economic Relations (ICRIER), India is the seventh-largest retail market in the world, and is expected to grow at a CAGR of over 13% till FY12. During the last few years, the Indian retail market has seen considerable growth in the organised segment. Major domestic players have entered the retail arena and have ambitious plans to expand in the future years across verticals, formats, and cities. For example, companies like Reliance, Tata, Bharti, Adani Enterprise, have been investing considerably in the booming Indian retail sector. Besides, a number of transnational corporations have also set up retail chains in collaboration with big Indian companies. The Indian retail sector is highly fragmented and the unorganised sector has around 13 million retail outlets that account for around 95-96% of the total Indian retail industry. However, going forward, the organised sector's growth potential will increase due to globalisation, high economic growth, and changing lifestyle. Moreover, high consumer spending over the years by the young population (more than 31% of the country is below 14 years) and sharp rise in disposable income are driving the Indian organised retail sector's growth. Even small towns and cities are witnessing a major shift in consumer lifestyle and preferences, and have thus emerged as attractive markets for retailers to expand their presence. With rising disposable incomes, expansion of stores and supporting economic factors, India's retail sector is expected to grow to about $ 900 billion by 2014, according to a report by global consultancy and research firm PricewaterhouseCoopers. The report titled -- Strong and Steady 2011 -- which provides an outlook for the retail and consumer products in Asia suggests that retail sales in India, currently estimated at about $500 bn. While the report did not specify the value growth, it said in terms of volumes, retail sales in India would grow at an average of four per cent between 2010 and 2014. "India, Asia's third-largest retail market after China and Japan, high inflation in 2010 is expected to keep retail sales growth under two per cent, but annual growth will increase at an average rate of over four per cent in 2010- 2014," the report said. According to the report, while retail sales in China will cross the USD 4,500 billion mark by 2014, India's will be around USD 900 billion. It cited rising incomes, increase in urbanisation and a variety of new stores, including international brands opening their outlets in India, as the growth drivers. The report, however, said "expansion in the attractive Indian market will remain constrained by restrictions on foreign investment." In India modern retail accounts for only 5 per cent of the total retail sales compared to 65 per cent in the US, 55 per cent in Malaysia and 10 per cent in China.

ETAIL: KEY DEVELOPMENTS & MAJOR INVESTMENTS

According to a report by research firm CB Richard Ellis India, over 6 million square feet of retail mall space was added across India in the first six months of 2011; primarily due to aggressive expansion by organised retailers. For instance, Kishore Biyani-controlled Pantaloon Retail added 2.26 million square feet (sq. ft.) of retail space during the fiscal 2011 and booked over 9 million sq. ft of retail space to fructify its expansion plans in future. Cumulative foreign direct investment (FDI) inflows in single-brand retail trading during April 2000 to June 2011 stood at US$ 69.26 million, according to the Department of Industrial Policy and Promotion (DIPP). Driven by changing consumption patterns, favourable demographics, expanding middle class and greater government support, retailers are eagerly foraying into untapped avenues of Indian markets by making huge investment plans. For example:

- Jubilant FoodWorks Ltd, which operates fast food chain of Dominos Pizza in India, will invest over Rs 70 crore (US$ 15.03 million) in the FY12 on new stores and commissaries.

- Reliance Industries' Reliance Retail (that runs supermarket and hypermarket chains) is planning massive expansion across the country by doubling the number of stores in several specialty formats in 2011.

- The brand 'More', operated by Aditya Birla Retail, will open 12 hypermarkets and 150 supermarkets in fiscal 2012. After the expansion, its supermarket stores tally will reach 715.

- Shoppers Stop Ltd, which has 43 departmental stores and 10 hypermarkets under the brand Hypercity, plans to open four more hypermarkets and 10 departmental stores in 2011 (IBEF, 2011).

Along with the metros, the retailers are betting big on tier-II and tier-III cities as well.

- The Aditya Birla group firm, Madura Fashion & Lifestyle, is aiming at a turnover of Rs 1,100 crore (US$ 236 million) for FY13, on the back of its pan-India expansion spree, including small cities and towns.

- In a bid to triple its turnover from retail segment, Shree Ganesh Jewellery has formed an alliance with Bharti Retail's 'Easy Day' market format to promote its Gaja Lites range of jewelleries. The company plans to launch 250 outlets in tier II and tier III cities under its flagship brand 'Gaja'.

- Japanese imaging technology major Nikon Corporation's subsidiary Nikon India is focusing on tier-II and tier-III cities to fuel its growth. The company is planning to extend its presence to 2,400 channel partners by March 2012 from the current 2,000 of them (IBEF, 2011).

ATIONALE OF THE STUDY

Value Delivery is the Key. The quality of the experience offered by the retailer has two aspects, the perceived value and the actual value delivered. Perceived value or point of

sale value delivery refers to the image that the customer has about the product & retail brand while buying it. The actual value or the point of use value is the quality of the product that the consumer experiences while using it. The retailer plays a very important role in building up perceived value with the use of value delivery measures. The retailer is in direct contact with the customers and so he can play a significant part in helping the manufacturer reduce the gap between actual and perceived value. The retailer should also ensure value at the various stages of the supply chain so that the value of the product is not affected. Unorganised retail on other hand is growing at a very slow pace that is 10% / annum as compared to 45-50% in case of organised retail which is around 16% of total retail in India as per Indian Council for Research on International Economic Relations. This study & studies like this can be very much an eye opener for unorganised retailers which provide almost same level of value as their organised counterparts but they lack in value delivery. It can prove very significant for unorganised retailers to not only stay in business but to grow as well as co existence as it is very much necessary for both types of retailers for growth of economy. And it is need of the hour for unorganised retailers to be competitive as FDI in Multi Brand Retailing is on cards as government can't delay it for a substantial amount of time. This study would help organised retailers to rethink about their pricing strategy to generate more value along with an adequate level of value delivery which is of descent level already.

REVIEW OF LITERATURE

Considering the competitive environment, there is a need for retailers to plan their strategies that will differentiate them from another. This can be achieved through the delivery of high service quality. The practice of excellent service quality has been proven that customer satisfaction will significantly lead to customer loyalty (Caruana et al., 2000; Caruana, 2002). The present research employs SERVQUAL scale (Parasuraman et al., 1988) to measure the service quality. Definitions of service quality hold that this is the result of the comparison that customers make between their expectations about a service and their perception of the way the service has been performed (Lehtinen & Lehtinen, 1982; Lewis & Booms, 1983, Gronroos, 1984; Parasuraman et al., 1985; 1988; Caruana, 2002). Service quality is defined as the degree of discrepancy between customers' normative expectation for service and their perceptions of service performance (Parasuraman et al., 1985). The definition of service quality was further developed as "the overall evaluation of a specific service firm that results from comparing that firm's performance with the customer's general expectations of how firms in that industry should perform(Parasuraman et al., 1988). Perceived value has its root in equity theory, which considers the ratio of the consumer's outcome/input to that of the service provider's outcome/input (Oliver & DeSarbo, 1988). The equity concept refers to customer evaluation of what is fair, right, or deserved for the perceived cost of the offering (Bolton & Lemon, 1999).

Perceived costs include monetary payments and nonmonetary sacrifices such as time consumption, 802 YANG AND PETERSON energy consumption, and stress experienced by consumers. In turn, customer-perceived value results from an evaluation of the relative rewards and sacrifices associated with the offering. Customers are inclined to feel equitably treated if they perceive that the ratio of their outcome to inputs is comparable to the ratio of outcome to inputs experienced by the company (Oliver & DeSarbo, 1988). And high value is one primary motivation for customer patronage. In this regard, Sirdeshmukh, Singh, and Sabol (2002) argue that customer value is a superordinate goal and customer loyalty is a subordinate goal, as it is a behavioral intention. According to goal and action identity theories, a superordinate goal is likely to regulate subordinate goals. Thus, customer value regulates "behavioral intentions of loyalty toward the service provider as long as such relational exchanges provide superior value" (Sirdeshmukh et al., 2002, p. 21). Prior empirical research has identified perceived value as a major determinant of customer loyalty in such settings as telephone services (Bolton & Drew, 1991), airline travel, and retailing services (Sirdeshmukh et al., 2002). Chang and Wildt (1994) report that customer-perceived value has been found to be a major contributor to purchase intention. In light of the preceding discussion and findings, it is proposed that: High levels of customer satisfaction are related to the service quality provided through customer interactions (van der Wiele et al., 2002; Vilares and Coehlo, 2003). The service profit chain (Heskett et al., 1994) specifically identifies a relationship between employee satisfaction, service quality and customer satisfaction. Research investigating these relationships has subsequently generated support for this model (Loveman, 1998; Anderson and Mittal, 2000; Voss et al., 2004). The "satisfaction mirror" (Schlesinger and Heskett, 1991; Normann and Ramirez, 1993) has also been presented as a model for understanding the relationship between internal aspects of service delivery with external customer satisfaction. Service quality has formed a nucleus of research incorporating many attributes of service outcome and the parameters for achieving these outcomes: costs, profitability, customer's satisfaction, customer retention, and service guarantee (Sohail, 2003); corporate marketing and financial performance (Buttle, 1996). Definitions of service quality have been found in abundance. For example, conformance to customer expectations (Berry et al., 1988), the difference between customer expectation and perceived service (Parasuraman et al., 1985).This latter perspective suggests that dissatisfaction occurs if expectations are greater than actual performance. As a result, evaluations are not based solely on the outcome of the service, the technical quality; they also involve the process of service delivery or functional quality (Gronroos, 1984). Kul (2005) made a study on which store attributes are appealing for self-image of consumers and their impact on in-store satisfaction and patronage intentions. She concluded that service expressiveness value is distinct from the performance value obtained from service delivery. Consumers satisfied with service quality are most likely to

become and remain loyal (Wong and Sohal, 2003). Kaul (2005) further observes that a store having modern equipment, good and clean physical facilities and ease in transactions would be able to yield satisfaction and patronage intentions. Clarke (2001) said, "a business that focuses exclusively on customer satisfaction runs the risk of becoming an undifferentiated brand whose customers believe only that it meets the minimum performance criteria for the category. Long-term customer retention in competitive markets requires the supplier to go beyond mere basic satisfaction and to look for ways of establishing ties of loyalty that will help ward off competitor attack". Sivadas and Baker-Prewitt (2000) also said that it is not merely enough to satisfy a customer. According to Storbacka and Lentinen (2001), customer satisfaction is not necessarily a guarantee of loyalty. They said that in certain industries up to 75% of customers who switch providers say that they were 'satisfied' or even 'very satisfied' with the previous provider. Customers may change providers because of price, or because the competitor is offering new opportunities, or simply because they want some variation (Storbacka and Lentinen, 2001). Clarke (2001) said that customer satisfaction is really no more than the price of entry to a category. For satisfaction to be effective, it must be able to create loyalty amongst customers. Sivadas and Baker-Prewitt (2000): "There is increasing recognition that the ultimate objective of customer satisfaction measurement should be customer loyalty". (Ma & Ding, 2010) observed that good service process and shopping experience have the same number of the customers in memory, and they can help many companies deliver superior customer value. (Wycoff, 1985) found that it is all about service process to create the service experience. It is the way the customer, information and materials are processed and how they link together that create the experience. Excellent service, which satisfies the customer and meets the strategic intentions of the company. According to the service process proposed by Roger Schmenner that services are classified into two dimensions degree of interaction and customization. (Ulaga, 2001) found that superior value delivery will concentrate on ways to meet or understand customer's needs, solve produce use problems and be pivotal in building strong customer satisfaction which is a result of service of high quality which in turn a resultant of high service standards. In addition, customer value delivery can satisfy customer demand, make customer satisfied and leads to customer loyal in consumption experience. Delivering good customer value can lead to higher customer loyalty and retention, higher market share and lead to reduced operating costs. Certainly customer value needed to be considered and its common for different customer to give different appraise, therefore different customers' opinions are deeded considered together. Service process is important for enterprise to survive and develop in competitive market, and it is the surviving base for delivering customer value of a company. (Tesco, 2006) Results of Tesco.com the relationship of customer value and service process is significant and positive for the retailing. Service process Tesco.com provided

is effect and convenient for customers, especially for customers of purchasing online. That is to say purchasers of a product make decision by using evaluation shopping experience and service process in memory commonly. Through offering different service process for the customers, the company could deliver an excellent overall customer service.
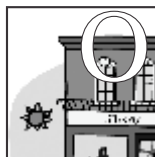
OBJECTIVE OF THE STUDY

- To study the impact of value delivery on customer satisfaction.

On the basis of above objective following hypotheses have been framed

H1: Tangibles are significantly associated with customer satisfaction.

H2: Assurance is significantly associated with customer satisfaction.

H3: Responsiveness is significantly associated with customer satisfaction.

H4: Reliability is significantly associated with customer satisfaction.

H5: Empathy is significantly associated with customer satisfaction.

RESEARCH METHODOLOGY

A small pilot study of organized (Aditya Birla's MORE, Bharati Group's Easy Day, Reliance's Reliance Fresh, Future group's Big Bazaar) & unorganized retailers was undertaken to compare the net prices of the both in four different areas of the city as price adds a lot to value in a price conscious market like India. Sample size of pilot study was 20 stores each. Data was collected through a structured questionnaire from the customers of organized retail outlets. Five value delivery attributes in the context of service quality were used to ascertain value delivery which were Tangibles, Assurance, Responsiveness, Reliability & Empathy. These five attributes contribute a lot in customer satisfaction. These attributes were further divided into four subparts to study these objectively & precisely. Stratified sampling was used in a way that first the city was divided into four different but uniform parts & then an equal part of sample of customers of organized retailers was chosen from these strata. Sample size was 400 customers of organized retailers. A four point Likert scale was used for value delivery & a five point Likert scale was used for customer satisfaction. Confirmatory Factor Analysis & Regression analysis was used to test & analyse the data. Cronbach's Alpha was used to test the internal consistency & reliability among variables. SPSS 14.0 & AMOS 4.0 was used to test the data.

DATA ANALYSIS

Table 1: Confirmatory Factor Analysis

Variables	M	SD	t	Skewness	Kurtosis	Factor Loading	Error	Square Multiple Correlation
Tangibles								
Physical Facility Appearance	4.21	2.11	18.08	-0.26	-1.23	0.71	0.7	0.64
Quality of Infrastructure	4.29	1.99	19.24	-0.25	-1.33	0.79	0.57	0.71
Personnel	4.17	2.12	24.31	-0.19	-1.31	0.98	0.39	0.89
Equipments	3.98	2.07	21.79	-0.24	-1.23	0.91	0.46	0.83
Responsiveness								
Prompt Service	3.71	2.06	20.79	0.07	-1.37	0.82	0.56	0.75
Willingness to Serve	3.57	2.01	18.35	0.05	-1.36	0.83	0.63	0.65
Time taken to complete a unit task	3.62	2.18	22.64	0.08	-1.32	0.92	0.43	0.82
Proactiveness	3.76	2.11	20.95	0.12	-1.31	0.87	0.53	0.75
Empathy								
Individual Attention	3.85	1.91	19.76	0.04	-1.16	0.85	0.52	0.69
Customer Problem Solving	4.05	1.94	22.88	-0.09	-1.81	0.91	0.63	0.81
Customer Care	4.24	1.87	26.04	-0.19	-1.06	0.95	0.45	0.91
Putting Customer at Ease	4.02	1.89	25.92	-0.19	-1.06	0.95	0.51	0.91
Assurance								
Courtesy	4.05	2.14	17.92	-0.11	-1.4	0.76	0.58	0.58
Ability to Convey Trust	4.11	2.09	22.87	-0.11	-1.22	0.96	0.48	0.82
Ability to Convey Confidence	3.85	2.12	22.58	-0.15	-1.34	0.82	0.31	0.74
Ability to deliver Value	4.27	1.94	21.42	-0.27	-1.14	0.86	0.29	0.74
Reliability								
Service Performance	4.55	1.76	19.11	-0.42	-0.63	0.9	0.63	0.62
Timely Solutions	4.27	1.86	21.4	-0.30	-0.90	0.86	0.41	0.73
Value Delivery Accuracy	4.21	1.86	21.62	-0.21	-1.06	0.89	0.44	0.72
Brand Image	4.47	1.76	17.92	-0.36	-0.72	0.71	0.5	0.61
Value Delivery								
Excellent Overall Service	3.87	1.48	20.14	0.86	-0.4	0.81	0.57	0.71
High Standards of Service	3.45	1.56	24.82	0.21	-0.63	0.95	0.34	0.85
Service of very High Quality	3.13	1.51	22.31	0.44	-0.48	0.91	0.52	0.76
Superior Service in any Way	3.71	1.56	15.71	0.12	-0.53	0.71	0.71	0.47

A five factor Confirmatory Factor Analysis with the help of Chi Square, Comparative Fit Index & Non-Normed Fit Index was performed. Values of these were above 0.84 which was a descent fit. Maximum likelihood method was used as the values of skewness were in between 0.86 to -0.42 & Coefficient of Kurtosis was adequately low. As far as value delivery was concerned skewness values were in between 0.12 & 0.86, coefficient of kurtosis was 12.18. It suggested that it was a normally distributed data. So again in value delivery maximum likelihood method was used. Index of Goodness of Fit Index showed values as $?2 = 35.89$, p<.001, df=2, SRMR= .021 & CFI=.949 which was a descent fit.

Table 2: Internal Consistency & Correlation

Variables	Mean	SD	α	Aggregate Reliability	Average			R			
Customer Satisfaction	3.81	1.54									
Tangibles	3.55	1.34	1.0	1.0	0.75	.67*					
Responsiveness	4.21	1.88	1.01	0.93	0.81	.33*	.48*				
Empathy	3.65	1.84	0.91	0.9	0.77	.41*	.54*	0.03			
Assurance	4.06	1.76	0.94	0.96	0.87	.36*	.44*	.23*	.39*		
Reliability	4.09	1.82	0.91	0.91	0.86	.44*	.53*	.14*	.55*	.43*	
Overall Value Delivery	4.4	1.55	0.91	0.88	0.78	.39*	.47*	.19*	.56*	.47*	.58*
*p<.001											

Table 3: Regression Analysis
(Customer Satisfaction-Value Delivery Attributes)

	β	t	P
Tangibles	0.31	6.79	0.001
Responsiveness	0.21	3.99	NS
Empathy	0.08	1.81	0.001
Assurance	0.23	3.86	NS
Reliability	0.06	1.46	0.001

NS=Not Significant, R^2 =0.41, $F_{(4.8)}$=4.41 p<0.001

Process of ascertaining the mediating impact of value delivery was started with calculating the relation between the customer satisfaction & value delivery attributes adopted in this study. Impact was significant (F=4.41, p<0.001) as shown by analysis of regression of value delivery attributes on customer satisfaction. The attributes which have contributed more significantly were assurance (ββ =0.23, t=3.86 & p<001),

responsiveness (βâ =0.21, t=3.99 & p<001) & tangibles

Table 4: Regression Analysis
(Value Delivery Attributes-Value Delivery)

	β	t	P
Tangibles	0.43	12	0.001
Responsiveness	0.37	8.13	0.001
Empathy	0.11	2.31	0.05
Assurance	0.23	4.92	0.001
Reliability	0.05	0.93	NS

NS=Not Significant, R^2 =0.49, $F_{(4.94)}$=100.10 p<0.001

Next step was to ascertain the mediating impact of value delivery attributes on value delivery itself. Impact was significant (F=100.10, p<0.001) as shown by analysis of regression of value delivery attributes on value delivery. The attributes which have contributed more significantly were assurance (β=0.23, t=4.92 & p<001), responsiveness (ββ =0.37, t=8.13 & p<001), tangibles (ß β=0.43, t=12 & p<001), Empathy (β=0.11, t=2.31 & p<001) (Refer to Table no.: 4).

Table 5: Regression Analysis
(Value Delivery-Customer Satisfaction Relation)

	β	t	P
Value Delivery	0.72	18.09	0.001
R^2 =0.56			
$F_{(1.318)}$=293.25 p<0.001			

After this the relation between value delivery & customer satisfaction was ascertained where value delivery was an independent variable & customer satisfaction was a dependent variable. Impact was significant (F=293.25, p<0.001) as shown by analysis of regression of value delivery

on customer satisfaction. Value delivery had values as ß β=0.72, t=18.09 & p<001, refer to Table no.: 5).

Table 6: Regression Analysis
(Mediating Role of Value Delivery)

	β	t	P
Tangibles	0.08	1.91	NS
Responsiveness	0.01	0.35	NS
Empathy	0.02	0.81	NS
Assurance	0.09	1.8	NS
Reliability	0.05	1.29	NS
Overall Value Delivery	0.57	10.49	0.001

NS=Not Significant, R^2 =0.48, $F_{(5.997)}$=63.42 p<0.001

At last to ascertain the mediating role of value delivery on customer satisfaction all five value delivery attributes & overall value delivery was taken to study the relationship. Impact was significant (F=63.42, p<0.001) & value delivery proved mediating in between value delivery attributes & customer satisfaction as all value delivery attributes had insignificant â values (Tangibles â=0.08, Responsiveness â=0.01, Empathy â=0.02, Assurance â= 0.09, Reliability â=0.05) .

CONCLUSION & MANAGERIAL IMPLICATIONS

Retailing in India would contribute more than what it has been contributing to the economy in future for sure. FDI in multi brand retailing is under constant consideration but would take some time. Retailing in India is very lucrative which can be clear with the entry of quite a few heavyweights of Indian industry & some international players like Wal-Mart & Metro cash & carry. India has witnessed some of the failures like Subhiksha, Eight Ten, and Vishal Mega Mart etc. Here comes the need for efforts which would lead to customer satisfaction. This study though was executed on a micro level in Ludhiana (Punjab) but results were as expected of the fact that value delivery attributes in the context of service quality like Tangibles, Assurance, Responsiveness, Reliability & Empathy contribute significantly in customer satisfaction. Also value delivery proved mediating in between value delivery attributes & customer satisfaction. Any school of thought resulting into not taking care of these factors would deteriorate the position of a retail store or a company for that matter. A retail manager's job becomes even tougher to make sure that all these factors are simultaneously taken care of. A lesser emphasis on retail manager's part on even a single factor would in turn make the store or the company lesser competitive. Management should make strategies to effectively endorse these factors along with other marketing strategies to deliver the customer what we call value. Also organised retailers have to reassess their pricing strategies towards more competitiveness so as to generate more value for customers. On other hand unorganised retailers should put extra efforts to deliver value which is in adequate amount as per the results of this study. This can be done through an effective involvement of retail service quality attributes on 360° basis.

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Inter Linkages Between Organizational Culture and Quality Management System: A Study of Small and Medium Enterprises in Indian Auto Component Sector

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ABSTRACT

Indian Auto component sector is one of the fastest growing within the Small and Medium Enterprise (SME) category of industries. This study investigates the relationship between cultural values and implementation of quality management principles in Indian Auto component manufacturing SMEs. Empirical data was collected via a questionnaire survey, and 61 Indian Auto component manufacturing SMEs located in Delhi and National Capital Region were studied. Statistical analysis revealed a significant difference between 'small' and 'medium' enterprises in relation to the prevalence of Cultural values like-Openness, Confrontation, Trust and Pro-action. However, no significant difference was found in the extent of practice on each of Quality Management factors between 'small and medium enterprises. An interesting aspect that has been highlighted is that both small and medium companies have shown a higher level of implementation of all quality principles. The results indicate three cultural dimensions -Openness, Confrontation & Pro-action which exhibited a significant positive association with all the quality management factors. Similarly, Experimentation, Collaboration, Authenticity and Trust exhibited positive significant correlation with most of the Quality Management factors. However, Autonomy is the only cultural dimension which was found to have non-significant low negative correlation with four Quality factors. The findings suggest that the cultural dimensions -Openness, Confrontation and Pro-action should be emphasized more given their association with all Quality Management factors. This paper presents new results evidencing the importance of OCTAPACE values in TQM implementation. Overall, the research findings provide a useful reference for Indian Auto component SMEs in their efforts to sustain global competitiveness.

Keywords: Quality Management, Organizational Culture, Auto Component SMEs

INTRODUCTION

Quality management has been accepted as the key factor for global competitiveness. It has been reported that total quality management help organizations to strengthen their management systems, practices and capabilities and enhance their competitiveness. Quality management methods and tools have been applied in companies as a means to develop improvement actions related to strategic objectives and to monitor results. Effective TQM practices are primarily found in larger and/or multinational organizations. Little has been written on how TQM has been applied in small businesses in South Asia. Therefore, it is significant to study and analyze Quality Management System of Small and Medium Enterprises in Indian Auto component sector, especially because this sector is so important for its job and wealth creation potential. SMEs are often suppliers of goods and services to larger organizations. Increasingly, they have felt the impact of the quality programs imposed on them. The lack of product quality from SMEs adversely affects the competitive ability of the larger organizations. It is because of this reason that larger companies have insisted that their small suppliers adopt TQM of their own (Barrier, 1992; Ghobadian and Gallear, 1996). Pun et al. (2006) investigated the hard and soft criteria of TQM in ISO 9001 certified small and medium enterprises. The results showed that the soft criteria were implemented less than the hard criteria in SME. These findings highlight the need to align SME's prevailing quality culture with Total Quality Management and consider it as one of the focal compliance requirements for future revisions of the ISO 9001:2000 standard.

The spread of TQM among large firms has also changed how business is conducted; they have screened and settled on fewer suppliers who can deliver better quality (Barrier, 1992). The role of smaller firms as suppliers to the larger firms places a substantial burden on the small companies to become world class and embrace the principles of TQM (Simons and Kerr, 1993). TQM is thus more than a way for SMEs to improve the quality of their products and services; it may well be the key to survival.

As part of the unorganized sector, Indian Auto components SMEs are one of the fastest growing within the SME category of industries (D&B, 2006).These units are key contributors to the total production of auto components and also have a significant share in the exports of the industry. They operate in a tier framework, and most of the companies in the SME segment are in the Tier II or below. Few of the suppliers to OEMs are medium scale enterprises.

The SMEs are riding a boom phase, driven by demand from global auto manufacturers. The industry is undergoing a major restructuring and many existing companies are expected to move up in the value chain to a higher tier. Nevertheless, sustenance and survival still remains an issue of concern for these companies as they will have to absorb global best practices in this competitive environment. Increasing competition, cost-cutting by OEMs and technology are among the major challenges for SMEs. The quality-conscious automotive component buyers generally insist upon certain quality management standards. International OEMs or Tier-1 companies may require the supplier to meet either the internationally accepted standards, or the buyer country's standard.

It has been seen that an organization's TQM practices are significantly influenced by the culture it adopts (Ambroz, 2004; Gallear & Ghobadian, 2004; Prajogo & McDermott, 2005; Rad, 2006; Briscoe et al. 2005; Kumar and Sankaran, 2007; Jung et al. 2008; Kaluarachchi, 2010; Kuo and Kuo, 2010; Chung et al. 2010; Baird et al. 2011; Zu et al. 2011; Schroeder et al. 2011; Pun and Jaggernath-Furlonge, 2012). If TQM is to achieve its potential to significantly enhance organizational competitiveness, a change in the quality culture of the organization is required. Since Indian auto component industry is one of the fastest growing within the SME category of industries and show increased level of global integration, this study attempts to study the relationship between cultural values and principles of quality management in Indian Auto component manufacturing SMEs. Simultaneously, the study also highlights the extent of Quality Management principles followed and the prevalence of cultural values across these SMEs.

LITERATURE REVIEW

Many authors and researchers now concede that organizational culture plays a major role in successful TQM implementation. Pun and Jaggernath-Furlonge (2012) signified five core dimensions of culture that would facilitate Quality Management Practices implementation, and their relative importance would be dependent on varying company size. The findings provided some insights in diagnosing cultural dimensions and in developing quality culture in manufacturing organizations. A study by Al-Swidi and Mahmood (2012) tried to examine the extent to which the relationship between total quality management, entrepreneurial orientation and performance is affected by the organizational culture. The findings of this study supported the premises of the contingency and organizational change theories by confirming the significant role of organizational culture. Baird et al. (2011) found three cultural factors, outcome orientation, teamwork/respect, and innovation exhibiting a significant positive association with the extent of use of TQM practices. These findings highlight the importance of the prevailing organizational culture in providing an environment that is conducive to the implementation of TQM practices. Schroeder et al. (2011) further confirmed the importance of quality culture in TQM implementation, particularly in the way that it influences how to customize quality practices to achieve higher performance outcome. Research findings by Chung et al. (2010) highlight that Organizational culture significantly influences execution degree of TQM activities. Based on these findings, authors suggest that in order to significantly enhance execution degree of TQM activities, the firms can improve the implementation of cost leadership and differentiation strategy and combine the characteristics of four cultures- group culture, developmental culture, hierarchical culture and rational culture. A study by Zu et al. (2011) also revealed that cultural profile is a distinguishing factor to explain the difference in quality management implementation among the companies. Kaluarachchi (2010) examined the effect of organizational culture on the TQM practices of a Sri Lankan public sector

hospital and found that supportive culture of the hospital has positively impacted its TQM practices. A study by Kuo and Kuo (2010) supports the findings of prior studies concerning the influence of Corporate Culture on TQM (e.g. Ambroz, 2004; Gallear & Ghobadian, 2004; Prajogo & McDermott, 2005; Rad, 2006). Zu et al. (2010) further investigated how organizational culture influences the implementation of different practices incorporated in Six sigma/TQM. The relationships between four culture types and ten TQM/Six sigma practices were examined. The results revealed the differential effects of the culture types on the implementation of TQM/ Six sigma practices.

Another set of research studies have been conducted to identify an ideal quality culture for TQM Implementation. Pun and Jaggernath-Furlonge (2009) identified that a quality culture constitutes low Power Distance (PD) and Uncertainty Avoidance (UA), with collectivism, feminine and Confucian dynamic (CD) dimensions that would affect Quality Management Practices. Feminine cultures address people-oriented issues (such as employee involvement and participation, absenteeism, well-being and satisfaction and attitude) towards quality on one hand (Pun and Jaggernath-Furlonge, 2009). Moreover, collectivism is characterized by teamwork that is required for Quality Management Practices implementation (Rad, 2006). The core of the TQM philosophy is based on long-term relationships with employees, suppliers and customers (Jung et al. 2008; Pun, 2001). This is in line with Confucian Dynamic (CD) that stresses long-term orientation and examines the degree to which the devotion is embraced (Pun and Jaggernath-Furlonge, 2009).A study by Al-khalifa and Aspinwall (2000) highlighted that the ideal cultural characteristics in the context of TQM can be classified as a group and developmental culture. Its characteristics tend to be flexible and customer oriented which emphasizes participation, innovation, concern for human resource development and an attempt to decentralize decision making. Another study by Corbett and Rastrick (2000) investigated the association between organizational culture (input) and quality performance (output), and suggests that aspects of each are correlated in ways that enhance organizational performance. Based on the findings, authors recommended that managers must aim to have the culture based on constructive style in their organization. Gallear and Ghobadian (2004) identified the necessary conditions (channels) that influence, mould and sustain a desirable cultural orientation required for a total quality management business approach. Ambroz (2004) concluded that only an open and human-oriented corporate culture that is based on the autonomy of the workplace and human resource management can be successful in implementing TQM in all working processes in the company. Cheng and Liu (2007) indicate that an ideal organizational culture for TQM in the Hong Kong construction industry must have the dominant characteristics, organizational leadership, organization glue and criteria of success of a hierarchy culture; the management of employees of a clan culture; and the strategic emphases of an adhocracy culture.

Numerous research studies have been undertaken to explore the relationship between TQM and Organizational Culture. In a similar study, Naor et al. (2008) investigated the relationships among organizational culture, infrastructure and core quality management practices and manufacturing performance. The results contribute to the quality management literature by emphasizing the importance of accounting for culture when making decisions to implement quality management practices to achieve a performance advantage. Jung et al. (2008) found that an organization's TQM practices are significantly influenced by the organization culture. However, each dimension of organization culture is related to TQM in different fashions. For instance, power distance influences all the TQM elements, but masculinity has positive impact on business performance of TQM practice only. Jabnoun and Sedrani (2005) in their study examined the relationship between dimensions of TQM practices and dimensions of corporate culture. Results indicated that the culture dimension of people orientation had the strongest correlation coefficients with most TQM practices. Based on these findings, authors recommend that managers should make more efforts to enhance the culture dimension of people orientation. Another empirical study by Prajogo and McDermott (2005) explored the relationship between total quality management (TQM) practices and organizational culture. Based on research findings, authors discovered that different subsets of TQM practices were determined by different types of cultures. In particular, hierarchical culture was found to have a significant relationship with certain practices of TQM. A study by Yong and Pheng (2008) identified four organizational culture types with their corresponding TQM implementation patterns. It was further highlighted that firms with strong comprehensive culture scored high on implementing the TQM elements of top management leadership, people process, customer and supplier management. Firms with clan driven culture scored high on implementing the element of process management while firms with hierarchy-driven and weak comprehensive culture scored low to moderate on implementing all elements. Based on the findings, authors propose a culture-based TQM implementation strategy.

Some studies were also undertaken to identify critical factors of TQM. In this line of research, a study by Al-Khalifa et al. (2008) revealed that amongst the various critical factors of TQM, leadership and quality culture are the most important factors of total quality management in UK industry. In a similar study, Metri (2005) suggests that quality culture is amongst the proposed ten critical success factors (CSFs) of TQM for construction industry namely, top management commitment, strategic quality management, design quality management, process management, supplier quality management, education and training, empowerment and involvement, information and analysis, and customer satisfaction.

Many researchers have gone further ahead and examined the role of cultural values and assumptions on TQM success. A study by Pun (2001) investigated the linkages of cultural values to TQM practices in Chinese enterprises and found that successful adoption of TQM lies largely in the management of cultural dynamics and organizational complexities in Chinese enterprises. Studies have confirmed the findings by Hellsten and Klefsjo (2000) which suggest that it is important that suitable techniques and tools support the core values in order to establish a quality culture. Based on the findings, Hansson

and Klefsjo (2003) recommend a core value-based model which implies that TQM implementation will start with core values like committed leadership, everybody's commitment and customer orientation. Kujala and Lillrank (2004) in their study found that TQM programs are more likely to succeed if the prevailing organizational culture is compatible with the values and basic assumptions proposed by the TQM discipline. Rad (2006) determined the impact of cultural values on the success of TQM implementation at a university hospital in Iran. The results highlight that TQM requires a quality-oriented organizational culture supported by senior management commitment and involvement, organizational learning and entrepreneurship, team working and collaboration, risk taking, open communication, continuous improvement, customers focus, partnership with suppliers, and monitoring and evaluation of quality. A study by Dahlgaard and Dahlgaard (2006) discussed the challenge of designing a quality strategy for building a company culture, which supports lean production, six sigma and TQM. Based on research findings, authors recommend building quality into people by balancing the development of people's Core Competencies with people's Core Values. A study by Kokt (2009) proposed a model for establishing a quality culture in the company under investigation through the development of a values framework, based on the three- level typology of Schein (1992). A study by Cameron and Sine (1999) identified a framework for Organizational Quality Culture and examined the framework's legitimacy with empirical analyses. The result suggests that a culture promoting quality is required if TQM is to achieve its potential to significantly enhance organizational performance. Kekale (1999) found that best TQM results can be achieved when there's a match between the basic assumptions of an organization's culture and the assumptions in the TQM approach. To achieve this end, the author suggests that an organization about to start a TQM approach should be aware of the basic assumptions of its own culture and how the organization interprets the basic assumptions in the tools and approaches related to TQM.

Several research studies have highlighted organizational culture as essential for success at quality initiatives (e.g. Ally & Schloss, 2003; Briscoe et al. 2005; Zadry, 2005; Kumar and Sankaran, 2007). According to a study by Ally & Schloss (2003), quality culture can help in problem solving, and improving training of employees. Study further confirmed a linkage between quality culture and total quality management. For instance, Briscoe et al. (2005) assert that ISO 9000 implementation could positively influence competitiveness by establishing a quality culture. Zadry (2005) also identified quality culture as an important factor for successful TQM implementation. Furthermore, Kumar and Sankaran (2007) agree that the implementation plan of Quality Management Practices should be customized to organizations with respect to their culture in different industry sectors, countries and regions.

Building on previous studies in this area, it seems appropriate that some research be undertaken to examine this relationship in context of Indian auto component SMEs, which is one of the fastest growing within the SME category of industries. Sustenance and survival of the auto component sector is driven by quality and efficiency. To remain competitive, they will have to absorb global best practices. This trend of the auto component SMEs to absorb quality practices has not been covered extensively in the context of the Indian scenario. Organizational Culture Questionnaire (OCTAPACE Profile) developed by Dr. Udai Pareek has been used to study the cultural values across these Auto component SMEs. In this study, authors have undertaken the study of the extent of Quality Management principles practiced in these Auto component SMEs. Accordingly, following objectives have been pursued in our study:
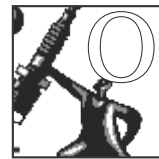
OBJECTIVES

- To study the extent of implementation of Quality Management principles in small and medium Auto component companies.

- To compare the prevalence of OCTAPACE cultural values in small and medium Auto component companies.

- To examine the relationship between OCTAPACE cultural values and the extent of Quality Management practices in the organizations under study.

HYPOTHESES OF THE STUDY

On the basis of the above objectives, the following hypotheses were formulated:

H01: There is no significant difference in the extent of practice on each of Quality Management factors between small and medium auto component manufacturing companies.

H02: There is no significant difference in the prevalence of OCTAPACE culture values between the small and medium auto component manufacturing companies.

H03: There is no significant correlation between OCTAPACE values with the Quality management factors in small and medium Auto component manufacturing companies.

RESEARCH METHODOLOGY

A questionnaire survey was conducted. The prospective sample of about 100 Indian Auto component manufacturing companies located in Delhi and National Capital Region were randomly selected from the Auto Component Manufacturer's Association (ACMA) member's database. The questionnaire was mailed to the Quality Heads of this sample of 100 companies and follow-up telephone calls were made in case non-response error was observed. Out of 100 questionnaires mailed, 65 filled questionnaires were received. On checking the filled-in questionnaires, it was found that 61 are valid, which comprised of 20 small and 41 Medium companies.

Tools Used

Quality Management Questionnaire

A questionnaire was designed based on review of existing

literature on Quality Management. Content validation of the questionnaire was done through two experts each from academia and industry. Reliability of the questionnaire was also calculated, the value of Cronbach's Alpha is .939.The Questionnaire aims to assess the extent of Quality Management principles being practiced in the organization. It's a thirty six item questionnaire in which each statement is rated on a five point scale ranging from –'never', 'rarely', 'occasionally', 'often' to 'always'. To test the dimensionality of the instrument, items of the Quality Questionnaire were factor analyzed using principal component extraction with varimax rotation. This resulted in seven factors- 1) Employee Involvement, 2) Process & Systems Approach, 3) Top Management Commitment, 4) Mutually Beneficial Supplier relationship, 5) Customer Orientation, 6) Factual Approach to Decision-Making and 7) Continual Improvement. Reliability for each of the seven factors was computed and the Cronbach Alpha coefficients of these seven factors were .833, .883, .837, .808, .705, .673 and .712 respectively (refer Table-1 for factor analysis results & reliability coefficients).These results indicate that these seven factors are reliable.

Table 1: Factor Analysis Results & Reliability Coefficients

Factor-1 Employee Involvement	Cronbach's alpha	0.833
• Employee involvement in training on quality. • Employee encouragement to work in teams. • Employee recognition for contribution to quality policy. • Kaizen are part of employee's activities. • Key performance figures with managers for decision-making. • Employee's representation in Quality improvement body.		
Factor-2 Process & Systems Approach to Management	Cronbach's alpha	0.883
• Customer satisfaction index. • SPC for monitoring production process. • Defined outcomes for supplier's practices. • Check on Supplier's delivery time • Qualifying criteria' for vendor's supply. • Customer's need identification through meetings with customers. • Customer Satisfaction Index shared & measures taken. • Systems evaluation method. • Conformance to standards.		
Factor-3 Top Management Commitment	Cronbach's alpha	0.837
• Top management emphasizes the quality issues. • Employee empowerment for decisions. • Motivation by seniors. • Top management involvement in setting 'Quality policy'. • Training on quality ensured by Top management. • Communication of quality targets. • Responsibility for managing change.		
Factor-4 Mutually Beneficial Supplier Relationships	Cronbach's alpha	0.808
• Work with suppliers for delivery improvement. • Regular meetings with suppliers. • Regular up gradation of benchmarks. • Regular Suppliers audit		

Factor -5 Customer Orientation	Cronbach's alpha	0.705

- *Regular assessment of Customer needs.*
- *New procedure Implementation.*
- *Improvement teams in all functions.*
- *Regular evaluation of CRM.*

Factor-6 Factual Approach to Decision Making	Cronbach's alpha	0.673

- *Majority of suppliers ISO 9004:2000 certified.*
- *Review of quality policies and processes.*
- *Clause in purchase order about raw material quality*

Factor -7 Continual Improvement	Cronbach's alpha	0.712

- *Efforts to incorporate customer requirements.*
- *Appraisals shared with employees to help them improve.*
- *Continuous improvement of processes.*

Organizational Culture Questionnaire (OCTAPACE Profile)

This questionnaire has been developed by Dr. Udai Pareek (2003). Reliability and validity of this questionnaire has already been tested by Dr. Pareek, the split-half reliability of the test as reported is .81. It is a 40 item questionnaire in which each statement is rated on a four point scale. In all eight values of organizational culture are measured through this test. These values are: 1) Openness, 2) Confrontation, 3) Trust, 4) Authenticity, 5) Pro-action, 6) Autonomy, 7) Collaboration and 8) Experimentation.

RESULTS AND DISCUSSION

Identification of the Quality Management System

The mean and standard deviation of the extent of practice of seven factors regarding the Quality Management System in 'small' and 'medium' auto component manufacturing companies, are presented in Table 2.

Table 2: Mean, S.D. and T-test on Factors of Quality Management between
Small and Medium Auto Component Companies

Factors of Quality Management	Small N=20		Medium N=41		t-value	p-value
	Mean	S.D.	Mean	S.D.		
Factor-1 Employee Involvement	3.97	.80	4.03	.78	.307	.760
Factor- 2 Process & Systems Approach	4.19	.69	4.19	.69	.004	.997
Factor-3 Top Management Commitment	4.39	.54	4.28	.77	.559	.579
Factor-4 Mutually Beneficial Supplier Relationship	3.90	.72	3.99	.83	.403	.688
Factor-5 Customer Orientation	4.11	.72	4.08	.77	.161	.873
Factor-6 Factual Approach to Decision-Making	4.00	.91	4.10	.79	.429	.669
Factor-7 Continual Improvement	4.25	.82	4.35	.69	.496	.622

In 'small' auto component companies, the Top Management Commitment (M=4.39) is an aspect, which has the highest mean score. This is followed by Continual Improvement (M=4.25), Process & Systems Approach (M=4.19), Customer Orientation (M=4.11), Factual Approach to Decision-Making (M=4.00), Employee Involvement (M=3.97).The mean score is least for Mutually Beneficial Supplier Relationship (M=3.90).

In 'medium' auto component manufacturing companies, the mean score of Continual Improvement (M=4.35) is highest. It is followed by Top Management Commitment (M=4.28), Process & Systems Approach (M=4.19), Factual Approach to Decision-Making (M=4.10), Customer Orientation (M=4.08), Employee Involvement (M=4.03).Again, the mean score for Mutually Beneficial Supplier Relationship (M=3.99) was found least. An interesting aspect that has been highlighted is that both small and medium companies have shown a higher level of implementation of all quality principles.

In order to establish a significant difference between the 'small' and 'medium' companies on the extent of Quality

component manufacturing companies. Since all factors have exhibited the p-value more than 0.05, meaning the result is not significant. So, we accept the null hypothesis.

Identification of Cultural Dimensions

The mean and standard deviation of eight aspects (OCTAPACE) regarding the culture of 'small' and 'medium' auto component manufacturing companies are presented in Table-3.

In 'small' Auto component companies, the cultural aspect, Pro-action (M=3.03) has the highest mean score. This is followed by Confrontation (M=2.87), Collaboration (M=2.82), Trust (M=2.77), Openness (M=2.74), Experimentation (M=2.71) and Authenticity (M=2.58).The mean score is least for Autonomy (M=2.44).

In 'medium' auto component manufacturing companies, again, the mean score of Pro-action (M=3.43) is highest. It is followed by Confrontation (M=3.25), Openness (M=3.18), Trust (M=3.10), Experimentation (M=2.93), Collaboration

Table 3: Mean, S.D. and T-test on Cultural Dimensions between Small and Medium Auto Component Companies

Dimensions of Organizational Culture	Small N=20		Medium N=41		t-value	p-value
	Mean	S.D.	Mean	S.D.		
Dimension-1 Openness	2.74	.70	3.18	.47	2.93	.005**
Dimension- 2 Confrontation	2.87	.69	3.25	.50	2.46	.02*
Dimension-3 Trust	2.77	.45	3.10	.44	2.72	.008**
Dimension-4 Authenticity	2.58	.41	2.73	.40	1.38	.172
Dimension-5 Pro-action	3.03	.83	3.43	.49	2.37	.021*
Dimension-6 Autonomy	2.44	.35	2.42	.29	.185	.854
Dimension-7 Collaboration	2.82	.39	2.90	.34	.796	.429
Dimension-8 Experimentation	2.71	.60	2.93	.42	1.64	.106

*(**-Significant at .01 level)*
(-Significant at .05 level)*

Management practices, the comparison of means is not sufficient. Thus, an independent sample t-test is applied to test the significant differences among the companies under study.

Test of Significance on Difference of Means for Quality Management Factors

The t-statistics (see Table-2) indicate that there is no significant difference in the extent of practice of each of Quality Management factors between small and medium auto

(M=2.90) and Authenticity (M=2.73).Again, the mean score for Autonomy (M=2.42) was found to be the least.

It is interesting to note that both 'small' and 'medium' auto component companies have shown highest prevalence of Cultural dimension-Pro-action while both have also exhibited lowest prevalence of Cultural dimension-Autonomy in their respective cultures.

Test of Significance on difference of Means for Organizational Culture Dimensions

An independent sample t-test is applied to test the significant

difference between 'small' and 'medium' companies on the prevalence of Cultural values. The t-values as shown in the Table-3 show that there is a significant difference between the small and medium auto component companies in relation to the presence of cultural values like Openness, Confrontation, Trust and Pro-action. Therefore, the null hypothesis is rejected.

Relationship between Quality Management Factors and Organizational Culture Values

Using Pearson's correlation, an attempt has been made to explore the relationship between factors of Quality

However, it has been observed that Autonomy is the only cultural dimension which was found to have non-significant low negative correlation with four Quality factors namely-Employee Involvement, Top Management Commitment, Mutually Beneficial Supplier Relationship and Continual Improvement. This suggests that increase in freedom given to employees to act independently in their own sphere does not facilitate the practice of Employee Involvement, Top Management Commitment, Mutually Beneficial Supplier Relationship and Continual Improvement for Quality Implementation. Thus, overall results indicate that there is a significant correlation between OCTAPACE values with the

Table 4: Correlation between Factors of Quality Management and Dimensions of Organizational Culture

	Employee Involvement	Process & Systems Approach	Top Management Commitment	Mutually Beneficial Supplier Relationship	Customer Orientation	Factual Approach to Decision-Making	Continual Impro--vement
Openness	398**	.538**	.492**	.366**	.413**	.313*	.379**
Confrontation	.429**	.479**	.505**	.386**	.395**	.265*	.411**
Trust	.285*	.353**	.387**	.234	.236	.141	.212
Authenticity	.305*	.313*	.399**	.179	.390**	.129	.282*
Pro-action	.451**	.578**	.550**	.365**	.412**	.350**	.456**
Autonomy	-.066	.044	-.012	-.005	.093	.005	-.003
Collaboration	.304*	.274*	.491**	.194	.296*	.233	.273*
Experimentation	.358**	.437**	.368**	.369**	.394**	.168	.302*

*(**-Significant at .01 level)*
(-Significant at .05 level)*

Management and values reflecting Organizational Culture. Results of this test as shown in Table- 4, clearly shows that all significant correlations are positive which shows that in the relationship, the two variables reinforce each other. This is indicative of the fact that an increase in one variable leads to an increase in the other variable. Cultural dimensions like Openness, Confrontation & Pro- action were found to have positive significant correlation with all the Quality Management factors. This suggests that the prevalence of these cultural values help in facilitating the practice of all seven Quality Management factors required for Quality implementation.

It is important to notice that cultural dimension-'Pro-action' was found to have highest correlation coefficient with five Quality Management factors-Employee Involvement, Process & Systems Approach, Top Management Commitment, Factual Approach to Decision-Making and Continual Improvement. This is understandable as action-orientation and initiative taking on the part of employees is the basic pre-requisite for successful implementation of Quality in any organization. Further, cultural dimension- Experimentation was found to have positive significant correlation with six Quality Factors. Collaboration and Authenticity were found to have positive significant correlation with five Quality factors while Trust was found to have positive significant correlation with three Quality factors.

Quality management factors in small and medium Auto component manufacturing companies. Hence, the null hypothesis is rejected.

DISCUSSION

This study had three objectives. The first objective was to study the extent of Quality Management practices in small and medium Auto component companies. An interesting aspect that has been highlighted is that both small and medium companies have shown a higher level of implementation of all quality principles. This suggests an increasing realization by both small and medium enterprises that TQM is not just an essential tool for them to increase the quality of their product and services but it's actually the key to their survival. Further, the results indicate no significant difference in the extent of practice on each of Quality Management factors between small and medium auto component manufacturing companies. This further suggests that perhaps the small auto component companies have felt the impact of quality programmes imposed on them and therefore, they seem to have gradually embraced the principles of TQM to successfully compete with medium enterprises.

The second objective was to study the level of OCTAPACE cultural in these companies. Results revealed that the various dimensions of the culture exist at varying levels in the companies under study. It is interesting to note that both in

'small' and 'medium' auto component companies the prevalence for cultural dimension- Pro-action was highest and prevalence for Autonomy was lowest in their prevailing cultures. Findings further highlight a significant difference between the small and medium auto component companies in relation to the presence of cultural values like -Openness, Confrontation, Trust and Pro-action.

And the third objective was to examine the relationship between OCTAPACE cultural values and the extent of Quality Management practices in the organizations under study. Specifically, the study examined the association between eight organizational cultural dimensions (Openness, Confrontation, Trust, Authenticity, Pro-action, Autonomy, Collaboration and Experimentation) and the extent of Quality Management practices. The results revealed three cultural dimensions-Openness, Confrontation & Pro-action which exhibited a significant positive association with all the quality management factors. Specifically, the cultural dimension-'Pro-action' exhibited highest correlation coefficient with most of the Quality Management factors. Similarly, Experimentation, Collaboration, Authenticity and Trust exhibited positive significant correlation with most of the Quality Management factors. However, Autonomy is the only cultural dimension which was found to have non-significant low negative correlation with four Quality factors. Accordingly, management needs to be conscious of such associations and attempt to make efforts to enhance the cultural dimension-Pro-action, which had the highest correlation coefficients with all the Quality Management factors. In addition, the findings suggest that the cultural dimensions –Openness and Confrontation should be emphasized more given their association with all Quality Management factors. These findings further reinforce the findings of prior studies that have highlighted the significant role that cultural values play in supporting Quality Management practices.

CONCLUSION

SMEs are often suppliers of goods and services to larger organizations but any compromise on product quality on their part would adversely affect their relationship with the OEMs and the competitive ability of the larger organizations. Because of this reason, the larger companies have insisted that their small suppliers adopt TQM of their own and hence we find that both small as well as medium enterprises are similar in their implementation of quality principles yet prevalence of cultural values vary between small and medium enterprises. One probable cause of difference in prevalence of cultural values between 'small' and 'medium' enterprises could be that most of these small enterprises are either proprietorship concerns or family owned and managed organizations, resulting in a culture which is largely influenced by the values adopted and permeated by a single owner. However, low prevalence of Cultural dimension-Autonomy in both small and medium enterprises suggests that these SMEs still appear to be practicing a traditional and centralized system of management, which signifies reluctance to delegate authority to their employees. Thus, relationship between the size of organization and inherent characteristics of organizational culture can be further taken up as part of the future scope of the work.

Overall the research findings provide a useful reference for the Indian Auto Component industry which has been navigating through a period of rapid changes leading to considerable growth. The role of smaller firms as suppliers to the larger firms places a substantial burden on the small companies to become world class and embrace the principles of TQM. It is important that suitable techniques and tools support the core values in order to establish a quality culture. The study does provide a path for promoting the Quality Initiatives among Indian Auto component SMEs by enhancing values like Openness, Confrontation and Pro-action, in their existing culture. The implementation plan of Quality Management Practices should be customized to organizations with respect to their culture in different industry sectors. It is important to infuse a culture that supports quality intervention in some form or the other to help Indian Auto component SMEs in their efforts to sustain global competitiveness.

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An Elucidation of Investment Preferences and Investment Objectives of

ABSTRACT

The present paper is an attempt to have an insight into the influence of five key attributes that is Safety of principal, Liquidity, Stability of Income, Capital Growth and inflation resistance on the investment decisions of individual stock investors of Punjab while choosing a particular investment and also identifies their major investment objectives. Additionally, the study gauges if there is any significant difference in the investment objectives of investors across their age groups. A pre-tested, well structured questionnaire was administered personally to 200 individual stock investors in Punjab and their responses were sought in terms of frequencies, percentages and weighted average scores. Chi-square test has been applied to test the difference between investment objectives across age groups. Gold is found as the highly preferred investment among individual investors in Punjab for four attributes that is safety of principal, liquidity, capital growth and inflation resistance revealing that they consider gold as most effective investment which is better on each of the above mentioned attributes than all the other potential investments. However, securities market is second highly preferred investment for three attributes that is liquidity, capital growth and inflation resistance but as far as attributes such as safety of principal and stability of income are concerned, bank fixed deposits is the second most preferred investment by individual stock investors for these attributes. Retirement planning is found as the major objective of individual stock investors of Punjab for making investments. The above findings will be helpful for the financial service providers in offering more effective advice to the investors by understanding their current stated investment objectives and the importance of key attributes to them while choosing among various investment options.

Keywords: Individual Stock Investors, Key Attributes, Investment Objectives, Weighted Average Scores, Chi-Square Statistics

Individual Stock Investors of *Punjab*

Sangeeta Arora, Kanika Marwaha

INTRODUCTION

The economic development of any country depends upon the existence of a well-developed financial system. It is the financial system which supplies the necessary financial inputs for the production of goods and services that in turn promote the well being and standard of living of the people of a country. The major assets traded on the financial system are money and monetary assets. The responsibility of the financial system is to mobilize savings in the form of money and monetary assets and invest them in productive ventures (Shaikh, R. A. and Kalkundarikar, B. A. 2011).

The growth and development of the country has shown the way to greater economic prosperity which further has led to the introduction of vast areas of financial investments. Since the economic liberalization there is an increase in number of investment avenues available for retail investors. In the current scenario, an investor is willing to invest in several instruments like corporate stock, life insurance, bank fixed deposits, real estate and various government schemes etc. But, however, their choice of investment depends upon their objective of investment which differs from individual to individual depending on the knowledge and personal factors of an investor.

Unlike any consumer goods, the investments have several distinct characteristics. Investment products have their own value and can be further sold, pledged at different period of the time and places (Kumar S. K. et.al, 2008). While choosing a specific investment, investors need to understand and know regarding the features their investments should possess. There are several investment features which an investor need to consider such as risk, return, safety of principal, marketability, Concealability, Capital growth, stability of income etc. While making investment decisions, the features desired in an investment should be consistent with the investor's general objectives. An intelligent investor is the one who makes the definite ideas regarding the features which their portfolio should possess and take smart decisions by investing as per their objectives.

LITERATURE REVIEW

Kiran D. and Rao (2004) identified the investor segments on the basis of their demographic characteristics and psychographic characteristics. Out of 200 questionnaires administered all over India, 96 responses were received. Multinomial Logistics Regression and Factor analysis were applied to the data. The relationship between the risk taking ability and the demographic and psychographic variables was analyzed. The six parameters that is safety, liquidity, long term capital appreciation, high short term returns and risk coverage affected the risk bearing capacity of the investors. The authors stated that such analysis could help the investment designers to specifically target particular segments.

Nagpal, Sushant and Bodla, B.S. (2007) attempted to understand the individual investor's pattern of investments and analyzing the investor's preferences for various investment alternatives across the demographic and psychographics dimensions. The survey was limited to the urban areas of Haryana, Delhi and Chandigarh. The study brought out that the highest percentage of investors that is 86.29% invested in insurance policies followed by investments in fixed deposits with banks or post offices and then EPF/PPF and NSC. The authors found three segments of investors that are aggressive, moderate and conservative investors on the basis of their lifestyles. Kumar, S.K. et.al (2008) studied the investment preferences of Tiruchirapalli investors to rank their product preferences among investment choices that is post office savings, bank deposits, gold, real estate, equity investment, mutual fund. The preferences of the respondents were known according to their attributes that is safety of principal, liquidity, stability of income, capital growth, tax benefit, inflation resistance and Concealability. The Analytical hierarchy process and multi criterion decision-making was applied on the collected data to achieve results. The authors studied this concept as they found that the investors are unlikely to determine the investment preference that is which is better on each attribute.

Kabra et.al (2010) studied the various factors that influenced investment risk tolerance and decision making process among men and women and among different age groups. The authors observed the behavior of various types of investors working in the government or private sectors in India. The major variables considered for the study were investing background, opinion, leadership, duration of investment, awareness of investments and security. The authors concluded that risk averse people opted for insurance policies, fixed deposits with banks, post office, PPF and NSC. It was also found that the investor's age and gender affected their risk taking capacity.

Shaikh, R., A. and Kalkundarikar, B. A. (2011) assessed the behavior of retail investors in Belgaum district of Karnataka state, identified their objective of investment. They found that the knowledge level had a significant impact on the returns on the investments and there is a negative correlation between the occupation of retail investor and the level of risk which was identified by applying correlation analysis. Regular income was found as primary objective among Belgaum investors.

NEED AND OBJECTIVES OF THE STUDY

The need for the study arises, as in Punjab; the research focusing on identifying ranking preferences of the Individual stock investors for the investment on the basis of the major attributes has not been studied so far. So, the present study aims to fulfill the gap with following objectives:

- To identify the ranking preference of the various investment options on the basis of five attributes that is Safety of principal, Liquidity, Stability of Income, Capital Growth and Inflation Resistance.

- To identify the objective of investment of the individual stock investors in Punjab.

- To explore whether there is any significant difference in the objective of investment across the age groups of investors in Punjab.

DATABASE AND RESEARCH METHODOLOGY

The present study is mainly based on primary data collected from 200 individual stock market investors from Punjab. These investors were interviewed through a pre-tested, well structured questionnaire which was administered personally. Convenience sampling technique has been used keeping in view the socio-economic characteristics. The responses of the investors were sought for identifying the ranking preferences for seven major investment options on the basis of five attributes on a five point likert scale ranging from Most Important to least important. However, the objective behind making investments is also sought out on a scale ranging from Most Important to least important and relationship between age and objective of investment has also been analysed. To analyze the responses, weights were assigned to these responses (5 for Most Important, 4 for important, 3 for Indifferent, 2 for Unimportant and 1 for Least Important). Weighted Average Scores and Chi- square test are the statistical analysis used to carry out results.

INVESTMENT SELECTION CRITERIA

Most often the investment selection happens based on the input from the environment and one's own understanding of various strengths and weaknesses of the investment. Most of the researchers classify the investment preference according to the return on investment and the risk associated with it. At a bird's eye view, the above mentioned two items are considered while selecting a investment, but however a more elaborate set of criteria are used in preferring a investment which are rarely studied (Kumar S. K.,2008).Table 1 presents the final set of five key attributes considered in the study.

Table 1: Key Attributes as Criteria in Choosing Investments

key Attributes	Description
Safety of Principal	Protection mechanism against loss under reasonable conditions that is principal amount and expected rate of return protection.
Liquidity	Converted into cash without delay at short notice of time and the investment is easily realizable, saleable or marketable.
Stability of Income	Uniform, assured and constant return to meet the investor needs.
Capital Growth	Appreciation in the capital value.
Inflation Resistance	The return from the investment beats the prevailing country's inflation.

Preferably, an investor would be keen to have all the above elements present in an investment but simultaneously, for an investor, it is not possible to find an investment which is better on each of the above mentioned attributes than all the other potential investments. Hence, the choice has to be made by an investor on the basis of what is available and identify his own ratings of the attributes and seek out the financial investments in the basis of their own priority ratings.

RESULTS AND DISCUSSION

The respondents rated the preferences for a investment on the basis of the above mentioned five key attributes. A description of these in terms of frequencies, percentages, weighted average scores is given below. However, ranks have been assigned according to each preferred investment by the respondents as per their respective weighted average scores.

Table 2: Safety of Principal and Investments

Investments	M. Imp (Freq.)	Imp. (Freq.)	ID (Freq.)	Unimp (Freq.)	L. Imp (Freq.)	WAS	Rank
Securities Market	16	22	81	57	24	2.75	6
Gold	122	76	2	0	0	4.60	1
Government Schemes	44	122	30	4	0	4.03	3
Mutual Funds	1	32	64	84	19	2.56	7
Real Estate	60	80	21	20	11	3.83	5
Bank Fixed Deposits	99	60	35	3	3	4.25	2
Insurance	43	114	39	3	1	3.98	4

It is found that investors in Punjab rank gold as their first preference with a WAS of 4.60 as regards safety of principal. . Subsequently, they place bank fixed deposits as their second preference with a WAS of 4.25 followed by investments in Government Schemes as their third preference with a WAS of 4.03 as a protection of principal mechanism. However, investors rank insurance and real estate at fourth and fifth with regard to safety of principal. Investment in Securities market and Mutual Funds is ranked lowest for the attribute safety of principal.

Table 3: Liquidity and Investments

Investments	M. Imp (Freq.)	Imp. (Freq.)	ID (Freq.)	Unimp (Freq.)	L. Imp (Freq.)	WAS	Rank
Securities Market	85	76	24	3	12	4.10	2
Gold	120	79	1	0	0	4.62	1
Government Schemes	20	85	95	0	0	3.63	3
Mutual Funds	8	29	81	56	26	2.69	5
Real Estate	16	66	20	55	43	2.29	7
Bank Fixed Deposits	2	42	67	69	20	2.69	4
Insurance	0	7	69	105	19	2.32	6

It is found that investors in Punjab rank gold as their first preference with a WAS of 4.62 concerning liquidity which reveals that they consider gold to be most liquid whenever cash is required. Investing in Securities market with WAS of 4.10 is ranked as second preference for liquidity followed by Government Schemes as third preference. Subsequently, they rank bank fixed deposits, insurance, mutual funds and real estate with WAS of 2.69, 2.69, 2.32 and 2.29 respectively as least preferred as far as liquidity is concerned.

Table 4: Stability of Income and Investments

Investments	M. Imp (Freq.)	Imp. (Freq.)	ID (Freq.)	Unimp (Freq.)	L. Imp (Freq.)	WAS	Rank
Securities Market	38	69	60	18	15	3.49	4
Gold	2	3	43	81	71	1.92	7
Government Schemes	0	38	98	58	6	2.84	6
Mutual Funds	9	71	96	20	4	3.31	5
Real Estate	33	97	54	14	2	4.35	1
Bank Fixed Deposits	86	95	14	2	3	4.30	2
Insurance	33	97	54	14	2	3.73	3

As far as stability of income is concerned, investors rank real estate with WAS of 4.35 as first preference, bank fixed deposits with WAS of 4.30 as second preference followed by insurance and securities market with WAS of 3.73 and 3.49 respectively as third and fourth preference. However mutual funds, Government Schemes and gold are placed as least preferred as regards stability of income. This reveals that most of investors in Punjab prefer a stable income through rent from real estate and interest from fixed deposits.

Table 5: Capital Growth and Investments

Investments	M. Imp (Freq.)	Imp. (Freq.)	ID (Freq.)	Unimp (Freq.)	L. Imp (Freq.)	WAS	Rank
Securities Market	101	66	25	7	1	4.30	2
Gold	108	82	10	0	0	4.49	1
Government Schemes	0	10	38	105	47	2.06	7
Mutual Funds	52	101	43	4	0	4.01	3
Real Estate	54	106	30	5	5	4.00	4
Bank Fixed Deposits	34	53	61	49	3	3.33	5
Insurance	4	63	91	37	5	3.12	6

When rating investments for attribute capital growth, investors rated gold with WAS of 4.49 as their first preference, securities market as second preference and real estate at third place in lieu of appreciation in the capital value of the investment. However, mutual funds are preferred at fourth place followed by bank fixed deposits, insurance and Government Schemes at fifth, sixth and seventh rank.

Table 6: Inflation Resistance and Investments

Investments	M. Imp (Freq.)	Imp. (Freq.)	ID (Freq.)	Unimp (Freq.)	L. Imp (Freq.)	WAS	Rank
Securities Market	58	65	36	18	23	3.59	2
Gold	139	61	0	0	0	4.70	1
Government Schemes	16	33	103	40	8	3.05	4
Mutual Funds	0	1	50	97	52	2.00	7
Real Estate	57	63	29	40	11	3.58	3
Bank Fixed Deposits	34	44	44	42	36	2.99	5
Insurance	9	39	51	57	44	2.56	6

Table 6 reveals that the ranking preference of investments on basis of inflation resistance, gold is ranked as their first preference with a WAS of 4.70 in order to beat the inflation. To be precise, they consider inflation resistance most effective when investing in gold. Subsequently, they rank securities market as their second preference with a WAS of 3.59 as regards the inflation resistance, followed by investments in real estate as their third preference with a WAS of 3.58 to beat the inflation. However, investors are neutral towards investing in Government Schemes, bank fixed deposits and insurance as they are ranked at fourth, fifth and sixth position with WAS of 3.05, 2.99 and 2.56 respectively by individual investors in Punjab with regard to inflation resistance as a variable while taking investment decisions. Mutual funds with WAS of 2.00 have been ranked lowest at seventh position that is the individual investors in Punjab feel that such investments do not have the power to beat the inflation in future, as a result such investment is least preferred by them as regards the inflation resistance variable.

O BJECTIVE OF INVESTMENT

An investment is an important and useful factor in the context of present day conditions. Investment decisions have become more significant as most people in India retire between the ages of 56 to 60. So, the individuals have to plan how to save their money. Saving by themselves does not increase wealth, saving must be invested in such a way that the principal and income will be adequate for a greater number of retirement years. Longer life expectancy is one reason for effective saving and further investment activity that help for investment decisions. When tax rate is increased, it will focus for generating saving by tax payer. When the tax payer invest their income into Government Schemes like provident fund, pension fund, Unit Trust of India, Life Insurance, Unit Linked Insurance Plan, National Saving Certificates, Development Bonds, Post Office Cumulative Deposit Schemes etc., it affects their taxable income. Interest rate is one of the most important aspects of a sound investment plan. The interest rate differs from one investment to another. There may be changes between degree of risk and safe investments. They may also differ due to different benefit schemes offered by the institutions. A high rate of interest may not be the only factor favoring the outlet for investment. Stability of interest is another important aspect of receiving a high rate of interest. In addition, Inflation has become a continuous problem which affects in terms of rising prices. Investor needs to get ensured to check up for safety of the principal amount and security of the investment. Both are crucial from the point of view of the interest gained from the investments. More incomes and more avenues of investment have led to the ability and willingness of working people to save and invest their funds. Hence, this implies that there is an objective behind making investment decision. So, the table below (Table 7) portrays the investment objectives of the individual stock investors in Punjab.

Table 7: Investment Objectives of Individual Investors

Investments	M. Imp (Freq.)	Imp. (Freq.)	ID (Freq.)	Unimp (Freq.)	L. Imp (Freq.)	WAS	Rank
Retirement planning	103	59	22	15	1	4.24	1
Meeting future contingencies	48	74	42	16	20	3.57	2
Purchasing of assets	12	29	51	71	37	2.54	9
Tax considerations	23	67	61	24	25	3.20	5
For Children's education	19	43	89	39	10	3.11	6
Hedging against inflation	49	68	38	25	20	3.51	3
Earnings short term gain	48	62	42	37	11	3.50	4
Regular income in form of interest, dividends	29	50	54	40	27	3.07	7
Medium term capital appreciation (greater than 6m but less than 2yrs)	18	52	49	47	34	2.87	8
Long term capital appreciation (greater than 2 yrs)	5	32	31	81	51	2.30	10
For Children's marriage	4	10	7	52	127	1.56	11

Table 7 reveals that the individual stock investors in Punjab rank retirement planning with WAS of 4.24 as their first major objective towards making investment, followed by meeting future contingencies and hedging against inflation as their second and third objective respectively . Subsequently, earning short term gain , tax considerations, children's education and earning regular income in form of interest dividends is among fourth, fifth, sixth and seventh objective respectively. However, medium term capital appreciation, purchasing of assets, long term capital appreciation and children's marriage are among least important objectives towards making investments.

D IFFERENCES IN INVESTMENT OBJECTIVES ACROSS THEIR AGE GROUPS

The study also explores whether there is any significant difference in the investment objectives of respondents as per their age. To analyze that whether age exert a significant impact on objective of investment across different age groups, chi-square test has been applied.

So, the hypothesis to be tested here is:

H_{0a}: There is no Significant Difference in Investment Objectives Across the Age Groups of the Individual Investors of Punjab.

The sample respondents are categorized into four classes according to their age. These are (i) Upto 30 years- young investors. (ii) 30 to 45 years- lower middle age group (iii) Above 45 to 60 years- upper middle age group (iv) above 60 years- retired group. Table 2 shows the results regarding investment objectives of the individual stock investors in Punjab for according to their age. It is found that the young investors place.

The chi-square statistic also reveals that there is no significant difference in investment objectives of the investors across various age groups for six objectives that is Retirement planning, Purchasing of assets, Medium term capital appreciation (greater than 6m but less than 2yrs), For Children's education, Hedging against inflation, Tax considerations as hypothesis stands accepted for these objectives. On the other hand, chi- square statistic reveals that there is significant difference in the investment objectives across various age groups for five objectives that is Meeting future contingencies, Earnings short term gain, Regular income in form of interest, dividends, Long term capital appreciation (greater than 2 yrs), For Children's marriage where hypothesis stands rejected for these objectives.

Table 8: Investment Objective and Age of Investors

Investment Objective		Upto 30 years (No. of respondents)	30-45 years (No. of respondents)	45-50 years (No. of respondents)	Above 60 years (No. of respondents)	Chi-squared statistic	Null Hypothesis
Retirement planning	MImp/Imp	31/23	41/21	25/1	10/10	0.222	Accepted
	N	6	11	2	3		
	Unimp/Limp	7/0	6/0	1/1	1/0		
Meeting future contingencies	MImp/Imp	19/28	22/30	6/14	1/2	0.000	Rejected
	N	9	21	6	6		
	Unimp/Lim	7/4	3/3	1/3	5/10		
Purchasing of assets	MImp/Imp	5/11	5/13	2/2	0/3	0.836	Accepted
	N	14	19	8	10		
	Unimp/Limp	24/13	27/15	12/6	8/3		
Tax considerations	MImp/Imp	5/24	12/25	2/11	4/7	0.906	Accepted
	N	20	25	10	6		
	Unimp/Limp	7/11	10/7	3/4	4/3		
For Children's education	MImp/Imp	6/17	6/15	4/5	3/6	0.831	Accepted
	N	24	39	16	10		
	Unimp/Limp	15/5	15/4	4/1	5/0		
Hedging against inflation	MImp/Imp	15/26	20/28	9/8	5/6	0.521	Accepted
	N	9	18	4	7		
	Unimp/Limp	8/9	7/6	7/2	3/3		
Earnings short term gain	MImp/Imp	23/22	17/28	1/1	7/11	0.000	Rejected
	N	11	20	6	5		
	Unimp/Limp	10/1	10/4	16/6	1/0		
Regular income in form of interest, dividends	MImp/Imp	9/19	17/18	0/6	3/9	0.067	Rejected
	N	16	21	8	7		
	Unimp/Limp	12/11	18/5	9/7	1/4		

Investments		Upto 30 years (No. of respondents)	30-45 years (No. of respondents)	45-50 years (No. of respondents)	Above 60 years (No. of respond dents)	Chi-squared statistic	Null Hypothesis
Medium term capital appreciation (greater than 6m but less than 2yrs)	MImp/Imp	8/15	6/23	3/7	1/7	0.958	Accepted
	N	14	19	9	7		
	Unimp/Limp	19/11	17/14	7/4	4/5		
Long term capital appreciation (greater than 2 yrs)	MImp/Imp	4/2	1/7	0/2	0/21	0	Rejected
	N	27	2	1	1		
	Unimp/Limp	8/26	69/0	3/24	1/1		
For Children's marriage	MImp/Imp	2/1	2/6	0/2	0/1	0.022	Rejected
	N	4	3	0	0		
	Unimp/Limp	16/44	20/48	15/13	1/22		

Significant ($p<0.10$), **Significant ($p<0.05$), ***Significant ($p<0.01$)

MANAGERIAL IMPLICATIONS

The study focuses on identifying the influence of five key attributes that is Safety of principal, Liquidity, Stability of Income, Capital Growth and Inflation Resistance while investing in a particular investment. This above finding will be very useful to the financial services marketing companies in redesigning their product or highlighting their product with respect to the core expectations of the investors as regards to attributes. Further, the public sector undertakings like the nationalized banks and the Government of India operating post office saving schemes and Insurance companies can improve their own products concerning these attributes and compete with other products available in the market using the result. However, the present study also identifies the objective of investors behind making investment and identifies the differences in objectives of investors across their age groups. The results derived will provide implications to financial service providers understand the individual investors and their investment preferences as per their objectives.

CONCLUSION

The present study is an exploratory study for understanding the influence of five key attributes on the decisions of individual investors in Punjab towards preferring a particular investment from a list of seven major investment options provided to them and identify the ranking preferences of investor's on basis of such attributes. For four attributes that is safety of principal, liquidity, capital growth and inflation resistance, gold is found as the highly preferred investment, revealing that the individual stock investors in Punjab consider gold as the most effective investment on each of the above mentioned attributes than all the other potential investments. However, securities market is placed at second rank for three attributes that is liquidity, capital growth and inflation resistance but for attributes, safety of principal and stability of income, individual stock investors in Punjab prefer bank fixed deposits as the second highly preferred investment. The investors stated retirement planning as their first major objective followed by meeting future contingencies and hedging against inflation earning short term gain, tax considerations, for children's education and earning regular income in form of interest dividends. However, medium term capital appreciation, purchasing of assets, long term capital appreciation and children's marriage are among least important objectives towards making investments. The chi-square statistic revealed that there is no significant difference in investment objectives of the investors across various age groups for six objectives that is Retirement planning, Purchasing of assets, Medium term capital appreciation (greater than 6m but less than 2yrs), For Children's education, Hedging against inflation, Tax considerations but there is found a significant difference in the investment objectives across various age groups for five objectives that is Meeting future contingencies, Earnings short term gain, Regular income in form of interest, dividends, Long term capital appreciation (greater than 2 yrs) and for Children's marriage.

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Mixed Nationalities Impact on Safety in Container Ships
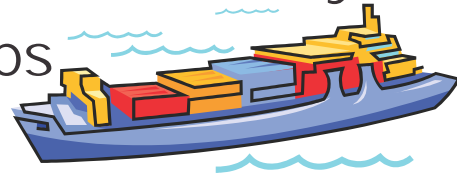
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ABSTRACT

The growing consensus among safety researchers and professionals is that safety culture plays an important role in creating a safe and reliable working environment. In order to evaluate the safety culture of an organization, critical safety factors that influence human behavior, attitude, perception, and performance are identified and studied. This study is an attempt to identify safety factors in the shipping industry, particularly in container ships. Surveys were sent to 250 container ships out of 300. Researchers received 789 shipboard responses from 110 container vessels representing a 44% response rate. A fifty six question survey was developed and for each question the answer ranged along a five point Likert scale: "Disagree", "Slightly Disagree", "Neutral", "Slightly Agree", and "Agree". The individual safety factor questionnaire contained items on the organizational safety factors, shipboard, and individual safety factors, as well as items on individual demographic and general information such as nationality, age, gender, and experience (three levels). The Kruskal-Wallis non-parametric statistical test revealed that significant differences between the safety factors were identified. The Mann-Whitney pair-wise comparisons also revealed significant differences based on nationality. The study provides details of statistical analyses of the findings.

Keywords: Safety Culture at Sea; Mixed Nationality Perception; Kruskal-Wallis; Mann-Whitney, Safety Factors, Safety Perception.

INTRODUCTION

Poor safety culture contributed to major failures and disasters such as the 1991 crash of continental Express Flight 2574 that killed fourteen people on board, the King's Cross underground fire in London, and the Piper Alpha oil platform explosion in the North Sea (Meshkati, 1997). Another recent example of management failure is the BP oil spill in the Gulf of Mexico. The Oil Spill Commission Report concluded that "systematic failure in risk management" was the reason for the BP Deep Water Horizon spill by the three drilling companies: BP, Halliburton, and Transocean (National Commission on BP Deepwater Horizon Oil Spill and Offshore Drilling, 2011).These accidents precipitated a turning point in history for researchers and practitioners to attempt to examine safety culture and the impact it has on potentially precluding such accidents.

The maritime shipping industry, especially oil tankers, is rather familiar with major safety failures. The Exxon Valdez oil spill off the coast of Alaska in 1989 is considered to be one of the world's worst environmental disasters, raising concerns and questions about safety. In fact an investigation into the accident revealed serious safety issues on many vessels that were generally considered to be the best in the world (Nadler, 2005).

The shipping industry is an international, multicultural workplace dominated by male workers whose first language is not English (Kahveci & Sampson, 2001). The crew works every day of the week and stays at sea for weeks or months, depending on their contracts with the company. Typically, the officers come from Organization for Economics Co-Operation and Development (OECD) countries (North America, Western Europe, Japan etc), the Far East, and Eastern Europe (BIMCO/ISF, 2005). The ratings usually come from developing countries such as the Far East and South Asia (BIMCO/ISF, 2005). The Philippines, India, and China are the major suppliers of labor in maritime industry. Other suppliers such as Ukraine, Croatia, Latvia, Greece, Japan, Russia, and the United Kingdom are becoming larger suppliers of labor (BIMCO/ISF, 2005). In the last couple of decades, the shipping industry has experienced a shift in the recruitment of crew members. Multinational personnel represent over sixty percent of the world merchant fleet (Kahveci & Sampson, 2001). Cost cutting is suggested as the main reason for recruiting these seafarers from different nationalities (Progoulaki, 2006). The shipping industry has shown a potential for major safety failures that could lead to catastrophic accidents and is considered to be one of the most dangerous industries and the most international (International Maritime Organization, 2002).

Previous research in the shipping industry indicated that mixed nationality and human factors were concerns of safety performance (Kahveci & Sampson, 2001). In this study, the differences between mixed nationalities and their safety culture perception are investigated to determine and address any safety concerns.

LITERATURE REVIEW

The shipping industry is considered to be one of the most dangerous industries in the world. However, there is relatively little known about safety culture onboard ships (Havold, 2005). In recent years, a few research papers on safety culture have been published; Havold (2005), Soma (2004), Progoulaki (2006), and Ek, Olsson, and Akelson (2000).

Hetherington, Flin, and Mearns (2006) discussed safety culture and nationality in the maritime industry. The authors searched several electronic databases to identify research articles on human factor and safety culture in the shipping industry. The search criteria included those studies published in English that had a sample of seafarers, peer-reviewed journals, empirical data sets, conference papers, and government papers. Twenty studies met the criteria of the literature search. In an attempt to review the literature on safety in the shipping industry, the authors reviewed the twenty studies of seafaring and identified some of the issues that influence safety in the maritime industry. Despite the twenty studies, the shipping industry still lacks the amount of work and research other industries have accomplished (Hetherington et al. 2006). The authors identified the following human factors issues that contribute to maritime performance. These areas are:

- Organizational and management issues: safety culture, safety climate, and safety training…etc.

- Personal issues: stress, health and wellbeing, shiftwork, decision making, situation awareness, communication, fatigue, and training.

- Design issues: automation

The authors mentioned language barriers as one of the major issues in safety onboard due to the lack of communication between the crew members. In the article, the authors acknowledged the lack of comprehensive literature review in the maritime industry.

Havold (2005) investigated differences between nationalities, occupations, and vessels in a Norwegian shipping industry. Havold defines safety orientation as "Results of the cultural, organizational and contextual factors that create attitudes and behavior that in turn influence occupational perception of the importance of health and safety, and by confidence in the efficacy of preventative measures in creating the behavior necessary to avoid/limit accidents and continuously improve health and safety". The author proposed a safety orientation model that describes how cultural variables and organizational practices interact and provide measures for safety indicators.

In the Havold (2005) study, a 40-item safety culture questionnaire on a 6-point Likert scale was developed and distributed to crew members onboard twenty vessels. Fifteen out of twenty vessels answered the questionnaire with a response rate ranging from 48% to 100%. The author used sixteen safety factors in the study. Principle Component Analysis (PCA) was used to determine the factors that account for most of the variations. Canonical correlation were applied

to these factors with loadings above 0.3 (9% of the variation), and the two derived functions from the canonical correlation analysis with higher correlation were, "employee and management's attitude to safety and quality" and "safety and quality experience". Canonical correlation is a multiple correlation technique that measures the linear correlation between multidimensional variables.

The author also applied Multiple Discriminant Analysis to determine if there exist differences between nationalities, occupations, and vessels on any of the factors. The result indicates that "employee and management's attitude to safety and quality" and "safety and quality experience" were significantly different among nationalities. The nationalities used in the study were: Filipinos, Croatian, Indian, Polish, and Norwegian. The results show a more positive attitude came from Indians, Croatians, and the Filipinos, and a negative attitude came from the Polish and the Norwegians.

Kahveci and Sampson (2001) conducted a study at the Seafarers International Research Centre (SIRC) on international crews and mixed nationalities as part of an ongoing three year research project. A total of fourteen ships of all sizes were part of the study with a total of 350 responses. Only one-third of the ships were from a single nationality group. Onboard, Filipino was the largest nationality followed by Indian and British. English was the official language for everyone to use onboard. However, for many of the workers, English was the second language, and half of the vessels did not have native English speakers on board. Interviews conducted with crew members onboard indicated that language and communication difficulties were the major concern and drawback of having mixed nationality crews. The study found that communication difficulties among mixed nationalities contributed to the overall safety culture onboard.

The study recommended a high minimum level of fluency in English when recruiting officers and ratings was desirable. Long term stability of the crews, promoting and encouraging social activities onboard, implementing anti-discrimination policies, and management skills training for new Masters were some of the recommendations for better safety culture onboard.

Horck (2005) discussed the behavioral problems such as stereotyping that multicultural crews can have at work or off duty that may affect the safety of the ship. Filipino crew members reported their dissatisfaction with excessive drinking by colleagues and distraction by colleagues' body odor. The article points out the importance of human relationships and interpersonal communication among crews. The minimum level of the English language required is not enough to prepare individuals for social life onboard. Communication and language barriers are some of the problems that must be addressed onboard. According to the author, the crews' command of the English language needed for safety onboard is not enough, causing significant communication issues. All crew members should be competent in the language used by the ship in order to perform their job safely as well as socialize with their crewmates. According to the author, some of the reasons that mixed nationality might be a problem is younger generations are not ready to accept old-fashioned management

(management with hierarchical structure) as still practiced today. The author also argues that flat management (management without hierarchical structure) onboard may not be accepted by some other crew members.

Havold (2007) examined the association between international culture and safety orientation of seafarers working for a Norwegian shipping industry. In the study, questionnaire surveys of 2,558 seafarers from 27 countries, produced in English or Norwegian, were collected with a 67% response rate. Only ten countries had more than ten respondents. The ten countries were Norway, Philippines, India, Poland, United Kingdom, Indonesia, the Netherlands, Latvia, Romania, and Cuba. Almost all of the participants were male (96%) and over 50% were from the Philippines. The safety questionnaire consisted of 97-items organized into a 5-point Likert scale.

Havold used the Hofstede Value Survey Model (VSM) to measure five dimensions of national culture: power distance (PD), individualism (IDV), uncertainty avoidance (UA), and masculinity/femininity (MAS), and long term orientation (LTO) (Hofstede,1997).

According to Hofstede, "Power distance is the extent to which less powerful members of institutions and organizations within a country expect and accept that power is distributed unequally." (Hofstede,1997). Individual initiatives in low power distance index (PDI) societies are encouraged while individual initiatives in high PDI societies are discouraged. Employees in organizations with high power distance index (PDI) tend to fear to disagree with their supervisors while people in low (PDI) society are not afraid of disagreeing with their supervisors (Havold, 2005; Hofstede, 1980). Individualism (IDV) measures whether people prefer to work alone or in groups. People with high IDV are more likely to encourage group work, and people with low IDV are less likely to encourage team work. Uncertainty avoidance (UA) is the measure of uncertainty and ambiguity in the future. People with high UA will tolerate lack of structure in the workplace, and people with low UA will require structure and rules in the workplace. Masculinity/feminity measures the degree in which the society values male and female traditional roles. People with high MAS have high degree of differentiation between male and female, and people with low MAS have low degree of discrimination between male and female. Long term orientation (LOT) measure the degree in which society values or does not value long term commitment and tradition. People with high LOT value the long term commitment and respect tradition, and people with low LOT are not afraid of change and do not enforce long term commitment. According to the author, power distance (PDI) and Individualism (IDV) have significant impact on safety culture perceptions (Havold, 2007).

The Value Survey Model (VSM) is questionnaire that consists of twenty six items and compares individuals from different countries or regions. Using the average of these answers, the index formula for each dimension was derived. For example, an index value of 0 indicates strong feminine and 100 indicates strong masculine. Previous research showed that people with high PDI and low IDV tend to answer questions to please

management while people in low PDI and high IDV do not (Havold, 2005; Hofstede, 1980).

Even though all nations seemed to show positive attitudes to safety and risk issues, there were significant differences between countries in the sample (Havold, 2007). There were also significant correlations between safety factors and the indices for national culture. Countries that have the same safety attitude were grouped into homogenous subsets. Norway and the Netherlands, Poland and Latvia, and Philippines and India were grouped into regional culture groups based on the ecological factor analysis. Another finding from this study suggests that crew members from one or two nations had a better, or more positive, attitude towards safety than crew members that were multinational.

Theotokas, Progoulaki, Tsamourgelis, and Tsagari (2006) discussed South Asian seafarers working in Greek-owned shipping industry. The article discussed the exponential growth and the mobility of South Asian seafarers in the world market and in particular the Greek shipping industry. Culture and background differences between Greek seafarers and South Asian were also discussed in this article. Due to the low cost of nationalities from the Philippines, India, South Asians countries, seafarer recruitment form these countries are increasing in the Greek shipping industry. According to the authors, these changes in recruitment create a competition between crews from South Asia and OECD countries. Greek seafarers reported that they work better with Filipinos because of the compatibility of the two cultures. However, Greek seafarers think that Filipino seafarers lack the training and skills compared to their Greek counterparts. According to the authors, Greek officers consider Filipino seafarers to be the most compatible and cooperative to work with onboard Greek Ships. Stereotype and attitudes towards Asian seafarers were reported onboard Greek Ships, but this attitude starts to disappear as Greeks and Filipinos started to know each other (Progoulaki, 2006). The author concluded that Filipinos and Greeks share similar individualism (IDV) indices of 35 and 32 respectively. According to Hofstede (1997), Filipino and Greek cultures are less individualistic. Filipinos' power distance index is 94, and the Greeks' index is 60. This indicates that Filipinos are more obedient and co-operative in the working environment.

Lamvik and Bye (2004) discussed the differences in occupational accidents between Filipino and Norwegian seafarers. The paper is based on accident reports, interviews and observations. The Hermeneutic method of interpretative approach was used to explain why accident rates among Filipino seafarers are lower than Norwegian seafarers. The Hermeneutic method, as defined by the author, is an interpretation of how different workers might perceive their work environment.

The Norwegian culture system emphasizes the work performance and the importance of individualism, initiative, and professionalism. Filipino seafarers incorporated family obligation into their daily life at work.

Although some research has been conducted in the shipping industry, more work is needed in the area of mixed nationality. The goal of this research is to explore the safety factors proposed and to see if they are related to safety risk based on Nationality.

ETHODS

Sampling and Respondents

A collaborative study between A.P. Moeller-Maersk (APMM), the American Bureau of Shipping (ABS), and Lamar University (LU) was conducted to investigate and analyze safety leading indicators and safety culture in the marine industry, in particular, container ships.

Surveys were conducted at A.P. Moeller-Maersk on the proposed safety factors. Researchers received 789 shipboard responses with a 44% response rate. A 56-question Likert scale questionnaire was developed. The survey was a five-point Likert scale containing: "Disagree", "Slightly Disagree", "Neutral", "Slightly Agree" and "Agree". The individual safety factor questionnaire contained items on the organizational safety factors, shipboard safety factors, individual safety factors, as well as items on individual demographics, such as nationality, age, gender, job position, experience in the company, experience in marine industry, and experience in current position. The individual questions were then grouped into thirteen safety factors. These safety factors are: anonymous reporting (2 questions), communication (5 questions), empowerment (3 questions), feedback (6 questions), hiring quality people (2 questions), integrity (2 questions), multi-cultural operations (2 questions), problem identification (4 questions), promotion of safety (7 questions), reward safety (4 questions), responsibility (4 questions), respect (6 questions), and safety awareness (8 questions). Table 1 shows the fifty six questions with the safety factors.

Table 1: 56-Item Survey Questions and Thirteen Safety Factors

No.	Question	S. Factors
1.	When ship management is told about near misses, corrective action is taken promptly.	POS
2.	When ship management is told about accidents or incidents, corrective action is taken promptly.	POS
3.	Shoreside managers never put schedule or costs above safety.	POS
4.	Ship management is personally involved in safety activities on a routine basis.	POS
5.	Ship management places a high priority on safety training.	POS
6.	Crew members are actively encouraged to improve safety.	REW
7.	This company has excellent maintenance standards.	PID

No.	Question	S. Factors
8.	On my ship, t he crew has adequate training in emergency procedures.	POS
9.	This company rewards error reporting.	POS
10.	People are praised or rewarded for working safely.	REW
11.	The crew is not encouraged to break the rules.	REW
12.	People are hired for their ability and willingness to work safely.	HQP
13.	The hiring process in this company is effective in hiring the right people.	HQP
14.	Language differences in multi-cultural crews are not a threat to safety.	MCO
15	I enjoy working with multi-cultural crews.	MCO
16.	There are no differences in the performance of crew members from different cultures.	MOC
17.	There is good communication on this ship about safety issues.	COM
18.	I am always informed about the outcome of shipboard meetings that address safety.	COM
19.	Watch hand-overs are thorough and not hurried.	COM
20.	When I joined this ship I received a proper hand-over, including familiarization with any new tasks.	COM
21.	Safety is the top priority for crew onboard this ship.	SAW
22.	Whenever I see safety regulations being broken, I report it.	PID
23.	Crew members monitor each other for signs of fatigue or stress.	RSP
24.	There is a system in place for observing my time off-duty.	RSP
25.	I get adequate rest on the work/rest cycle that I work.	RSP
26.	The crew is expected to adhere to the work/rest cycle.	FDB
27.	I am confident that I can operate the automated equipment within my area of responsibility.	REW
28.	I am very satisfied with the follow-up measures taken after accidents and near losses.	FDB
29.	Mistakes are corrected without punishment and treated as a learning opportunity.	REW
30.	The crew is always given feedback on accidents or near misses that occur onboard this ship.	FDB
31.	I am encouraged to conduct risk assessments and report near misses.	PID
32.	An effective anonymous reporting system exists in this company.	ANR
33.	Crew members are willing to report each others' near misses.	ANR
34.	This company cares about my health and safety.	RST
35.	Senior managers place a high priority on health and safety training.	RST
36.	Suggestions to improve health and safety are welcomed.	FDB
37.	I fully understand my responsibilities for health and safety.	RSP
38.	The crew is always given feedback on injuries that occur onboard this ship.	FDB
39.	On this ship, the crew has access to all necessary personal protective equipment (PPE).	EMB
40.	I am always informed about the outcome of shipboard meetings that address health and safety.	FDB
41.	If I am interrupted whilst carrying out a task, I carefully check what I did, or start again, before resuming the task.	SAW
42.	Checklists are essential for safety.	SAW
43.	When my workload is high, I ask for assistance.	SAW
44.	Safety procedures, instructions, and rules are always followed.	SAW
45.	Safety briefings and training are never overlooked.	FDB
46.	The ship's safety culture makes it easy for me to know when someone is working unsafely.	SAW
47.	I have good control over the safety outcomes of my job.	EMP
48.	I am usually consulted on matters that affect how I do my job.	EMP
49.	I do not take chances to get the job done.	INT
50.	I do not bend the rules to achieve a target.	INT
51.	It is important that I work safely if I am to keep the crew's respect.	RST
52.	Even if I am in a hurry, I try to listen patiently and not interrupt others.	RST
53.	I am comfortable asking for help when unsure how to do a task.	SAW
54.	Pre-job assessments are completed for all jobs that need them.	PID
55.	I always give proper instructions when I initiate any work onboard.	COM
56.	I always ask questions if I do not understand the instructions given to me, or I am unsure of the relevant safety precautions.	SAW

Statistical data analysis of the safety factors was performed using non-parametric tests (Kruskal-Wallis and Mann-Whitney), and differences in safety culture were identified based on nationality. The mean rank of the safety factors will determine the most positive and most negative factors.

Out of the 789 respondents from the fifteen countries that took part in the study, only eleven countries had more than eight respondents. The remaining countries were combined into one group called "Others". The eleven nationalities consist of: British, Danish, Dutch, Filipino, Indian, Indonesian, Other, Polish, Romanian, South African, and Thai. The largest groups are from the Philippines, which reflects the true shipping industry data (Sparks, 1992; Parker, Hubinger, Green, Sargent, and Boyd, 2007).

Cronbach's Alpha or Coefficient Alpha was used as a measure of internal consistency that a set of items in a group are closely related (Cronbach, 1951). Cronbach's Alpha is also a function of the number of items and the magnitude of the inter-correlation among the items (Spector, 1992). Only a single test is needed to provide a unique estimate of the internal consistency. Increasing the number of items or raising the inter-correlations between the items will produce higher Cronbach's Alpha (Spector, 1992). Cronbach's Alpha value ranges from 0 to 1.0. Cronbach's Alpha closer to 1.0 means greater internal consistency of the items. A rule of thumb is provided by (Nunnally, 1978) that alpha must be greater than or equal to .70 for a scale to have an acceptable internal consistency.

Table 2: Cronbach's Alpha Values for Each Safety Factor

Code	No. of Qs	Safety Factors (Shipboard)	Cronbach's Alpha
ANR	2	Anonymous Reporting	.832
COM	5	Communication	.887
EMP	3	Empowerment	.746
FDB	6	Feedback	.844
HQP	2	Hiring Quality People	.899
INT	2	Integrity	.798
MCO	3	Multi-Cultural Operations	.877
PID	4	Problem Identification	.842
POS	7	Promotion of Safety	.937
REW	4	Reward Safety	.894
RSP	4	Responsibility	.844
RST	6	Respect	.815
SAW	8	Safety Awareness	.888

PROCEDURES

Kruskal-Wallis is a non-parametric statistical method to test if the population medians are equal among two or more groups. It is a one-way analysis of variance (ANOVA) where the normal assumptions of the data set are not required. Unlike the parametric ANOVA, the Kruskal-Wallis test uses the ranks rather than the raw data to calculate the statistic. Safety factors were compared among nationalities using the Kruskal-Wallis

test. The statistical decision to reject the null hypothesis is set to .05 as the significant level. P-value less than or equal to .05 indicates if there are significant differences among nationalities. Mean rank for each nationality will determine which group answered the questions more positively or negatively (Conover, 1999). The Kruskal-Wallis H statistics will determine which safety factor has more variations.

The following hypothesis was constructed for nationality:

H_0: All of the nationalities have the same safety perception.

H_a: At least one or more nationality has different safety perceptions.

Since the data in the current study does not come from normal distribution (Skewed data), non-parametric tests were used to conduct all of the analyses. The Mann-Whitney test was chosen to compare two samples as a replacement for the t-test, a non parametric procedure used to test if two samples obtained from different populations are identical or different. In other words, the test enables one to see if the null hypothesis that the two populations are identical can be rejected. Unlike the t-test, Mann-Whitney uses the mean ranks instead of the average to compare the two samples. The test is conducted by combining the two samples into one sample and assigning ranks to the values from the smallest to the highest. The sum of the ranks of each population is compared to determine if there is a difference. If the sum ranks of one sample is less than or greater than the other, the null hypothesis is rejected (Conover, 1999).

The following hypothesis was constructed for nationality:

H_0: Two nationalities have the same perception of safety culture

H_a: There is a difference between nationalities (one is a positive and one is a negative response).

DATA ANALYSIS

In the statistical analysis, differences between nationalities are analyzed using the non-parametric Mann-Whitney test at the .05 level of significance.

Nationality consists of eleven different nationalities: (British, Danish, Dutch, Filipino, Indian, Indonesian, Other, Polish, Romanian, South African, and Thai). Mann-Whitney test was performed within the demographic data (e.g. British vs. Danish, British vs. Dutch, and British vs. Filipino etc.). Fifty-five Mann-Whitney comparisons were conducted. For each comparison, another Mann-Whitney Test was performed. The resulting p-value indicates the significant difference if one exists (p< 0.05). The mean ranks of responses show which group answered more positively or more negatively, and the direction of the responses. Analysis of safety factors was also conducted using the Kruskal-Wallis non-parametric test. The test is performed among the demographic data. The resulting p-value indicates the significant differences among nationalities. The Z-values show which nationality has the greatest differences, and the mean ranks of responses will show the direction of the responses, positive or negative.

RESULTS

Cronbach's alpha reliability test was used to test whether the safety factors were consistent and reliable. It's a statistical test commonly used to measure the internal consistency or the reliability of a scale. Generally, the Cronbach's alpha will increase if the inter-correlations among the items are high. Another way to increase Cronbach's alpha is by increasing the number of items (Cronbach, 1951).

Cronbach's Alpha values for each safety factors are shown in Table 2. The test value for each factor was well above 0.70 (Sekaran, 1992; Nunnally, 1978; Churchill, 1991).

Descriptive Statistics

Exploratory analysis revealed that the largest nationality, with 35.07% of the crew, came from the Philippines, and the smallest nationality, with 1.04%, were Polish. The older crew members, 40 years old and up, are the British, the Danish, and the Dutch. The younger crew members, less than 30 years old, are the Indians, the Romanians, and the Thai. Some of the respondents did not provide their nationality and hence their responses were not included in this table. Statistical results are provided in Table 3.

Inferential Statistics

The Kruskal-Wallis statistical analysis results of nationality comparisons are shown in Table 4. Negative Z-value indicates that the mean rank for the safety factor is below the mean rank for all the observations and positive Z-value indicates that the mean response for the nationality is above the mean rank for all the observations. Z-value below -1.96 (p<.05) or above 1.96 (p<.05) indicates significantly different from the mean rank for all the data. Large H statistics value indicates high variability and small H statistic value indicates low variability. Table 4 also represents the safety factor mean rank of each nationality as well as the overall mean rank.

Negative survey responses came from British, Danish, Dutch, and South African and positive responses came from Indian, Indonesian, Romanian, and Thai. Overall, hiring quality people (HQP), multicultural operation (MCO), promotion of safety (POS), and anonymous reporting (ANR) possessed the most negative responses. Empowerment (EMP), safety awareness (SAW), integrity (INT), and Feedback (FDB) possessed the most positive responses.

Crew members from OECD countries responded negatively on almost all of the safety factors. OECD countries possessed the most negative responses on hiring quality people (HQP) and multi-cultural operations (MCO). Crew members from Asia responded positively on almost all of the safety factors.

Crew members from Asia responded more positively than crew members from OECD on almost all of the safety factors. They scored lower on hiring quality people (HQP) than the rest of the factors. Filipino crew members responded positively somewhere between OECD countries and Asian countries. They responded more negatively on promotion of safety (POS) than Asian crew members.

Safety awareness (SAW), hiring quality people (HQP), multicultural operation (MCO), and feedback (FDB) possessed the highest variation between nationalities. Reward Safety (REW), responsibility (RSP), and integrity (INT) possessed the smallest variation between nationalities. Table 5 shows the Z-values comparisons between the safety factors. Large Z-value indicates larger difference between the safety factors. Pair-wise comparisons among the safety factors also were conducted and the results are presented in Table 6.

Overall average rank for all the observations is 22092.5. A mean rank scores above the overall mean rank indicates

Table 3: Percentages of Nationalities

Nationality	Percentage (%)
Filipino	35.07
Indian	18.57
Other	12.34
Danish/Faroese	11.30
British	8.05
Dutch	4.29
South African	3.25
Romanian	2.60
Indonesian	1.82
Thai	1.69
Polish	1.04

Table 4: Kruskal-Wallis Comparison of Z-Values, Mean Ranks, and H Statistics for Nationalities.

Safety Factors	British	Danish	Dutch	South African	Polish	Indian	Indonesian	Thai	Filipino	Other	Romanian	Overall Mean Rank	P-Values	H Statistics
REW	1277 (-4.87**)	1603 (1.4)	1382 (-2.09*)	1369 (-1.96*)	1234 (-1.96*)	1701 (4.79**)	1584 (0.37)	1729 (1.54)	1502 (-1.77)	1639 (2.3*)	1433 (-1.09)	1541	0.0001	27.75
RSP	1393 (-2.72*)	1568 (0.61)	1443 (-1.29)	1390 (-1.72)	1508 (-0.21)	1707 (4.97**)	1324 (-1.84)	1518 (-0.18)	1503 (-1.72)	1561 (0.49)	1623 (0.84)	1541	0.0001	37.88
INT	749 (-0.57)	737 (-1.06)	623 (-2.76**)	752 (-0.3)	532 (-2.16*)	903 (5.57**)	733 (-0.45)	811 (0.46)	747 (-1.51)	740 (-1.02)	861 (1.31)	771	0.0001	43.02
EMP	1009 (-3.14**)	1165 (0.25)	862 (-4.47**)	997 (-2.09*)	1029 (-0.94)	1273 (4.03**)	1062 (-0.92)	1202 (0.44)	1136 (-1.05)	1231 (2.03*)	1409 (2.98**)	1156	0.0001	60.58
COM	1689 (-3.91**)	1850 (-1.5)	1852 (-0.87)	1656 (-2.76**)	2058 (0.76)	2080 (4.1**)	2156 (1.75)	2157 (1.69)	1854 (-2.92**)	2125 (4.18**)	1995 (0.63)	1926	0.0001	65.59
RST	1855 (-6.88**)	2234 (-1.39)	1682 (-6.78**)	2037 (-2.55*)	2178 (-0.69)	2619 (7.5**)	2261 (-0.34)	2595 (1.9)	2378 (2.51*)	2307 (-0.07)	2247 (-0.53)	2311	0.0001	82.58
PID	1310 (-4.26**)	1403 (-3.06**)	1067 (-6.25**)	1382 (-1.81)	1556 (0.1)	1742 (5.99**)	1656 (0.98)	1797 (2.1*)	1536 (-0.19)	1665 (2.9**)	1608 (0.69)	1541	0.0001	108.01
ANR	549 (-5.8**)	603 (-5.28**)	500 (-5.05**)	599 (-2.77**)	851 (0.72)	859 (3.738**)	901 (1.57)	996 (2.6*)	842 (4.64**)	812 (1.36)	785 (0.21)	771	0.0001	123.95
POS	2156 (-7.53**)	2695 (-0.02)	2265 (-4.3**)	2396 (-2.59*)	2847 (0.73)	3003 (6.92**)	3202 (3.25**)	3274 (3.58**)	2597 (-3.41**)	2912 (3.82**)	2770 (0.57)	2696	0.0001	159.54
FDB	1842 (-7.06**)	2264 (-0.84)	1778 (-5.75**)	1955 (-3.32**)	2312 (0.01)	2699 (9.47**)	2381 (0.49)	2439 (0.86)	2262 (-1.82)	2388 (1.48)	2662 (2.93**)	2311	0.0001	174.96
HQP	431 (-8.87**)	479 (-9.2**)	437 (-6.23**)	523 (-4**)	711 (-0.54)	832 (2.59*)	977 (2.48*)	948 (2.06*)	940 (10.96**)	841 (2.32*)	665 (-1.52)	771	0.0001	300.89
SAW	2400 (-8.89**)	2566 (-8.1**)	2126 (-8.91**)	2498 (-4.71**)	2805 (-1.24)	3444 (7.67**)	2867 (-1.28)	3314 (1.35)	3323 (7.87**)	3226 (2.4*)	3275 (1.4)	3081	0.0001	328.39
MCO	644 (-10.91**)	666 (-12.6**)	688 (-7.13**)	893 (-3.46**)	1126 (-0.21)	1362 (7.1**)	1531 (3.69**)	1718 (5.31**)	1280 (6.6**)	1374 (5.9**)	1160 (0.05)	1156	0.0001	451.46

REW: Reward Safety; RSP: Responsibility; INT: Integrity; EMP: Empowerment; COM: Communication; RST: Respect; PID:Problem identification; ANR: Anonymous reporting; POS: Promotion of safety; FDB:Feedback: HQP:Hiring quality people; SAW: Safety awareness; MCO:Multi-cultural operations.
Z-values are given in parenthesis.
Mean ranks are in front of parenthesis
** p-value <.01
* p-value <.05
Positive z-value indicates socres above the overall mean rank.
Negative z-values indicates scores below the overall mean rank.

Table 5: Kruskal-Wallis Multiple Comparison of Safety Factors

Safety Factors	N	Median	Ave Rank	Z
Anonymous Reporting (ANR)	1578	4	17509.9	-14.53
Communication (COM)	3945	5	22706.2	3.17
Empowerment (EMP)	2367	5	25319.9	12.65
Feedback (FDB)	4734	5	23390.1	7.41
Hiring Quality People (HQP)	1578	4	15410.4	-21.19
Integrity (INT)	1578	5	23620.6	4.85
Multi-Cultural Operations (MCO)	2367	4	16132	-23.37
Problem Identification (PID)	3156	5	22257.6	0.75
Promotion of Safety (POS)	5523	4	20070.7	-12.59
Reward Safety (REW)	3156	4	20566.4	-6.98
Responsibility (RSP)	3156	5	22896.1	3.67
Respect (RST)	4734	5	23429.3	7.63
Safety Awareness (SAW)	6312	5	25240	21.18

positive and below the overall mean rank indicates negative. The z- value for problem identification (PID) is 0.75, the smallest absolute z- value. This size indicates that the mean rank for PID differed least from the mean rank for all observations. The mean rank for multicultural operation was lower than the mean rank for all observations, as the z- value is negative (z = -23.37). The mean rank for safety awareness is higher than the mean rank for all observations, as the z- value is positive (z = 21.18).

The Kruskal-Wallis test is a global test and perceived as a generalization of the Mann-Whitney test. The test provides the aggregate difference among the mean ranks of the multiple samples, and it does not convey if a particular sample is significantly different from the other sample. Therefore, the Mann-Whitney test is conducted as the pair-wise comparison. There were fifty-five pair-wise Mann-Whitney comparisons between nationalities and seventy-eight pair-wise comparisons between the safety factors. Table 6 represents the Kruskal-Wallis pair-wise comparison between safety factors.

Table 6: Kruskal-Wallis Comparison of Safety Factors

Safety Factors	ANR	COM	EMP	FDB	HQP	INT	MCO	PID	POS	REW	RSP	RST	SAW
ANR	0.00	*	*	*	*	*	*	*	*	*	*	*	*
COM	14.92**	0.00	*	*	*	*	*	*	*	*	*	*	*
EMP	20.55**	8.60**	0.00	*	*	*	*	*	*	*	*	*	*
FDB	17.30**	2.71	6.55**	0.00	*	*	*	*	*	*	*	*	*
HQP	5.04**	20.94**	26.07**	23.47**	0.00	*	*	*	*	*	*	*	*
INT	14.70**	2.63	4.47**	0.68	19.72**	0.00	*	*	*	*	*	*	*
MCO	3.63**	21.62**	27.03**	24.65**	1.90	19.70**	0.00	*	*	*	*	*	*
PID	13.17**	1.61	9.63**	4.21**	18.99**	3.78**	19.26**	0.00	*	*	*	*	*
POS	7.67**	10.81**	18.27**	14.33**	13.96**	10.63**	13.71**	8.38**	0.00	*	*	*	*
REW	8.50**	7.66**	14.95**	10.51**	14.30**	8.47**	13.95**	5.74**	1.90	0.00	*	*	*
RSP	15.00**	0.68	7.62**	1.84	20.76**	2.01	21.27**	2.17	10.83**	7.91**	0.00	*	*
RST	17.41**	2.87	6.42**	0.16	23.589**	0.56	24.79**	4.36**	14.50**	10.65**	1.98	0.00	*
SAW	23.48**	10.68**	0.28	8.23**	29.86**	4.92**	32.31**	11.70**	24.00**	18.33**	9.19**	8.05**	0.00

REW: Reward Safety; RSP: Responsibility; INT: Integrity; EMP: Empowerment; COM: Communication; RST: Respect; PID:Problem identification; ANR: Anonymous reporting; POS: Promotion of safety; FDB:Feedback: HQP:Hiring quality people; SAW: Safety awareness; MCO:Multi-cultural operations.

78 Kruskal-Wallis pair-wise comparisons

Family Alpha: 0.2

Bonferroni Individual Alpha: 0.003

Bonferroni Z-value (2-sided): 3.016

**p<.01 and Z>3.016

The Mann-Whitney statistical analysis of the fifty-six shipboard questionnaire responses revealed a number of instances where crew members in different nationalities had a different perception of safety culture. The questions with a relatively small number of significant differences for the fifty-five comparisons were:

Question 4:   Ship management is personally involved in safety activities on a routine basis (POS) (three significant p-values).

Question 6:   Crew members are actively encouraged to improve safety (REW) (four significant p-values).

Question 20: When I joined this ship I received a proper hand-over, including familiarization with any new tasks (COM) (three significant p-values).

Question 24: There is a system in place for observing my time off-duty (RST) (four significant p-values).

Question 53: I am comfortable asking for help when unsure how to do a task (SAW) (three significant p-values).

Questions with relatively large number of significant p-values are:

Question 9:   This Company rewards error reporting (POS) (thirty one significant p-values)

Question 12: People are hired for their ability and willingness to work safely (HQP) (thirty three significant p-values).

Question 14: Language differences in multi-cultural crews are not a threat to safety (MCO) (thirty six significant p-values).

Question 15: I enjoy working with multi-cultural crews (MCO) (thirty three significant p-values).

Question 16: There are no differences in the performance of crew members from different cultures (MCO) (thirty six significant p-values).

Question 21: Safety is the top priority for crew onboard this ship (SAW) (thirty significant p-values).

Some of the Mann-Whitney comparisons that possess the least differences for all the fifty six questions are: British vs. Dutch, British vs. South African, and Polish vs. South African, Indonesian vs. Thai, and Filipino vs. Polish.   Some of the Mann-Whitney Comparisons that possess the greatest differences are: Dutch vs. Romanian, Other vs. Polish, British vs. Romanian, Other vs. British, Indian vs. South African, Indonesian vs. Thai, and British vs. Danish.

DISCUSSION

The focusing on safety culture and employees' perception of safety is an important issue in the shipping industry. The result of this study is an attempt to identify some of the differences in safety culture perceptions in the shipping industry based on nationality. The current study investigated the impact of nationality in the form of a questionnaire of safety culture onboard 110 container ships. Safety perceptions of crewmembers were compared among eleven different nationalities. The study also examined thirteen safety factors presented in this paper with each other.

In the sample, more than one third of the nationalities were from a single country, the Philippines. Filipino crew members represent 35% of the data and Indians represent 19%, which is common in the shipping industry. This result is supported by previous research by the Seafarer International Research Centre (SIRC). A survey of 10,958 seafarers showed that one third of nationalities came from the Philippines (Kahveci and Sampson 2001). Another study of seafarers working for Norwegian shipping companies by Havold (2007) had over 50% respondents from the Philippines (Havold 2007).

British, Danish, Dutch, and South African answers also suggest that language and culture differences may contribute to safety concerns onboard. This result is consistent with a previous study by Kahveci and Sampson (2001). In the study, the authors found that communication difficulties existed between seafarers because of mixed nationality crew. Havold (2005) also pointed out the impact of mixed nationalities on the overall safety culture of the vessel. On the other hand, Indian, Indonesian, Romania, and Thai answers suggest that they have a positive attitude towards safety on almost all of the safety factors.

Hiring quality people (HQP), multicultural operation (MCO), promotion of safety (POS), and anonymous reporting (ANR) possessed the most negative responses. In these categories, crew members feel that the company is not hiring the most qualified people and multicultural operation is a major safety concern. They also feel that an effective anonymous reporting system does not exist in this company. Overall, empowerment (EMP), safety awareness (SAW), integrity (INT), and Feedback (FDB) possessed the most positive responses. Crew members feel that they have control over the safety outcome of their job.

Seven out of eleven nationalities responded positively except for British, Danish, Dutch, and South African. The result suggests big disagreement among nationalities on the company's effective anonymous reporting policy and the willingness of crew members to report near misses.

The most negative responses for OECD countries are in the area of hiring quality people (HQP) and multi-cultural operation (MCO). In these categories, crew members feel that management are not effectively hiring skilled and qualified people and new hires are not fit for the job. More than half of the nationalities perceive that hiring qualified people in the company is a problem. They also feel that company safety policies and procedures are not efficient; therefore, crew members are not following the rules. The crews feel that multicultural working environment is not safe and language is a threat to safety. These results are consistent with previous research (Havold, 2007; Kahveci & Sampson, 2001; Lamvick & Bye, 2004).

While crew members from European countries have the same view of safety, crew members from Asia, except for Filipinos,

view safety differently. Generally, most of the crew members from Asia are positive about safety. Unlike crew members from OECD countries, crew members from Asia answered positively on all the safety factors. These results are consistent with previous studies that suggested crew members from Asia are likely to answer survey questions positively (Havold, 2007).

Havold (2007) discussed Hofstede's method that nationality with high power distance index (PDI) tends to accept that power are distributed unequally and people with low Individualism index (IDV) tend to have strong family or group ties. Those people are more likely to answer questions that would please management (Havold, 2007). In this case, nationalities from Philippines, India, Indonesia, and Thailand are considered to be high PDI and low IDV. British, Dutch, Danish, and South African are low PDI and high IDV.

Havold (2007) found that all nations showed positive attitude towards safety. Nations from European origin tend to answer these questions negatively, and nations from the Far East tend to answer the questions positively. He concluded that the importance of safety issues is not shared across all nationalities.

Filipino crew members responded positively, somewhere between OECD countries and Asian countries. They responded more negatively on promotion of safety (POS) than Asian crew members. The answers suggest that Filipinos feel that managers put schedule or costs above safety and the company does not reward error reporting.

Lamvik and Bye (2004) discussed the differences in occupational accidents between Norwegian and Filipino. He argued that the Filipino accident rate is lower than Norwegian because the Norwegian seafarers culture system emphasizes the work performance and cherishes individualism, professionalism, and initiative, whereas Filipino crew members added and incorporated family obligations into their daily life onboard. In other words, Filipino crew members do not engage in dangerous work situations because they are the sole providers for their family and they think of their safety in order to help their family back home (Lamvik and Bye 2004).

Safety awareness (SAW), hiring quality people (HQP), multicultural operation (MCO), and feedback (FDB) possessed the highest variation between nationalities. The large variation in these safety factors explains the great cultural differences among nationalities, the disagreement between crews of the hiring process of skilled qualified people in the company, the lack of enforcement of the company safety policies and procedures, and the impact of culture differences onboard. Horck (2005) emphasizes the important of human element and argues that lower cost and quality of seafarer might have an impact on safety performance onboard. Horck (2005) claims that through education, awareness, and training, cultural differences can be diminished and globalization can be achieved. The Mann-Whitney test revealed that crew members from OECD countries view multicultural work environment as a threat to safety onboard. They feel that there are differences in the performance of crew members from different cultures. The crew members also feel that language differences in multi-cultural crews are a threat to safety.

CONCLUSION / RECOMMENDATIONS

The shipping industry is a multicultural work environment that has little or no work conducted in relation to mixed nationality safety culture. The present study showed that significant differences in safety culture perception existed between the safety factors as well as the individual nationalities. The results found that not all nationalities showed a positive attitude toward safety. Nationalities from European origin tend to answer these questions negatively, and nationalities from Asia tend to answer positively.

The study also revealed that hiring quality people (HQP), multicultural operation (MCO), promotion of safety (POS), and anonymous reporting (ANR) possessed the most overall negative responses. It is also demonstrated that safety factors such as hiring quality people (HQP) and multicultural operation (MCO) are negatively related to nationalities from the OECD countries and positively related to nationalities from Asia. On the other hand, nationalities from Asia responded positively on all of the safety factors. It is also shown that OECD nationalities had negative safety perceptions and Asian nationalities had positive safety perceptions. Hiring quality people (HQP) and multicultural operation (MCO) also represent the greatest differences among the OECD nationalities and Asia nationalities. The study also showed that the Filipinos, the largest nationality onboard, were concerned regarding the reporting system of unsafe acts by the company.

In order to improve safety performance and work conditions of seafarers onboard, the industry must improve the quality of crew members through education and training. Hiring skilled and well-trained crews will not only help the company achieve their safety goals but also protect the marine environment from disasters. Management should address not only the technical skill of seafarers but also the communication and language skills. It is apparent from this study that cultural awareness training is essential to safety and cohesion on board. Non-technical skills or cognitive skills such as communication, decision making, culture awareness, teamwork, and social skills may reduce human errors in the shipping industry (Theotokas et al. 2006).

In the case of nationalities from OECD countries, the researchers suggest additional focus be given to the implementations of safety procedures to address the negative responses in the following safety factors:

Multicultural Operation (MCO)

The results suggest that mixed nationality is a major safety concern. In order to address language difficulties onboard and communication among mixed nationalities, these recommendations can potentially help the organization improve their safety record:

- Provide higher percentage of training and documentation in native language

- Investigate the language differences and provide language training

- Implement social activities onboard that would improve the interaction between mixed nationalities onboard

- Require minimum level of English fluency when recruiting

- Provide cultural awareness training program that focuses on educating crew members about different cultural characteristics, beliefs, values, religions, behaviors, and communication.

- Provide specific language training such as frequently used technical phrases and terms onboard and how to pronounce them correctly

- Implement a strict tolerance policy for discrimination and stereotyping onboard.

- Provide accommodations for different faiths and customs.

Hiring Quality People (HQP)

The process of hiring skilled and qualified crew members is crucial to safety onboard. The organization has a plan on how to recruit and retain well-trained employees. The following recommendations are proposed to address the negative responses:

- Review the company hiring policy and procedures and document it.

- Provide quality training for transfer or new employees in leadership, team work, workload management, decision making, personal limitations, and stress management.

- Provide quality training for human resources employees on how to retain employees.

- Provide internship training program to identify potentially qualified crews.

- Involve immediate supervisors directly in the hiring process and interviews.

- Provide attractive employment compensation packages.

Anonymous Reporting (ANR)

Reporting incidents without fear of being blamed is an important factor in an effective safety culture system. It is important that employees feel confident that the reporting system is anonymous, and they should be encouraged to report incidents and near misses without the fear of being punished. A good reporting system should inform the employees that their input is very important and the actions the company has taken to correct. The following recommendations are proposed to address the negative responses:

- Work on improving the anonymous reporting system in the company and remove the obstacles by ensuring the anonymity of the employee.

- Set target for near misses reported by employees.

In the case of Filipinos, the researchers suggest additional focus be given to the implementations of safety procedures to address the negative responses in the following safety factors:

Promotion of Safety (POS)

Promotion of safety is the level of commitment in which upper management is willing to undertake safety promotion. The following recommendations are suggested to improve POS:

- Encourage near miss reporting by offering an appropriate non-monetary reward or recognition.

- Continuously improve new safety goals.

- Set new targets for prompt closure of corrective action reports, the number of safety audit recommendations, the number of safety meetings attended by management, the number of crew members attending safety training, and the number of safety meetings attended by senior management.

- Increase the number of crew members that meet the STCW requirements.

- Establish zero tolerance policy for intentional safety violations.

- Communicate safety expectations clearly to crew members by management through bulletin boards, websites, and supervisors.

- Provide employee training in safety policies and procedures.

In case of variation, the researchers suggest additional focus be given to the implementation of safety procedures to address the largest variations in the following safety factors:

Safety Awareness (SAW)

In order for employees to perform their jobs safely, the organization must provide all the communication tools and training to achieve the highest safety standard. The following recommendations are suggested:

- Provide training in the use of safety checklists onboard

- Provide training in safety procedures and instructions

- Provide management training in safety investigations

- Encourage employees' involvement in safety meetings

- Offer more safety training with incentives

- Set goals and targets for safety meetings attended by crew members

- Implement a training program in safety awareness and safety investigation

- Set targets for safety meetings attended by senior management

- Set targets for near misses reported by crew members

- Communicate the results of near misses and the corrective actions that have been taken by senior management

Hiring Quality People (HQP) was addressed above.

Multicultural Operation (MCO) was addressed above.

STUDY LIMITATIONS

In the current research, two limitations must be addressed. First, the survey questionnaire is written in the English language, and some nationalities might interpret questions differently. As a result, the score responses from different nationalities might be biased. Future research must address the language barrier by implementing questionnaires in multiple languages. Second, the survey was conducted in one shipping company, and more research in multiple shipping companies is needed in order to generalize to the industry.

FUTURE RESEARCH

The differences observed among nationalities provide a solid foundation for future study of the working conditions, safety perceptions, and attitudes of seafarers in order to improve safety culture onboard. A more extensive investigation of safety culture would also require a comparison of vessels from different shipping companies. Additional studies are also needed to examine nationalities by gender, age, job position, and maritime experience. The logistic regression techniques can be used for modeling the relationship between the response variables and the set of independent variables.

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Web-based
Artificial Intelligence
Agents

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ABSTRACT

This paper discusses implementations of Artificial Intelligence (AI) technologies over the World Wide Web. The implementations include a pilot agent with natural language processing and rule-based AI that recommends IBM products, a planning agent that can be used by dispersed Army Small Units, and a learning apprentice for the Web that can help users to locate desired Web sites. The potential for the use of the AI technology, in light of the latest development in Internet and Web 2.0 technologies, is high for both corporations and every day users.

Keywords: Artificial Intelligence, Intelligent Agents, Natural Language Agents, Agents on the Internet

INTRODUCTION

One of the features on Apple's new iPhone 4S is a voice activated AI program called Siri, which is marketed as a modern "personal assistant"(Claburn, 2011). The features of this program closely resemble those on IBM's Watson which won the TV show "Jeopardy"(Paul, 2011) by answering the questions more correctly than its two human opponents. Both systems are a result of profound advancements in AI, which allow users to give voice commands and receive answers to questions in real time and, thereby, revolutionize the day-to-day human-machine interactions. AI systems achieve this by increasing the speed at which data and information can be accessed and retrieved. The recent advances in e-commerce and Web 2.0 technologies have resulted in the production of a lot of data and information. To the vendors and customers, these colossal data and information repositories can lead to information overload. An AI system is helpful in quickly delving through the data and retrieving relevant information.

AI is emerging as one of the methods for accessing and managing data and information. AI also helps in creating knowledge, and it has various useful practical applications. For instance, AI is applicable to e-commerce because of its capability to reduce search costs (Hinz& Eckert, 2010).With the US wireless penetration reaching 96% (CTIA, 2011) and almost 70% of US households having access to computers and the Internet (US Census Bureau, 2009), the future of e-commerce is certain. Thus, successful information access and retrieval is of paramount importance to both commercial users/vendors and customers.

An AI-based search engine can be an asset to firms that want to provide an effective tool by which their customers can find exact products or information-match that tally with their requirements. On the other hand, non-commercial users, such as government agencies, can take the advantage of combining the AI technology with the Web. For example, by using a planner with AI that works on the Web, the dispersed army units can collaboratively work on a strategic plan and, thus, benefit from the specialized skills and knowledge of dispersed team members (Martins, Gilson, & Maynard, 2004).A household user can also benefit by using the AI technologies. For instance, a user surfing on the Internet in search of a subject matter with any general interest will probably not have specific knowledge about the contents of the collections on the Internet. The AI agent can help such a user to navigate through the jungle of hyperlinks by coalescing and organizing the data and information into a more manageable and understandable format. In essence, the AI technology has the potential of being an indispensable part of the day-to-day human-machine interactions on the Internet.

This paper discusses three AI agents which implement different AI technologies in spite of being web-based. The first agent, called Natural Language Assistant comprises a search engine with natural language processing capability that is based on the traditional rule-based AI Technology. This implementation is timely considering the demand of the AI implementation in the search technology. For example,

Google[1], even with its highly successful search engine, acknowledges the limitations of a traditional search engine and argues[2] that the ultimate search engine must have an AI component to it.

The second AI agent covered in this paper shows how an AI planning technique and capability can be exploited as an aid to support US Army Small Unit operations. A web-based AI planning agent named O-Plan has been developed for use during the planning life cycle in military and civilian crisis situations. The paper also covers a third agent that explores the notion of a tour guide software agent for assisting users browsing the Internet. A Web tour guide-agent provides assistance similar to that provided by a human tour guide in a museum. The agent guides the user along an appropriate path through the collection, based on the agent's knowledge of the user's interests, location, and relevance of the various items in the collection. The agent also incorporates knowledge generated from past experiences of the way other users have interacted with the collection in the past.

The rest of the paper is organized as follows. We begin by exploring the features of the three AI agents as well as their strengths and weaknesses. Following that, we discuss the implementation issues related to the three identified AI agents. A comprehensive comparison of the three AI agents is followed by concluding remarks.
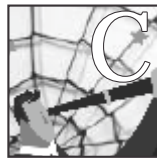
COMMON TYPES OF ARTIFICIAL INTELLIGENT AGENTS

Natural Language Assistant

The Natural Language Assistant (NLA) is a web-based natural language dialog system that helps users to find relevant products on e-commerce sites (Chai et. al. 2002). There are a number of popular implementations of AI agents that are based on NLA technology. The version of NLA described in Chai et al. (2002) was developed as a pilot agent that recommends IBM ThinkPad laptops based on the customers' preferences. The front end (user interface module) accepts both type-in text and speech input with the parser capturing the user's specifications (e.g. speed, memory, usage pattern, and price).Based on these expressions and the session context maintained by the dialog manager, the interpreter constructs a set of constraints on attributes of IBM Think Pads. These constraints are then translated into an SQL query by the action manager. The action manager then executes the SQL query against a relational database and eventually retrieves a set of products matching user specifications. Based on the identified constraints and the retrieved output, the AI agent retrieves the products online, and gives its response which can be further questions, recommendations, or both. This output is presented through the user interface module under which the user can start another interaction with the agent if need be.

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[1] with seven consecutive quarters of profit earnings

[2] Source: PBS interview of a Google executive, 11/30/2002.

Smart Choice is a nNLA based AI agent that is implemented as an online content-based recommender system. It provides parents with information about schools, based on the parents' preferences and the needs, interests, abilities, and talents of the student(Wilson et al. 2009). Closely resembling Smart Choice is another NLA based AI agent called Auto Tutor (Graesser, Jeon, &Dufty, 2008; Graesser, Chipman, Hayes, & Olney, 2005). Auto Tutor generates deep reasoning questions, and prompts students for answers, while also offering pointers through dialogue. The dialogue involves, for instance, requesting clarifications as well as soliciting for more information from the student in order to narrow the choices and enable the learner to deduce the correct answer.

There are many implementations and applications of NLA based AI agents to the general public; hence, the three agents mentioned here are mere examples. The following table presents the strengths and weaknesses of the NLA based AI agents discussed above.

STRENGTHS
NLA based AI agent is a generic concept that can be easily applied to many e-commerce websites for product recommendations as well as online services that incorporate question and answer sessions.
Unlike menu-driven navigation or the keyword search engines that are based on word matching, NLA based AI agents work by extracting semantics, a concept that reduces user frustrations.
NLA based AI agents offer more flexibility through a number of methods: a) User interface: the system allows and provides both text and speech input/output b) User/system interaction: while answering the questions from the system, the user is not confined to specific answers. c) Context: the user has leeway in specifying the requirements and can utilize natural-language relational operators (e.g. for a ThinkPad recommender, between $500 and $800 and with at least 3 hours of battery life) without being confined to a pre-specified selection set.
The fact that the parser uses a statistical approach makes NLA-based AI agents such as Smart Choice and Auto Tutor easily scalable to other languages. The existing schema can be used to annotate a collection of sentences from another language.
WEAKNESSES
For a novice user who just needs a quick answer, the NLA-based AI agents systems can be overwhelming.
The NLA-based AI agents would be more appropriate to both novice and experienced users if it incorporated menu

driven interface in addition to the already implemented text and speech recognition.

The issue of response time is not clearly addressed in the literaturealthough it might not be a concern because of the advancement in processor and memory technology. Nevertheless, with centralized systems and many user interactions, real time applications that generate multiple messages parsingcan lead to bottlenecks.

O-Plan

O-Plan is based on a command, planning, and control architecture (Tate, Levine, Jarvis & Dalton, 2000; Tate, Dalton, & Levine 2000; Tate, Dalton, & Levine 1998; Tate 1997a;Tate 1997b;Tate 1997c;Drabble& Tate 1995; Fraser & Tate 1995). Since O-Plan is domain independent, it is intended to provide flexibility through an open modular structure and has been implemented on the Web. The O-Plan project is undertaken at the University of Edinburgh and is part of DARPA/Roma Laboratory Planning Initiative. This collaborative venture aims at studying mixed initiative planning methods, and how these methods can be applied to realistic problems in logistics, air campaign planning, and crisis action response.

The model for the O-Plan agent is based on planning workflow control. The implementation employs an underlying representation of plans termed <I-N-OVA>, (Tate, 1995) which expresses plans as a set of constraints on behavior. O-Plan can help with planning and is easily applicable to, for instance, disaster relief planning—where a number of people need to be evacuated from various places under different circumstances. In such an incident, for example, stormy weather will prevent helicopters from being used, while collapsed bridges will impede road rescues. O-Plan generates a suitable plan of action and helps during its execution. The agent can also be used by the military in the deployment of surveillance aircraft, thus helping the US troops to, for instance, hunt down their enemies(Erwin, 2008).

Prior to carrying out a mission[3], an Army Small Unit is provided with an operation order which is prepared at a higher echelon. Operation orders are usually written in English and follow a strict structure but they are shared between military planners and planning assistants. The operation orders originate from initial requirements against which company commanders can establish options for the course of action to be taken. O-Plan is applicable during these initial stages when there is room to explore various points of views, assumptions, advice on tactics, etc. O-Plan is also preferred in latter stages and can be used by multiple users performing different tasks (for instance, monitoring the plan execution).The users can interface to both O-Plan and each other via a panel that is accessible through the various Web browsers. This panel assists in coordination of multiple participants.Lopez et al. (2004) point out that O-Plan is expected to help the United

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[3] Actual details acquired by the authors from US Army Small Unit Operation's Subject Matter Experts (SMEs) at Fort Benning, Georgia.

States adopt better strategies to combat the enemy following the attacks of September 11, 2001. Thus, O-Plan is intended to be a proactive and a strategic planning tool to avert man-made disasters and also recover from natural disasters.

The Planning Phase of O-Plan

The planning phase of O-Plan entails, among others, the formulation of objectives by the user where by the operation orders (requirements) serve as the inputs. A user-friendly simple pull-down menu is used to describe the plan objectives, possible resources, time constraints, and operational approaches. O-Plan offers a mixed initiative mode, which ensures that all users with different authorities can seamlessly interact with each other. To implement this capability, the planner is authorized to generate and explore any of a number of sub-options for the top level plan and interact with various users with different degrees of authority. For instance, top level executives such as a commander have the capability to access all the available operation options, plans, and approaches and can also generate the action evaluation matrix.

Following the generation of a set of plans, the most appropriate plan is selected for execution. During the execution phase, O-Plan provides a "goal structure" which offers casual links indicating the purpose of actions in the plans, and how these plans are interrelated. An action may trigger a situation that precedes another action. For example, in a hostage rescue plan, a combat unit should first secure its toehold building before proceeding to the building that houses the hostages. The precondition actions will be specified in the goal structure. In addition to helping with determining the preconditions required for completing an action, O-Plan also helps in re-planning after a break in prior conditions or change in circumstances.

Moreover, O-Plan works as a re-planning agent by generating new plans after a break in preconditions. On the other hand, when the break occurs in the middle of a plan, O-Plan can generate a report that shows the actions that have already been completed while also adding new actions to the remaining part of the plan. The user input and interaction in any of these stages is similar to those employed when constructing a new plan.

The authors participated in the O-Plan through links:http://www.aiai.ed.ac.uk/~oplan/isd/andhttp://www.aiai.ed.ac.uk/project/oplan/isd/. Below are some of the strengths and weaknesses of this AI agent.

STRENGTHS
O-Plan offers interactive demonstrations which are available at
http://www.aiai.ed.ac.uk/~oplan/isd/andhttp://www.aiai.ed.ac.uk/project/oplan/isd/
By taking the user through most envisioned planning phases through a user-friendly interface, the system provides thoroughness of the support for planning.

WEAKNESSES
Although the interactive demonstrations mentioned earlier were insightful, some fields were not clear enough as to what was expected as input.
The literature (Tate, Levine, Jarvis, & Dalton, 2000; Tate, Dalton, & Levine, 2000; Tate, Dalton, & Levine, 1998; Tate, 1997a;Tate, 1997b; Tate, 1997c;Drabble & Tate, 1995; Fraser & Tate, 1995)fails to provide evidence of guaranteed behavior of O-Plan on the Web.
There was also no literature that showed how the O-Plan would respond with many planners working simultaneously and not just sharing it on the Web.
Similarly, the existing literature failed to offer information on how issues of access control and web security are/will be addressed.

Web Watcher

Web Watcher (Armstrong, Freitag, Joachims, & Mitchell, 1995; Joachims, Freitag, &Mitchell, 1997; Joachims, Freitag, &Mitchell, 1996;Joachims, Mitchell, Freitag, & Armstrong, 1995) is an AI agent that interactively helps users to locate desired information on the Internet. It makes use of learned information that is based on the user's specified goals and previously visited hyperlinks to predict which hyperlinks are more likely to lead to the desired target information for the user.

Users invoke Web Watcher by following a Web hyperlink to its Web page. After that, a form is generated on which the user inputs information that specifies what information is sought. Following this, the Web Watcher retracts and points the user back to the initial page where the user was visiting before accessing the Web Watcher website. Then, Web Watcher follows the user's actions in what is referred to as "looking over the user's shoulder" (Armstrong, Freitag, Joachims,& Mitchell, 1995). Web Watcher offers suggestions for hyperlinks by highlighting these hyperlinks on the current page, and adding new hyperlinks while suggesting others that are closely related to the current page. Web Watcher also has the capability to send an email message to the user, at a later pre-specified time, when a particular page has changed.

We tried using Web Watcher which was supposed to be accessed through http://www-2.cs.cmu.edu/~webwatcher/ but found that the support had been discontinued. We took the demo instead.

In Joachims, Mitchell, Freitag, & Armstrong (1995), work in progress was described. The authors implemented an algorithm using the "nearest neighbor" approach to map an arbitrary Web page to a set of related pages. A matrix representing related pages as rows and hyperlinks as columns was used to "relate" the pages with one another. The "nearness" to a page was measured by the Term Frequency/Inverse Document Frequency (TFIDF) vector described below. Each page had two "neighbors" which had

the closest distance to it. Each hyperlink a was described by the TFIDF vector representation of the underlined anchor text. Each page s was represented in an analogous way using the text in its title. For the purpose of determining similarity, the distance between the hyperlink a1 on page s1 and the hyperlink a2 on page s2 was defined to be the distance between a1 and a2 plus twice the distance between s1 and s2. The distance between two vectors was defined as the cosine of the angle between the vectors, a standard similarity measure used in TFIDF. The target function learned using the AI was a mapping from an arbitrary Web page to a set of related pages. The authors mentioned other alternative algorithms such as mutual information (Quinlan, 1993)and Minimum Description Length (Rissanen, 1978). Instead of describing the algorithm implemented in Joachims, Mitchell, Freitag, and Armstrong (1995) in more detail, we will do so for the later version of Web Watcher in the following paragraphs.

In Joachims, Freitag, and Mitchell (1996) the authors use a different matrix which is based on a technique from information retrieval. User interests and hyperlink descriptions are represented by vectors, with each dimension representing a particular word in the English language. Using the TFIDF heuristic, the weight of a word w for a piece of text is computed as:

$$TFIDF(w,d) = TF(w,d) * \log(n/DF(w))$$

The term frequency TF(w,d) counts the number of times word w occurs in text d. The document-frequency DF(w) is the number of texts that contain word w and n is the total number of texts. The TFIDF measure assigns a word a higher weight if it occurs more often in a piece of text. The words that occur more frequently throughout all texts receive a lower weight. The weight of a word is zero if it does not occur in a piece of text at all. Based on this vector representation, the similarity of two pieces of text can be calculated as the cosine between their vectors.

The algorithm that suggests hyperlinks goes through all the hyperlinks on the current page. Using the TFIDF method to find the similar pages, each hyperlink is ranked using its similarity value. The hyperlinks that are sufficiently similar (above a threshold) to the user's interest are suggested by Web Watcher.

Close to six thousand tours were given[4] between August 1995 and March 1996. Web Watcher offered at least one piece of advice in 21% of the cases, and this was demonstrated by the highlighted hyperlinks. However, if the users had randomly followed the pages while ignoring the advice of Web Watcher, it still would have offered advice 15% of the times. As such, the results indicate that the effective "learning" took place only 6% of the time, which is not very encouraging. As we observed in Armstrong, Freitag, Joachims, & Mitchell, 1995; Joachims, Freitag, Mitchell, 1997; Joachims, Freitag, Mitchell, 1996; and Joachims, Mitchell, Freitag, & Armstrong, 1995, the authors were trying to find better AI techniques. The experiment also concludes that in about 44% of the cases, the user followed the

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[4]as per http://www-2.cs.cmu.edu/~webwatcher/ accessed on 10/02/2010

advice given by Web Watcher. Our concern with this result was that Web Watcher did not indicate whether the users were satisfied with the results they received in those 44% cases.

Practical Applications of WebWatcher

There are a number of practical applications of the Web Watcher and we will briefly discuss some of them here. One in particular was presented by Torres-Verdin et al. (2004), and is an intelligent system that takes in a set of queries and attempts to learn the search profile of a specific user. Thus, the system aims at improving the correlation between the user's search interest and the retrieved documents. The system also seeks to help users retrieve and organize information which is available across huge data and information repositories (Deltor, 2002).

Another Web Watcher agent called Expert Clerk (Shimazu, 2002) imitates a salesclerk and consolidates the requests from a human shopper. It utilizes gentropy (navigation by asking) and also shows contrasting sample products which are accompanied by explanations of their selling points (navigation by proposing) to narrow down the list of products. Web Crow is another implementation of a Web Watcher which is used as a crossword solver and employs knowledge mined from the Web to solve the puzzles. It makes use of the Web and natural language processing techniques in order to generate clues to solve the puzzles. Web Crow has utilized the web-based approach to outperform human challengers in solving crossword puzzles (Ernandes, Angelini, &Gori 2008).Finally, Twine, a Web organizer, is based on Semantic Web technology and processes the meaning of Web pages in lieu of downloading them. Twine also has features that allow users to track and organize relevant information about products, people, places, items, documents, and recipes based on the user's interests (Farber, 2008).

I IMPLEMENTATIONS

We have incorporated some details on the use of AI in each agent in the above sections. This section exclusively addresses the issue of the AI implemented, including the discussions using our analysis.

NLA

NLA's web-based AI agent is implemented by two of its components. The "interpreter" component extracts constraints that specify relations and values for product attributes (for example, shipping-cost<$30). Constraints may be either numeric or string. Numerical constraints are normalized to canonical units, such as dollars for "shipping-cost." String-valued attributes are either matched directly (using the substring matching) against a string value in the product database, or used as a similarity measure to produce canonical string values. The similarity measure technique uses a particular attribute category with values for that attribute in the product database. For example, in the query, "I want a 24-inch monitor," the interpreter identifies a constraint "size=24" because the interpreter has various values for the size attribute. The "action manager" component simply translates constraints to SQL code-lines. To translate the

multiple min-max constraints, it reverses the order of occurrence. For example, for the query "cheapest, latest laptop with 2 GHz", the action manager first searches for 2 GHz, then the latest, and finally the cheapest.

The above-discussed are the main AI components. The interpreter implementation seems traditional and straight forward. We verified that the interpreter allows multiple constraints on the same attribute. However, the action manager is too simplistic. We deem that, with the limited database for this pilot agent, it may be justified to have a limited-functionality action-manager. Nonetheless, for a real application, users need to implement a dedicated constraint solver for better speed. Considering goal satisfaction, grounding techniques, and unification methods used by various constraint solvers, users can select an appropriate constraint solver. Users will have to tackle the issues of coming up with the criteria for pruning. For example, if a customer asks for a price of less than $800, then the part of the decision tree representing the laptops with 2GHz and higher processor speeds can be pruned since such classes of laptops will not fit the user's dollar criteria. Also, to translate the multiple min-max constraints, the interpreter could probably use a suspended goal strategy rather than simply reversing the order of occurrence of constraints. This probably would not result in correct interpretation all the time. The authors have not mentioned about how the disjunction (or) is handled. This limitation may result from the fact that the interpreter does not understand a disjunctive criterion.

In general, we feel that NLA makes an appropriate but limited use of AI. Musliner et al., 1995 have found that "the broad application of AI methods to real-time domains will require new approaches, differing from many of the traditional search-based techniques explored in the field. Based on our testing, we feel that the pilot agents such as NLA will need to go with the in-depth AI implementation for their use in the "real world".

O-Plan

We have extracted the AI implementation information for O-Plan, which can be categorized as following:

- Least-commitment approach: Under this inference procedure, the constraint satisfaction algorithms do not commit to a constraint; instead, they delay making the choice. This approach is selected most probably because O-Plan implements partial order planning and the least commitment approach forms the basis for this category of planning.

- Partial-order planner: Such a plan can take an advantage of not having to commit to an ordering between tasks until the application is forced to do so. While building a partial order plan between actions, performing an action twice can create a problem. An algorithm would require assigning an index to each instance of an action (not the action itself) and then order the instances. O-Plan implementation details are sketchy and did not list the exact algorithm if users used this technique to guard against the problem.

- Opportunistic selection: In case there are multiple actions satisfying the constraints, the strategy needs to be chosen to deal with the constraints. The opportunistic selection chooses the action with the highest utility upper bound. The literature does not mention the justification for picking this selection criterion over the two other selection rules, which areselecting the average highest utility and highest utility lower bound. A statistical analysis is usually carried out to find the most appropriate criteria, but, in general, when the greatest reward potential is high, this analysis is necessary. It can be deduced that the O-Plan was probably developed to maximize the benefit (the highest utility possible) from an action.

- Localized search to explore alternative actions: We investigated to see if O-Plan attempts to reach the global maxima. We found that it does indeed use "global re-orientation" alternative when necessary.

Since a plan can be viewed as a set of constraints which limit the behavior when it is executed, we looked into the types of constraints used by O-Plan. It uses the following three types:

(1) Implied constraints: The pending constraints that get added when unsatisfied requirements get handled.

(2) Plan node constraints: The nodes can be actions in an activity planner or resources in a resource planner.

(3) Detailed constraints: These can be temporal constraints—which treat time as any other resource, or they can be variable constraints—which put restrictions on plan objects. The advantage of the temporal constraint is that if the goal state specifies a deadline and if the partial plan requires more time than allowed, we can backtrack immediately without considering any completion of the plan. This advantage results from the fact that time never goes backward.

After testing the AI planners and examining the details on O-Plan planning constraints, ,Although AI planners can implement given constraints, we contemplated the question on whether the planners can replace humans who can discern between two plans, or relax criteria in order to explore tradeoffs. We were glad to find that theO-Plan Project considered combining the O-Plan planner with a knowledge-based system that reasons about the plan evaluation.

WebWatcher

The algorithm that suggests the related hyperlinks to the user uses a function named User Choice?, which takes the following form:

User Choice?: Page x Interest x Link

Where Page is the current page, Interest is calculated using the TFIDF method described earlier and the Link is one of the hyperlinks found on the Page. The user's interests are matched against the hyperlinks. Each time the user selects a new hyperlink, a training example is logged for each hyperlink on the current page corresponding to the Page, Interest and Link. Web Watcher splits this function for each Web page. (In other

words, they have different input vectors for each page). So, Web Watcher learns a function User Choice? p for every page p as demonstrated in:

User Choice? p: Interest x Link

Although the authors did not acknowledge the inadequacy of this learning method explicitly, from the experiment results described in the section on Web Watcher, we think that there is a scope for improvement in the current AI technique used for learning. The authors have dedicated large portions of literature (Freitag, and Mitchell, 1996), which explore alternative learning methods. One of the two alternative methods is to employ reinforcement learning so as to create more refined descriptions of the hyperlinks. The other idea combines the results of multiple learning methods in order to improve accuracy. We will discuss only the former, taking into account the scope of this survey in the following paragraphs.

The "goodness" of an action is expressed in terms of an evaluation function defined for all possible state-action pairs. An analogous navigation problem for an agent on the Web is to navigate from page to page by taking hyperlinks so as to get to good sources of information. Pages can correspond to states, and hyperlinks can correspond to actions. The reward that a Web agent receives for a page is the degree to which the result fits the user's interests. The learning agent then seeks for tours through the Web that leads as directly as possible to pages of greatest interest to the user. The reward function that measures whether a page fits the user's interest will be based on TFIDF heuristic that was earlier discussed.

A significant problem with the above approach might be that the users do not always stick to pages they have already seen. We classify this environment as semi-dynamic. In a semi-dynamic environment, it is difficult for a system to "learn" effectively; so, the nearest neighbor approach could be an approximation at best.

COMPARISON OF THE AI AGENTS

This section compares and contrasts the three agents that we examined earlier. Where applicable, we arranged the agents starting from the highest/best to the lowest/worst in their respective categories. For example, we listed the product with the easiest user interface first under the user interface title.

Extent and the Type of Use of AI

We would rank O-Plan at the top of list because it has the highest use of AI. Indeed, we found that users extensively use O-Plan for planning. NLA makes use of traditional, rule-based AI as a search engine. In our opinion, Web Watcher struggles in making an effective use of AI's machine-learning domain. From the experiment results and the constant changing of the algorithms, there are indications that the Web Watcher developers have not come up with a successful AI implementation.

Approach to Web-based AI

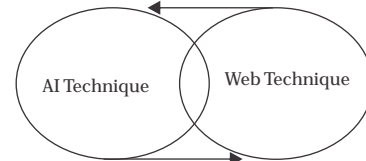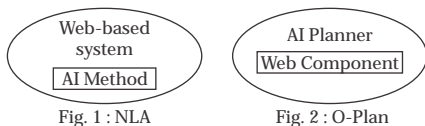Fig. 1 : NLA   Fig. 2 : O-Plan

Fig. 3 : Web watcher

We illustrate the three agents described above based on how the agents use the AI technology and the Web technology. The three figures above show that NLA embeds AI into a web-based system, O-Plan embeds Web component into the AI system, while Web Watcher couples the Web and AI subsystems on a parallel interface.

Control

The greatest advantage of Web Watcher is that the user remains in control at all times. The user can decide to use or ignore the advice (suggested hyperlinks) provided by the agent. While using NLA-based AI agent, both the user and the system are in control as interacting partners, i.e. they both depend on the input from one another. This is unlike O-Plan, where once the user selects the input data, O-Plan takes control. Also, with O-Plan, most fields accept only the system-defined input. The user can only make a selection from the items provided in the drop-down menus. This scenario leaves the users with much less control over what they can specify.

Security

We were surprised to note that the extant literature did not address the security issue, especially with O-Plan which is supposed to be used by the US Army. In our opinion, security should be one of the greatest concerns with any web-based application. On the other hand, being a government-oriented project, the authors might have circumvented the issues of security so as to avoid exposing the vulnerabilities of the systems to future potential security bleaches.

Input type or user interface

Although we could not use Web Watcher, judging from the demo, it appeared to be an easy tool to use. We tried O-Plan and liked its user interface (http:// www.aiai.ed.ac.uk/ project/oplan/isd/password: show O-plan). However, some input sheets were not clear as to what was expected as the input; nevertheless, we liked the menu-driven part. Considering the variety of details it can process, O-Plan does a good job of providing user-friendly interface. NLA can understand both the natural language as well as the type-in input. Thus, NLA outperforms the other two agents in providing a wider variety of the accepted input type. This notwithstanding, from examining the article, it is clear that it takes some practice to get used to the way NLA works.

Product Maturity or Evolution

NLA had two predecessors, namely "Happy Assistant", that provided limited language processing, and its improved version after the first user study called "Natural Language Sales Assistant." Natural Language Sales Assistant is an incremental improvement of the Happy Assistant. The first work in this area seems to have been reported in the year 2001. Thus, this is a newer agent that has gone through the process of proof of

concept, prototyping, and the pilot deployment. Natural Language Sales Assistant was reported in summer 2002.

Web Watcher work was reported in 1995 and continued up to 1996, during which period the AI backbone was revised several times. However, the product's functionality seems to have remained the same since then and there is no evidence of any current work in this area. Based on what we came across, the initial ideas on O-Plan were published in 1991. These ideas seem to have been used in a project (Enterprise project: 1993 to 1996) and then the joint project with DARPA and University of Edinburgh started in 1995 with automated planning support aid. The work is still going on; hence, of the three, this program has the longest successful life.

All the three agents did develop prototypes. We are not sure about the availability of NLA to the general public. Web Watcher is no longer supported on the Internet, but O-Plan provides in-depth access on the Internet.

Research experiments

The O-Plan has an edge over NLA and Web Watcher since the O-Plan provides more complete and modular set of tools. More specifically, the O-Plan can accommodate all three phases of completing a task including planning, assigning the command, and monitoring the task execution. The O-Plan can use different agents for these three roles, providing substantial modularity and flexibility. Using military logistics, the O-Plan project demonstrates how to use it with practical problems (O-Plan Approach, 2012). The O-Plan has already been applied to various projects including space-platform construction, satellite planning and control, non-combatant evacuation operations, and air campaign planning workflow. More data on these projects are available at http://www.aiai.ed.ac.uk/project/oplan/web-demo/index.html. Another advantage of O-Plan over other AI based planning systems is that the O-Plan adopts well with a dynamically changing environment by allowing refinement of an initial plan or requirements to regenerate new options (Tate & Dalton, 2003).

While O-Plan's strength lies in using it for practical problems, the strengths of NLA and Web Watcher lie in using them to perform experiments, resulting in statistical data. We were surprised not to see any such experiments in the existing literature on O-Plan. Only one of the papers (Tate, Dalton, & Levine, 1998) from the eight articles (Tate, Levine, Jarvis, & Dalton, 2000; Tate, Dalton, & Levine 2000, Tate, Dalton, & Levine, 1998, Tate 1997a, Tate 1997b, Tate 1997c, Drabble & Tate, 1995; and Fraser & Tate 1995) lists a scenario describing an experiment to envisage system use. The papers fall short in providing the experimental data, such as the comparison of manual planning versus using the O-Plan.

Validation

All the AI agents were easily accessible for testing. O-Plan has been online at least since the year 2000 and is still actively supported. Web Watcher was also available on the Web. It provided 1,777 tours from August 1995 to March 1996. Through email correspondence between one of the authors and a caretaker person, we conclude that it seems like the project has come to a standstill now. NLA was deployed as pilot on IBM's website (time duration not mentioned).

ONCLUSION

Considering the growth potential of the World Wide Web, we looked at three AI agents that can be effectively used online in different domains such as commercial, military, or individual. We discussed the strengths of these agents and the issues that still need to be addressed. NLA can be viewed as a prelude to other, more advanced semantic-based natural language processing search engines that use AI. O-Plan is a promising agent that demonstrates a broad use of AI planning technologies across the whole planning cycle. The products, such as Web Watcher that implement machine learning, are promising agents for users to utilize while surfing on the Internet. The versatility and the value of deployment of AI technology over the Web could make AI a crucial part of the Web.

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Doctoral Abstract

The Impact Of Global Economic Recession On Selected Indian Industries

Anju Batra

INTRODUCTION

The devastating tornado named 'Global Economic Recession' which emerged from U.S. subprime crisis in the end of 2007 engulfed almost all of the world economies in the year 2008-2009. This financial market turmoil led to an unprecedented collapse of major financial institutions, plummeting equity market, currency devaluation, contraction in investment activities and decline in gross domestic product along with the soaring unemployment rate worldwide. This global down-trend in economic cycles not only doomed U.S., its epicenter, but also transmitted strong tremors to so many other economies of the world. Whereas there is no commonly accepted definition of a global recession, International Monetary Fund regards 'the period when global growth is less than 3% to be global recession' which generally lasts as a cycle between 8 and 10 years. According to World Bank Report the world output growth rate in current recession shrank to mere 0.9 percent in comparison to already receding growth rate of 2.5 percent in 2008 from 4 percent in 2007. The growth rate of world trade also contracted to 2.1 percent in comparison to a sizable growth rate of 6.2 percent in 2008 and a high of 9.8 percent in 2007.

Due to substantial increase in financial globalization the recessionary cycles not only made deeper impact on the real economies of advanced countries, but doomed emerging market economies as well. As this crisis unfolded, credit markets appeared to be drying up in the developing economies along with the developed world. The Keynesian economics substantiates that demand-driven theories were at the root of recession as once panic and deflation set in, many people avoided further losses by keeping clear of the markets, resulting in falling investment & aggregate demand. On the other hand the monetarists believe that the recession started due to significant policy mistakes by monetary authorities especially the Federal Reserve's expansionary monetary policy and the Community Reinvestment Act. Along with it Government's inability to evaluate counter-party risk due to opaque financial statements and the unpredictable nature of government's response germinated the present crisis. The end result was internal as well external instability in the economies of the world, that needs an appropriate use of Monetary and Fiscal Policy' to combat such situations. MUNDELL Model explains that 'internal balance in an economy is achieved by reducing inflation and unemployment to zero, whereas external balance is achieved by reducing balance of payments deficits and surpluses to zero' through expansionary monetary policy and expansionary fiscal policy. Expansionary fiscal and monetary policies constitute expenditure increasing policy measures, whereas contractionary monetary and fiscal policies constitute expenditure reducing policy measures. To maintain internal balance as well as external balance during recession a mixed package of various fiscal & monetary measures used by the Government in India has been studied through this model in this study.

The financial crisis produced a "manufacturing crisis", with the strongest decline in industrial production occurring in export-based economies like India. High interest rates, raw material costs and credit availability crunch along with dipping demand continued to be a big challenge. Since the performance of industries underpin the growth of an economy, the impact of the global recession on Indian economy; especially on Indian industry has been the major issue of concern in this study. Under the impact of external demand shocks Indian economy witnessed a deceleration in growth, particularly a noticeable negative growth in industrial output in Q4 of 2008-09. It receded from 5.1% to 4.8% and then 1.65% and -0.55% in Q1, Q2, Q3 and Q4 of 2008-09 which was a steep decline for the first time since mid-1990s. Was this performance an aftermath of the global upheavals called economic recession or some inherent weaknesses of particular industry, is the issue that has been pondered over in this research. As the analysis of financial and operational performance of various firms of an industry gives a bird's eye view to ascertain its business strength for meeting long run & short term commitments, efficiency and growth prospects; the financial performance, profitability performance as well as efficiency performance of selected industries namely-automobile industries, hotel industries, gems & jewellery industries and information technology industries has been assessed through Dupont Model and Ratio Analysis. The analysis has been made individually of sample units of the industries, as well as industry as a whole in Ex-post Facto design, i.e. for pre-recession period and post-recession period.

The specific performance of above mentioned industries may depend on their strengths, weaknesses or some extraneous factors. This study further has tried to explore the reasons for the same through Porter's Diamond Model of competitiveness. Competitiveness is considered to involve a combination of assets and processes where assets are either inherited, i.e., natural resources, or created, i.e. infrastructure; and processes transforming assets to achieve economic benefits by customers through sales. Porter's Diamond Model explains that the sources of real competitive advantage lie in the four major economic attributes- (a) Advanced Factor Conditions like skilled labour, (b)Advanced Technology & Capital, (c) the Sophisticated Customer Base & demand conditions, (d) presence of Related & Supporting Industries, firm level strategy, structure and internal rivalries to give intensity of competition. The four direct diamonds are constrained by additional two external factors: chance and Government. The nature endows some nations with factors which provide them with a comparative advantage in the short-run and a competitive advantage of probabilistic serendipitous inventions discoveries in an industry's growth as well as nation's economic growth. The reasons for resilience of Information Technology industry and Gems & Jewellery industry have got expression through Porter's Diamond Model of competitiveness in the present research.

OBJECTIVES OF THE STUDY

The following objectives have been ascertained to ponder over the phenomenon under study:

- To get acquainted with the recent global economic turmoil and find out the factors responsible for this financial catastrophe

- To measure the impact of global economic recession on the financial performance of selected Industries namely Automobile Industry, Hotel Industry, Gems & Jewellery Industry and Information Technology Industry in India.

- To assess the key strategies and reasons for their resilience.

- To suggest the directions for further growth through global competitiveness after the tempest, i.e. economic recession.

HYPOTHESES OF THE STUDY

For accomplishment of second objective especially the following hypotheses have been formulated-

H_{01}: The expenses performance does not change in post-recession period.

H_{02}: The operating performance does not get influenced due to economic recession.

H_{03}: The gross profit performance for these industries does not undergo any change.

H_{04}: Net profit performance does not change in post-recession period in comparison to pre-recession period

H_{05}: Earnings per Share of each company does not reduce in post economic recession period.

RESEARCH METHODOLOGY

The present study is an Ex post Facto as well as Descriptive Research intended to measure the impact of global economic recession on selected Indian industry with a Pre-Post research design. It is a type of conclusive study which provides an insight into the concept 'recession' and the hypotheses developed regarding its impact which have been statistically tested using descriptive research methodology. In the study four prominent industries have been selected for the research namely Automobile Industry, Hotel Industry, Gems & Jewellery Industry and Information Technology Industry. From each industry five firms have been chosen as samples from different segments to get a generalized overview of the industry, e.g. in Automobile industry companies producing two-wheelers, three wheelers, four wheelers & cars, as well as heavy commercial vehicles have been picked as samples. For the study of sample companies' financial performance the data has been extracted from their Published Annual Reports from 1st April, 2005 to 31st March, 2010. The research under consideration has used secondary information to assess the impact of economic recession on the firm's performance during the period. The financial tools like Expense Ratio, Operating Profit Ratio, Gross Profit Ratio, Net Profit Ratio,

Earnings per Share Ratio and Return on Income Ratio have been employed to measure the impact of global economic recession on firm's productivity and financial performance of industry as a whole. The coefficient is calculated for each ratio from variables values in pre – recession period and post – recession period and their averages have been compared. The statistical tool namely T-test has also been used for hypotheses testing and making statements with a degree of precision or a level of confidence. Along with it Dupont Analysis has been applied to assess the Return on Investment for efficiency and profitability performance. The analysis has been presented in tabular form as well as SPSS output for different variables for each industry under study.

RESEARCH FINDINGS

To study Indian Automobiles Industry five listed company in Bombay stock exchange, namely Atul Automobiles Ltd., Eicher Motors Ltd. Hero Honda Motors Ltd., LML Ltd. and Tata Motors Ltd. were chosen as samples and the following results were derived….. An aggregative study of automobile industry reveals that it did not perform very well with respect to expenses, & profitability in post recession period, but industry's average gross profit ratio as well as earnings per share have increased marginally during post-recession period. According to ROI ratio of Dupont Model Hero Honda Ltd. was more efficient firm in comparison to remaining sample companies of the industry.

The study under consideration has also evaluated the impact of global economic recession on five Indian hotels namely Oriental Hotels Ltd., Blue Coast Hotels Ltd, EIH LTD., Indian Hotels Ltd & Asian Hotels Ltd. Industry level analysis reveals that expenses performance and the operating performance of the Indian hotel industry were adversely affected due to global economic recession. The net profit performance of the hotel industry has also decreased in post-recession period in comparison to pre-recession period. Return on Investment ratio in Dupont Model suggests that Oriental Hotels Ltd was more efficient as compared to other industry samples.

To fathom the Gems & Jewellery industry's endurance of recession five listed companies in Bombay stock exchange, namely Asian Star Co. Ltd. Classic Diamonds Ltd. Goldiam International Ltd. Shyam Star Gems Ltd. Vaibhav Gems Ltd.were selected….. The analysis of industry as a whole highlights that whereas average ETR has increased; the operating performance of the industry has not been affected significantly. Profitability as well as earning per share have dipped significantly in the post recession period taken under study i.e. till April 2010. Again, the Dupont Model suggests that Asian Star Co. Ltd was more efficient as compared to other sample units of the Gems & Jewellery industry.

The Impact of Economic Recession on Indian Information Technology (IT) Industry has been measured from the performance of following listed companies taken as samples- ACI Infocom Ltd., ADVENT Computer Services Ltd.., BLUE STAR Infotechs Ltd., GOLDSTONE Technologies Ltd.,

PALSOFT Infosystems Ltd. These companies are engaged in computer designing, development, implementation and management of computer-based information systems, particularly software applications and computer hardware…… The average expense ratio for Indian IT industry has been found to be more in pre-recession period as compared to the post-recession average ETR of the industry. This infers that the operating performance of the Indian IT industry has not been affected negatively due to global economic recession. The analysis further states that average gross profit ratio of the Indian IT industry was negatively affected due to global economic recession. The average EPS for Indian IT industry was μ = 4.76 in pre-recession period which happens to be more in comparison to the post-recession EPS μ = 3.08 of the industry. There has been a visible negative impact on Indian IT industry immediately after   recession. By analyzing ROI ratio under Dupont Model it was found that the Goldstone Technologies Ltd. had been efficiently utilizing its asset to generate sales in post-recession period in comparison to other sample companies taken in IT industry.

TATUS OF HYPOTHESES TESTING

The Pre-Post measures were further statistically analyzed using T Test, so that it can be ascertained that the differences between the means are due to the phenomenon i.e. 'Economic recession' and not "by chance". Statistical tests allow us to make statements with a degree of precision. Level of significance has been taken up to .5 and .1, as the data has been procured from secondary sources.

- In case of Expense turnover ratio in automobile industry, the ETR for pre-recession and post-recession period were tested through paired t-test (two-tailed) at á = 0.05. The result observed was t =.374, which was not significant at any level of risk. Null hypothesis was not rejected. Hence expenses performance of the Indian automobiles industry was not significantly changed due to global economic recession.

  The Indian hotel industry ETR performance through paired t-test (two-tailed) observed t = - 7.67 which was highly significant at 1% level of risk. A null hypothesis was rejected. Hence expenses performance of the Indian hotel industry was affected due to global economic recession.

  In case of Gems & Jewellery industry ETR performance through paired t-test (two-tailed) at á = 0.05 the observed result was t = - 2.09 which was not significant at any level of risk. Hence expenses turnover performance of the industry was not significantly affected due to global economic recession.

  The ETR performance through paired t-test (two-tailed) at á = 0.05 and it was observed, t = - 0.740 which was not significant at any level of risk. Hence expenses performance of the Indian IT industry was not affected due to global mild economic recession significantly.

- In case the average OPR of the Automobile industry SPSS output by using paired t-test where t = -1.136 and not statistically significant at any standard level of risk. Hence the OPR performance of the industry is not influenced greatly due to global economic recession. For Indian hotel industry operating performance measured through paired t-test (two-tailed) observed that t = 4.78 which was highly significant at 1% level of risk. Null Hypothesis was rejected. This inferred that operating performance of the Indian hotel industry was adversely affected due to global economic recession.

  The study under consideration tested the operating performance through paired t-test (two-tailed) at á = 0.05 where observed t = 0.14 and which was not significant at any level of risk. Hence operating performance of the Indian Gems & Jewellery industry was not affected positively/negatively due to global economic recession.

  In case of Indian IT industry the operating performance analyzed through paired t-test (two-tailed) at á = 0.05 where t = 1.23 observed and which was not significant. Hence operating performance of the Indian IT industry was not affected positively/negatively due to global economic recession.

- In case of GPR- The t-value for the GPR (pre and post) was t = - 1.141 which was negative and not significant at á = 0.05. Thus Null hypothesis has been accepted.

  The pre and post-recession Operating performance of Indian hotel industry has been tested through paired t-test (two-tailed) at á = 0.05 where t = 3.72 was observed and significant at 5% level of risk. Null Hypothesis was rejected. Hence gross profit performance of the Indian hotel industry was adversely affected due to global economic recession.

  The pre and post-recession operating performance of Indian Jewellery industry has been tested through paired t-test (two-tailed) where observed value of t = 2.328 significant at 10% level of risk instead of 5% level of risk. Hence gross profit performance of the Indian Jewelry industry was positively affected due to global economic recession.

  Operating performance of Indian IT industry has been tested through paired t-test (two-tailed) and the resultant t = 1.248 which was not significant at 5% level of risk. Hence average gross profit performance of the Indian IT industry has been negatively affected due to global economic recession.

- The NPR for pre-recession and post-recession period for automobile industry were tested through paired t-test where the resultant t = -.907 which was not significant at any level of risk while testing at á = 0.05. Hence net profit performance of the automobiles Indian industry was not significantly changed due to global economic recession. The pre and post-recession period performance of the hotel industry was tested through paired t-test and the

result was t = 2.74 significant at 10% level of risk. Null hypothesis has been rejected. The net profit performance of the hotel industry has decreased in post-recession period very apparently.

For Gems & Jewellery industry observed t value was 1.94, which was not significant at any level of risk. Hence net profit performance of the Indian Jewellery industry was not affected due to global economic recession.

The pre and post-recession net profit performance of Indian IT industry has been tested through paired t-test (two-tailed) at á = 0.05 where t = - 0.87 is observed not significant at any level of risk.

- In case of EPS in automobile industry t = -.394 which was not significant at any level of risk. Hence the EPS performance of whole industry was not much affected. In hotel industry t = .989 which was significant at 5 percent level of risk. Null hypothesis has been rejected. Hence the EPS performance of Hotels industry has been adversely affected due to global economic recession.

In Gems & Jewellery Industry t=1.34 which was not significant at any level of risk. Hence EPS performance of the Indian Jewellery industry was not positively/ negatively affected due to global economic recession.

Indian IT industry was tested through paired t-test (two-tailed) at á=0.05, where the resultant t = 0.60 which is not significant at any level of risk. Hence EPS performance of the Indian IT industry is not positively/negatively affected due to global economic recession.
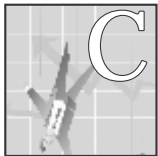
CONCLUSION

On the basis of obtained statistical results it has been deduced that the global recession had only a dampening effect on the growth of Automobile industry, IT industry and Gems & jewellery industry but hotel industry got a major setback. According to analysis made above the expenses in aforesaid industries were not affected much due to recession. Whereas the sales and profitability of these industries dipped in post recession period but did not pose a challenge to their existence & survival. Rather Automobile Industry and IT industry have shown resilience. The Gems & Jewellery and Hotel Industry also have huge growth potential and are about to bounce back after this short term phenomenon. Latest information indicates that these are on the path of fast recovery. In fact when the developed nations of the world were feeling the scorching blaze of recession, Indian industry felt the placid heat only i.e. a slowdown with lesser intensity. Various factors attributed to this industrial resilience which correspond to the third objective of the study may be counted as:

- The conservative but sensible financial policies of the government- An approach of full convertibility of rupee on the Current account, but a very cautious phased out approach towards Capital account convertibility. & maintaining a grip on exchange rate. Along with it

expansionary monetary & fiscal policy helped in achieving external as well internal balance in the economy. This corresponds to Mundell Model. Monetary policy focused on augmenting liquidity-both domestic rupees as well as foreign exchange liquidity- to make them available at lower rates. This was supported by fiscal stimulus measures aimed at cushioning the deficiency in demand as well as helping the economy to return back to normal pace of activity & growth.

- Large domestic demand emanating from the huge middle class and consumerism insulated these industries from external shocks and dipping demand.

- High rate of domestic savings: The Indian psyche of saving money was a big savior in these testing times when organizations turned towards the domestic banking sector for their investment needs with lesser Foreign Institutional investments in the market. Along with it, RBI's decreasing Bank rate, cash reserve ratio, Repo rate, Reverse Repo rate helped in credit expansion and stimulation of investment to support industry.

- Cheap resources: The availability of cheaper factors of production, especially labour, also helped these industries to sustain the recessionary shocks.

- Skilled and educated labour: It was a major reason behind the quick recovery of the industries under study, especially the automobile and Gems and jewellery industry which had creative and skilled labourers, to bring in competitive advantage. Along with this, the huge army of IT professionals brought an added benefit to the IT industry which has put India in almost reigning position over the world. This was a major economic attribute to achieve the competitive advantage according to Porter's diamond model.

- Improving infrastructure: To fight out recessionary trends, the government introduced various fiscal measures, especially the public expenditures through huge investments in infrastructure

- Comparative as well as competitive advantage to our industries helped them in surviving this catastrophe. Comparatively cheaper labour in the IT sector, gems and jewellery sector, and the automobile industry has brought comparative advantage in the form of decreased costs. Along with it, their skill and efficiency were helpful in getting competitive advantage to brush aside the business losses in these industries. India was the cheapest destination for outsourcing of quality IT services of research projects, website development and design work.

- Promotion of tourism: India is the most popular destination for heritage tourism, adventure tourism, eco tourism, and medical and wellness tourism, which may boost up the hotel and tourism industry, especially in the post-recession period.

- Huge pump priming of Rs 3 lakh crores in the economy

with specific measures for various sectors, especially to export industries was another great reason for their resilience.

• Entrepreneurship: Recession was a great time to start new ventures and boosting innovation as laid off engineers, scientists, and other skilled persons decided to pursue their own ideas. Entrepreneurship has been promoted, especially in the IT sector giving the industry sustainability.

The fourth objective has been accomplished by indicating towards various comparative & competitive advantages mentioned in Porter's Diamond model of competitiveness, which can be amassed and incorporated by these industries not only to gain financial vigour and vitality to sustain the inevitable economic phenomenon like recession, but to succeed in achieving global competitiveness in modern times.

LIMITATIONS OF THE STUDY

The present study measured the impact of recession on only four but major industries namely hotel industry, automobiles industry, gems and jewellery industry and information technology industry with limited number of units considering the paucity of time & resource constraint.

The research was based on secondary information. Moreover the secondary information taken was not for a long period, as economic recession surfaced in 2007 only.

The data has been primarily taken from published annual reports of the companies. Authenticity of research findings depends upon the authenticity of secondary data used in the study.
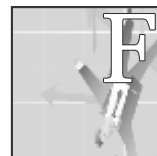
FURTHER SCOPE OF THE STUDY

The study can be replicated to verify more industries and larger samples.

Since the industrial recovery has been attributed to the government policies up to an extent, we can make another empirical study to explore the effectiveness of these policies as well as the effectiveness of corporate strategies. Along with it, various social, economic, psychological and sociological perspectives related to recession can also be taken as further statistical studies.

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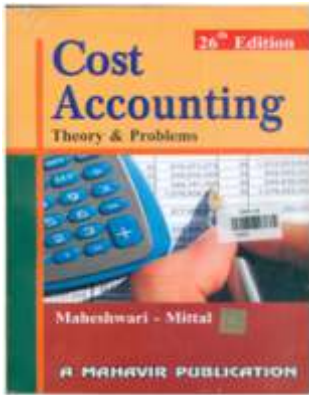
COST ACCOUNTING -THEORY & PROBLEMS

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The business organisations in today's world are witnessing opportunities and threats alike. Some organisations maximize opportunities and minimize threats to become leaders while those who cannot do so, vanish sooner or later. The focus is on improving the bottom line. To achieve this objective, a paradigm shift towards cost management techniques need to be undertaken and it is imperative both for practitioners and budding managers to comprehend the cost concepts, techniques and their management. This need has been fulfilled through the 26th revised edition of the book titled "Cost Accounting-Theory and Problems". The inclusion of all latest concepts, upgradations and updations relevant to the topics are a special feature incorporated by the authors. The book provides an exhaustive coverage through FIVE sections divided into Twenty Three comprehensive chapters.

SECTION ONE covers the "Costing Fundamentals" in six chapters (1-6). To achieve success in this competitive business environment understanding of costing fundamentals is essential for the business managers for effective decision making. Chapter 1 discusses the basics of cost accounting which sets the ground for further understanding of the subject. Globalization has resulted in expansion of businesses across the world and a wide range of products are entering the market. Appropriate methods and techniques are required for controlling the costs of essential components viz. Material, Labour and Overheads for effective cost management. An understanding of the procedure of materials control will assist the business managers in continuous and adequate supply of materials for conduct of smooth manufacturing operations. The book serves the purpose with the inclusion of complete procedure of the materials control in chapter 2. As is rightly said, "Without labour nothing prospers", the cost of the product largely depends upon the efficiency of labour but achieving effectiveness is easier said than done. It becomes mandatory for the managers to familiarise with the choice of

methods of remuneration, controlling idle time cost and ensuring optimum utilisation of resources to optimise labour costs. All these concepts have been explained by the authors in chapter 3. Overhead costs are a crucial matter of concern for every organisation, because, everybody has them but nobody owns them. Overheads, also known as supplementary costs, constitute an essential element of cost as they are incurred both for manufacturing a commodity and making it ready for sale. Chapter 5 deals with allocation of overhead costs to the end product. In this section the authors have included a new chapter 6 on Activity Based Costing. It is a method of cost attribution to cost units on the basis of benefits received from indirect activities. The performance of particular activities and demands made by these activities on the quantity of resources of an organisation are linked together so that cost of product is arrived at as per the quantum of actual activities performed to produce a product or service.

Businesses are diverse in their nature of operations and characteristics of finished products produced or services rendered. The job of building a house is quite different from running a motor vehicle for a kilometre. Though, in all cases, the basic principles and procedure of costing remain the same but methods and techniques to ascertain cost of their products or services are different. Taking this into consideration, authors have delineated "Costing for Specific Industries" in SECTION TWO comprising of four chapters (7-10). Chapter 7 discusses the single or output costing; the system is, most commonly used in case of industries like breweries, brickworks, dairies and sugar mills. All types of manufacturing concerns can broadly be classified into two categories –(i) Mass production concerns (ii) Special order concerns. Special order concerns manufacture products in clearly distinguishable lots in accordance with special orders and individual specifications. In such concerns, it is necessary to keep a separate record of each lot of products or jobs from the time the work on the job or product begins till it is completed. Chapter 8

provides the complete procedure of preparation of accounts according to the job, batch and contract costing. These costing methods are suitable in case of Printing Shops, Construction Companies, Machine Tool Manufacturing, Repair Shops, Wood-Work Shop Etc.

When a product passes through different stages of production, each distinct and well defined, process costing is employed. This type of costing is useful in the case of manufacturing erasers, oils, chemicals or processed food, etc.. In Chapter 9 exhaustive procedure of maintaining the process accounts has been described in very lucid manner. Adequate number of illustrations has been added for better understanding of the subject. Operating costs are the costs incurred by service providers. Most widespread examples of such undertakings are the Transport Concerns, Gas Agencies; Electricity Undertakings; Hospitals; Theatres etc. The varied nature of activities carried out by the service undertakings requires a different costing system. Chapter 10 comprehends the concept of operating or service costing and also acquaints the readers with the process of ascertaining the unit cost of a particular service.

In this challenging business world to become a leader in the industry, adoption of strategies like cost control and quick decision making are essential. Proper maintenance of cost accounts and financial accounts facilitates managers in effective decisions making. Cost accounting records can also be kept on the basis of double entry system which helps in checking the accuracy of the posting made. This also assists in reconciliation of cost and financial accounts. SECTION THREE emphasizes on the "Accounting Methods" with the help of three comprehensive chapters 11, 12 and 13. These chapters impart knowledge about the method of maintaining the cost control accounts or non-integral accounts, reconciliation of cost and financial accounts and integrated accounts respectively. Ledgers required by financial as well as costing departments have been mentioned in the chapters along with the procedure for making accounting entries.

SECTION FOUR themed as "Costing for Control" contains ten chapters (14-23). It is stated that, "Economy is the method by which we prepare today to afford the improvements of tomorrow". Savings of today will help us tomorrow. Effective budgeting techniques are useful in proper planning of future income and expenditure of individuals or business organizations. In large organizations such planning is highly formal while for smaller businesses, it is less formal. Keeping in mind the importance of future planning authors have dedicated Chapter14 to the immediate future planning i.e. the next year through describing the complete process of budgetary control. Planning is indispensable for making control effective. Growing competition has made survival of businesses much more complicated than earlier. In this turbulent time, cost control has become a major issue of concern for organizations across the world. To meet the challenges of current business world, standard costing

technique help the managers to control costs through setting up standards and comparing it with actual, for identifying the deviations in the usage of different elements of costs. Specialized techniques for calculating variances of materials, labour and overheads have been thoroughly elucidated in chapter 15. With the advent of information technology, exposure and awareness of customers have increased manifold. Customers are demanding high quality products at lower prices. Hence, in the present scenario profit generation has become a challenging task; therefore, marginal costing technique and its use in effective manner has become need of the hour. With the help of marginal costing technique, break-even point, point of margin of safety, effect of change in prices on net profit, effect of change in selling price on profits can be analyzed which will facilitate business managers in taking important decisions regarding how much to produce, what to produce, how to produce, when to produce, at what cost to produce, how to maximize the profits and minimize the costs. Chapter 16 provides insight into the concepts of marginal costing and cost volume profit analysis.

Uniform costing technique emphasizes on the adoption of same costing principles, practices and procedures by the firms working in the same industry for inter-firm comparison. It was first introduced by the National Association of Stove Manufacturers of U.S.A. which developed a uniform formula for use by its members for costing industry's products. In India, it is used in coal industry, steel industry, fertilizer industry and can be used in the other industries too. It is also useful for price fixing bodies, like Bureau of Industrial Costs and Prices or other Government departments to determine the average cost and fixing the fair selling price of various products. Chapter 17 illuminates the concept of uniform costing and inter-firm comparison. Uniform pattern adopted by all helps mutually in cost control and cost reduction which is at the high priority for organizations. Chapter 18 has been completely revised by the authors as per the recent changes in Cost Records and Cost Audit Rules, 2011 notified by Ministry of Corporate Affairs (MCA). A new concept of operational audit has also been incorporated in this chapter.

To prosper and survive during recession every organization across the globe has adopted cost reduction strategies which aid in the maintenance of reasonably good financial returns. The authors have described the concept of cost reduction along with its different techniques for future business managers in chapter 19. Value analysis through cost reduction has also been discussed in the chapter. Value chain analysis is a powerful tool in the hands of management accountants to identify the key activities within the firm which form the value chain for that organisation, and have the potential of a sustainable competitive advantage to the organisation. Chapter 20 provides thorough understanding of the concept of value chain analysis. Chapters 21, 22 and 23 throw light on the innovative concepts of quality costing, target costing, and life cycle costing respectively.

Providing high quality products to the customers is essential for the organizations to stay ahead from their rivals in the market. Quality costing is one of the latest tools of management accounting described by the authors in chapter 21. Quality costing focuses upon quality systems and processes and their designing in such a way that the enterprise provides value to the customers by meeting their requirements, as to quality specifications and product reliability. In traditional costing system, cost ascertainment was undertaken after producing the product and then price was decided. In the modern costing system, organizations determine the costs before development of the product according to the paying capacity of the target group; this approach called target costing has been explained by the authors in chapter 22. The last chapter 23 describes "Life Cycle Costing" which used to estimate total life cycle cost of a procurement process which considers overall total cost, i.e., sum of acquisition and life cycle ownership cost of an item.

SECTION FIVE of the book contains revisionary problems on important topics along with their solutions which provide complete guidance to the students in preparation of their examinations. Basic formulae related to different topics are provided at the beginning of the book for revision at a glance. Solved illustrations along with the working notes make the book self-explanatory to the readers. Two appendices have also been incorporated at the end of the book. In Appendix-1 extracts from terminology issued by Chartered Institute of Management Accountants, London, are included. The basic features of all the thirteen cost accounting standards have been incorporated in Appendix-2.

The concepts explained in the book are presented in a very logical sequence. Adequate number of practical illustrations to understand the concept have been included in the chapters which make the theory all the more interesting and self explanatory to the readers. The book follows an examination oriented approach with the inclusion of questions from different university examinations. The language of the book is lucid and reader friendly. Learning objectives mentioned at the beginning of each chapter give an insight to the readers regarding the coverage of the topics in the chapter. At the end of each chapter, test questions, practical problems and key terms are given for pondering and better grasping of the subject. The book provides a holistic view to the students, pursuing M.Com, MBA, CA, CS, CFA, ICWA and other professional courses. With all the updations, innovative features and exhaustive practical exposure, the book is an irreplaceable source of knowledge for the readers.
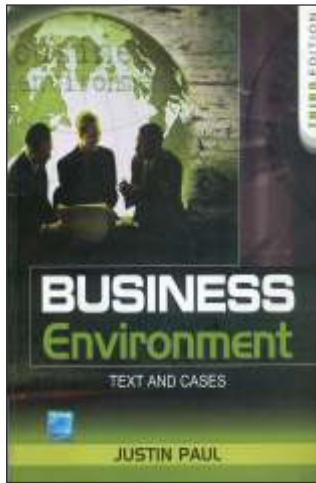
BUSINESS ENVIRONMENT TEXT & CASES

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Business Environment is very vast concept and understanding all the environmental aspects of business is a crucial task. Recent economic crises of US has impacted whole economy at a large scale and hampered trade & commerce around the world particularly in developed countries. Moreover, understanding the impact of such crises on corporate sector is very important for all the business students as well as corporate personnel. Present book by Justin Paul on business environment provides comprehensive understanding of business and its environmental aspects. The topic business environment covers various aspects of business such as economic, political, global and its impact on future of Indian corporate. The process of globalization has become an irreversible phenomenon and it becomes very important for the business personnel or management to understand these aspects.

The book is divided in nine parts. The economic aspects of business are explained in detail. Part one comprises of three chapters. Chapter 1 explain the introduction of nature and dynamics of Business Environment where global capitalism is explained through its history. In order to make the book useful for current market situation, recent sub prime crises and recession has been covered in detail. It also covers economic system, its growth and development in current situation and its importance in business. Chapter 2 comprehend the political environment and economic system of the country and chapter 3 deals with the concept of economic growth, development and measure poverty issues.

Part 2 consists of two chapters, deals with the Indian economic perspective of economic reforms, globalization and its impact on businesses. In this part the author has touched upon the business environment of different sectors. It stated that external sector plays a key role in enabling the conditions to accelerate the pace of the external liberalization process. It further asserts how different sectors are contributing to the growth and development of country. It also covers the outline the phases of globalization and analyze their impact on different sectors. It explains the problem and issues involved in globalization which can be a threat in growth and development of economy such as unemployment, deterioration in the quality of jobs and increase in economic and political inequalities.

Part 3 comprises three chapters, explaining the business aspects in global business environment, it is very essential to understand the industrial policy including foreign direct investment and policy for small scale industries. Further in relation to explaining various industrial policies in detail, different sectors such as FMCG, Chemical and Pharmaceuticals are explained in detail. SWOT analysis of all the sectors is given after each analysis which reflects cost competitiveness, investment in innovation, and significant export potential. Cases on Cipla, Nicholas Piramal and Dabur India are added to give an idea about sector analysis.

Part 4 consist of three chapters covering the problems and prospects of privatization. It is becoming an important issue these days in India which every business needs to understand and thus author has covered these topics with related policies such as fiscal & monetary policy, union budget, Banking sector reforms and tax related matters. Various objectives of privatization are reduction in burden on government, improving public finance and to fund infrastructure growth. It is also stated that there are some difficulties also in privatization such as union power, social institutions, and corruption. Misuse of power by new owners and private monopoly creation. Monetary policy is a means by which the government regulates the level of aggregate output and money and also the general price level.

Part 5 consisting of one chapter explains the technological environment as an important element in business world. Importance of technology in gaining competitive advantage has been very well covered in part 5. It includes remote banking, effect of technology on risk in banking and delivery channels and channel migration. It is stated that technological initiatives taken by banks are part of their channel diversification strategy. It is concluded that the future of banking will be one in which customers can address most of their needs through self directed means i.e. technological environment.

Part 6 comprises of two chapters and talks about various legal issues involved in financial market and Indian financial system such as derivative market, stock indices and norms for mergers and acquisitions. It gives an idea about the legal aspects involved in the business which should be considered in ensuring the market for long term sustainability of firm. This part of he book highlight the ban on age old badla system, introduction of rolling settlement and addition of three more derivative products, such as options, futures and stock index.
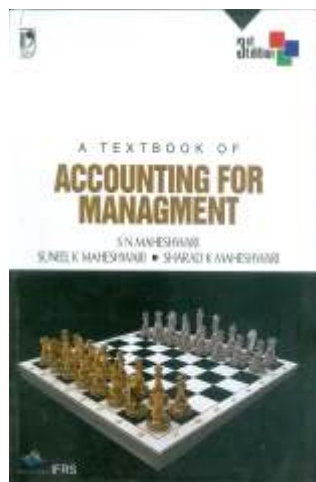
Part 7 consists of six chapters and covers Indian trade policy, WTO agreement, balance of payment, currency convertible, ADR/GDR and global outsourcing and multinational companies and FDI. IT explains the causes of global recession and financial crises during 2008-09 and nature and implications of global recession on the new business environment. It is found in part 7 that firms which formulate their business strategy, taking into account all changes and diversify their destination might emerge as winners in the post crises era of globalization. It is also observed that there are no absolute comfortable foreign exchange figures; nor is market sentiment predictable and volatile global financial market leading to many factors such as political, country and economic.

Part 8 with two chapters covers social environment of India and China including child labor issues, women in workforce and poverty. The societal aspects in India and China both have

to work towards the upliftment of the society. There are many issues demanding attention in India and China such as reduction in poverty line, improving working condition and stabilization of population. In today's scenario corporate governance and corporate social responsibility are most talk about topics and authors has very well explained same in easy to understand manner. It also explain the importance of corporate governance and stated that more progressive companies are voluntarily accepting tougher accounting standards and more independent directors than are mandated by law.

Part 9 comprises of five chapters and covers economic and business environment of Europe and SAARC countries. This part also includes business environment of developed countries to compare it with international standards. First chapter of part nine explain economic environment and policies in Europe and potential prospects of doing business in "Euro" countries. It is concluded that many of latin America have adopted more prudent and open policies that foster competition and participation in global markets. A prudent fiscal policy is crucial to economic stability and several of the economies of the region have made significant strides in this direction.

Justin Paul as on author is becoming brand in writing qualitative books in India. The present book is third edition of same title and four new chapters have been added in this edition i.e. nature and dynamics of business environment, global recession and new business environment, multinational companies and foreign direct investment and economic and business environment in east and south east Asian countries. And apart from this there are number of new cases and practical problems which are related to current economic situation have been added. And the best part of third edition is coverage of major sectors of economy. The book is meant for professionals and students from management and economics background. It can be useful for all those professionals who act as advisors.

A TEXTBOOK OF ACCOUNTING FOR MANAGEMENT

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The vicissitudes and progressions in business practices, legal framework and escalating complexities in the dynamic milieu have led to a radical transfiguration of role of accounting. The traditional role of stewardship has been replaced by a proactive role in financial decision making, strategic management, constructing resilient internal controls and a forceful role in planning taxes so as to abate tax burden and capitalize on income, within the legal boundaries. Accounting professionals, in this era of globalization, have been progressively levitating their standards to match the global parameters with emphasis on greater accountability and transparency, to bring the Indian and global perspectives together on issues of contemporary relevance to accountancy profession.

Deliberation on conversion of new emerging challenges into opportunities for inclusive growth, from the point of view of accountancy profession in India and the world, has led to need for a strong and internationally comparable reporting system while at the same time helping to reduce corruption and mismanagement of resources. In the wake of various financial crises, continued efforts are being made towards improving the quality of corporate reporting as an important part of measures towards reinforcement of the international financial architecture.

Keeping oneself abreast of all the increasing amendments in the various decrees, formats like changes in Schedule VI of the Companies Act, 1956, legislations, stringent procedures of regulatory authorities, is becoming all the more difficult in the contemporary capricious times. All managers, whether novel to their positions or well-established in the organizational hierarchy, can use a little "brushing up" now and then. The book under review takes care of this prerequisite and provides hands on experience to all facets of accounting. Needless to say that whatever are the responsibilities in the organization, accounting skills are indispensable to reach pinnacles of success.

Appreciating the growing necessity, the authors have meticulously divided the book into five sections, each encompassing a specific fragment of accounting. Having an unequivocal, intelligible and transparent accounting system is imperative in this day and age. Rudimentary knowledge of accounting is indispensible for executives at all levels for the subsistence and progression of the business, be it small, medium or large. The authors have catered to this need by dedicating the first section to discussion of "Accounting Fundamentals", segregated into eleven different chapters. Chapter one: Meaning and Scope of Accounting deliberates meticulously on the nitty-gritties of accounting including meaning and scope, the basic accounting terminology and the accounting process. The second chapter: Accounting Principles, incorporates the current status of IFRS and its convergence in India in the form of Ind AS, together with a brief synopsis of all the Accounting Standards presently in practice.

Negotiable instruments, used freely for making payments and discharging obligations, are significant in the business domain. Cheques, bills of exchange, promissory notes and other negotiable instruments, used in commercial transactions and monetary dealings, play a vital role in boosting trade and commerce. The concept and types of negotiable instruments alongwith the procedure of recording the related transactions have been explained in chapter seven: Negotiable Instruments. For the expediency of the readers, the treatment is given in a tabular form for both, the books of the drawer as well as the drawee of the bill. This will assist the readers in effortlessly comprehending the journal entries for the various stages of processing of the bill.

Advancements in technology bring in new products to the market, thus, making the current ones obsolete. Also, constant usage causes wear and tear, consequently, diminishing the value of the asset. It is, therefore, crucial to appraise the asset annually and allocate the cost of the asset over its useful life. It will help to bring the asset to the value that it would fetch approximately in the market if sold today, thereby, warding off losses in the actual event of a sale, and the financial statements of the company will reflect a true and clear picture of its standing. The methods of depreciation have been detailed

upon in chapter ten: Depreciation Provisions and Reserves with the help of numerous examples to make the concepts clear to the readers. The provisions of AS-6 (Revised): Depreciation Accounting as issued by ICAI have also been discussed in this chapter.

Inventory, usually, comprises of the major proportion of the current assets held by a trading or manufacturing enterprise. Unwise investment in inventories, i.e. both, excessive and shortage, in the first instance and its inappropriate valuation later on, affects the liquidity, productivity and the profitability of the enterprise. Chapter eleven: Inventory Valuation deals with AS - 2 (Revised): Valuation of Inventories, which states that inventory should be valued at lowest of "cost" and "net realizable value". In addition, the periodic and perpetual inventory systems and the various methods of valuation of inventories have also been discussed.

Over the years, there has been an accretion of extensive research in management accounting. The traditional management accounting role of cost determination and financial control has been defied and budged to a more sophisticated role of creating value through the development of novel management accounting techniques and practices. These have been discussed in Section – II: Cost and Management Accounting, which has been sub divided into 5 chapters. The first chapter: *Management Accounting: Nature and Scope* explains the basic ideology of management accounting, whereas the second chapter: *Cost Accounting: Meaning and Scope* caters to cost accounting and its related concepts. The numerous cost concepts like classification of cost, cost reduction and cost control, cost objective and cost accumulation have been dealt with in detail in the next chapter: *Basic Cost Concepts*. Readers develop a concrete understanding of costs and cost behavior and the use of cost information for planning and control decisions.

Human Resource Accounting (HR Accounting) is still considered a new term for a lot of small businesses as most view employees as assets but forget that there is a real tangible cost associated with obtaining and retaining these resources. Narayan Murthy, founder of the IT giant Infosys, opines that "My assets are not the buildings, the business or foreign contacts. My assets walk out of the gate every evening and I wait for them to come back to me the next morning." The authors, empathetic to the intensifying recognition of human resources and their valuation, have included a separate chapter *"Human Resource Accounting"* in this revised third edition.

Also, imminent and pioneering concepts like Backflush costing, Life cycle costing, Economic Value Added, Target Costing, Kaizen Costing and Balanced Scorecard have been discussed in chapter five: *Innovative Concepts* to keep the readers abreast of the latest terminologies and their applicability.

A corporation's financial statements make available expedient statistics on its economic standing and profit levels, thereby, facilitating stakeholders cognize operating data, assess cash receipts and payments and appraise owners' investments in the company. This analysis of financial statements allows evaluation of periodic business performance and can be conducted by adoption of one or more of the various tools and techniques of financial analysis like preparation of comparative financial statements and/or common size financial statements, calculation of trend percentages, funds flow analysis, cash flow analysis, CVP analysis and ratio analysis.

Section – III: Financial Analysis caters to the need to provide a systematic and effective basis for business analysis. It has been further segregated into three chapters, wherein analysis and interpretation of financial statements, funds flow statement and cash flow statement have been discussed with the help of numerous illustrations. Test questions and practical problems at the end of each chapter assist in assessment and solidification of the knowledge base of the readers.

Financial planning and control, being a strategic process of Corporate Performance Management provides, on one hand, internal succor in planning, navigating and monitoring value creation, while on the other, it offers external guidance in equipping stakeholders with key corporate information. Diverse modus operandi, essential for planning and control, have been discussed at length in the Section IV: Planning and Control, which has been segregated into seven chapters, each delineating different aspects of the techniques.

Management is labeled efficient, if maximum results are attained with minimum costs and efforts. Accomplishment of maximization of profit levels, both in the short term and long term, is possible by managing production outlays and administrative incidentals adequately. Corporate leaders, usually, monitor earnings and disbursements in operating activities using budgeting as a cost control tool. Budgetary control is a potent tool that encourages planning, sets milestones, evaluates performance and suggests paths for improvement, thus, providing information that communicates strategic and operational priorities to managerial decision makers. The authors have deliberated upon different types of budgets and control ratios very articulately in the first chapter, *Budgetary Control*, under Section IV. Also, novel and incipient budgeting techniques like programme budgeting, performance budgeting, responsibility accounting and zero based budgeting have been delved upon in a simple and comprehensible manner, enabling readers to grasp the concepts effortlessly.

But, a budget is usually considered to be just an estimate of what is going to happen rather than reality. The process of analysis and decision making is impracticable without responsibility which should be commensurate with controllability. For controlling to be effective, establishment standards and benchmarks are essential to measure actual values against goals and standards. Variances are not ends in themselves but springboards for further analysis, investigation, and action. This exploration of inconsistencies, known as variance analysis, helps management to improve operations, correct errors and deploy resources more effectually to reduce costs. The same have been deliberated upon in detail in chapter three: *Variance Analysis* along with copious practical illustrations.

In this era of ferocious competition, customer is the king. The consumer desires best quality product at least prices,

challenging companies to earn decent profits while meeting the demands. The technique of marginal costing, as a tool of planning and monitoring costs based on selection of resource drivers and separation of costs into fixed and variable constituents, assists in ensuring that ebb and flow of costs, caused by fluctuating operating levels, are accurately predicted and incorporated into variance analysis. It acts as a guiding force for deciding optimum selling price, exploring new markets, determining sales mix, choosing amongst different market strategies and making decisions regarding make or buy, equipment replacement, expansion or contraction, discontinuance of a product line and shut down or continue. These have been discussed with the help of practical questions, enabling the readers to be able to understand the conceptual details regarding the diverse decisions along with their practical implications. The systematic presentation and self explanatory solutions to illustrations accompanied by proper working notes help the readers to easily comprehend the implications of the concept of key factor and differential costs in the various decisions involving alternative choice.

A new section on "Case Problems" has been introduced, incorporating seventeen cases with their detailed solutions. The case studies included in the book, covering a wide array of significant topics from the other four sections, have been chosen well and reviewed by experts from all over India. These case studies provide a systematic way of viewing events, collecting relevant data, analyzing the information and reporting the results, consequently, sharpening the understanding of the theoretical concepts and their applicability practically.

The book thoroughly reviews emerging issues in different areas of accounting and emphasizes the interpretation alongwith the construction of accounting information and encourages a critical, rather than unthinking acceptance, of the underlying assumptions behind accounting. Despite the fact that all managers need not have the knowledge of a professional, they must still have a basic understanding of how money is tracked and accounted for in an organization. The authors have ensured that the book has ample ideas and stratagems, by defining the essential terms and more importantly, discussing their application in everyday business, to help managers develop skills to become more adept, efficient, effective and valuable to their organizations.

The book under review is an excellent reference resource for academicians, students preparing for graduate and post graduate examinations conducted by various universities and examinations conducted by professional bodies like Institute of Chartered Accountants of India, Institute of Company Secretaries of India and Institute of Cost Accountants of India, avid readers besides professionals and practitioners. It offers a relevant, real-world decision-making approach to different areas of accounting and enables practitioners to review developments and explore their relevance for use in their own organizations. This new edition has been extensively updated through out and now covers reference material on human resource accounting, emerging concepts, IFRS, Ind AS and the new accounting standards.

The concepts are clearly explicated in brief and concise paragraphs, taking in all pertinent theoretical and practical topics that are applicable in the industry. The book is based on concrete conceptual foundations and illustrates the concepts by applying them to realistic situations. It also contains adequate illustrations and well worked-out examples where needed, while remaining coherent and logical in terms of its structure. Each chapter ends with a concise glossary "Key Terms", "Test Questions" comprising of multiple choice questions, essay type questions and practice exercises under the heading "Practical Problems", to enable the readers to assess and evaluate their knowledge. Ultimately, the strength of this book lies in its simplified and direct approach. The text is presented in a manner that is easy to read and comprehend, without sacrificing any of its scope or substance. It is the perfect tool for all interested in gaining an understanding about financial accounting, cost accounting and management accounting.
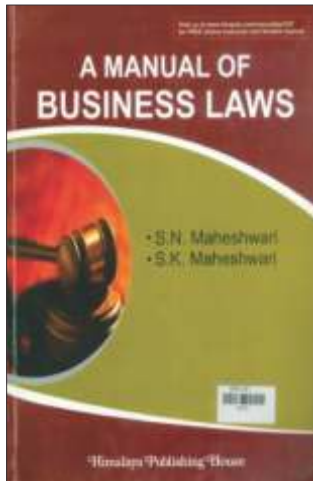
A MANUAL OF BUSINESS LAWS

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Spiritually, it is believed that the life on the earth is regulated by the laws of the Lord or the Divinity. Law acts as the cementing material of society and an essential medium of social change promoting accuracy of expression, skill of interpretation and understanding of social values. Today, legal education derives its impetus from the economic, social and political set up of the society. A well administered and socially relevant legal education is a sine qua non for proper functioning of the society. To exercise the legal system, capable citizens are required with a proper understanding of the laws, affecting their lives. Giving legal education a human face would create law abiding citizens, instilled with concepts of human values, ethics and rights, transforming business managers into effective personnel.

The book titled "A Manual of Business Law" is inscribed to impart understanding of various social and economic legislations like the Indian Contract Act, Partnership Act, Sales of Goods Act, FERA: FEMA, SEBI and certain labour laws. The book under review is written primarily to meet the needs of bankers, students of law at B.Com. BBA., M.Com., and MBA and provides a clear understanding of the various Acts and their implications via case-laws.

For easy comprehension and learning, the book is organized into six sections and each section is further classified into various chapters, elucidating all the aspects of the Acts exhaustively. The key terms, objective type questions, and practical problems provided at the end of the chapter offer better clarity of the topic.

Rules and regulations bring a sense of seriousness and definiteness in business dealings. The Law of Contracts is the basis of business law because the transactions of the trade; commerce and industry are based on contracts. Understanding of the Contract Act becomes imperative for all individuals. The FIRST SECTION elaborates the Indian Contract Act, 1872 with the help of fifteen chapters. Chapters (1to 6) elucidate the essential elements of the contract like offer and acceptance, competence of contracting parties, consent, consideration, legality of the object.

Chapters 7 & 8 explain various types of agreements and contingent contracts. Detailed discussion on the execution of the contract has been covered in the 9th chapter. This is followed by discharge of the contract and remedies for breach of the contract in the 10th and 12th chapter. Contract Act has laid down certain special rules for certain contracts like, Contract of Indemnity, Contract of Bailment & Contract of Agency which are covered in 13th, 14th, and 15th chapters respectively.

Transactions relating the sale of goods form a considerable part of commercial dealings. An Act has been enacted to deal with the legal issues concerned with the contract of sales" Sales of Goods Act, 1930". The authors explicate this particular act in the SECOND SECTION, comprising of five chapters. The first two chapters focus on the Contract of Sales, Conditions and Warranties. The main object of contract of sale is the ownership of goods and its transfer which is dealt in the 3rd chapter. Performance of the Contract of Sale and Remedial Measures are explained in the 4th and 5th chapter of the section.

To carry on a business, a person may choose any form of organization depending upon his needs. "Partnership" is the most common form of business organization. Hence it becomes important to understand the legal aspects which exist between the partners carrying on business together. The THIRD SECTION of the book comprises of four chapters (1-4), which detail the legal aspects of the partnership. The 1st chapter elaborates general principles of partnership. Followed by the 2nd chapter which elucidates the formation of partnership. The section ends with the discussion of rights and liabilities of the partners and dissolution of partnership firm in the subsequent chapters.

Negotiability is one of the salient features in the interchange of commodities which has lead to diffusion of the boundaries between the nations and opening new channels of trade and commerce. Negotiable Instruments are money/cash equivalents controlling the trade and commerce. They play an important role in in settlement of debts and claims. These have been explained meticulously in the FOURTH

SECTION. Introduction to Negotiable Instruments and parties to the negotiable instruments are discussed in the first two chapters. The next three chapters encompass Presentment, Negotiation, & Discharge of Parties. Banker's liability in the current scenario is briefly dealt with in the 6th chapter.

In India, the Companies Act, 1956, is the primary legislation that empowers the Central Government to regulate the companies. It empowers the Central Government to inspect the books of accounts of a company, to direct special audit, to order investigation into the affairs of a company and to prosecute the violators of the Act. In view of the above, the authors have incorporated the Elements of Company Law in the SECTION FIFTH of the book (22 chapters).The first 7 chapters explicate the formation of the company and the requisite documents followed by the chapters six and seven delineating with prospectus and share allotments.. The topics covered in chapters from 8 to 20 deals with the Borrowing Power, Managerial Remuneration, Role of Directors & Secretary, Accounts and Audit, Dividends, Bonus, Prevention of Oppression and Mismanagement. The circumstances for the winding up of the company are discussed in the 21st chapter of the section.

The tremendous growth of the Indian corporate sector and the global competitive environment has made it necessary both for the government and the corporate to have easy and secure access to all types of services required under the corporates. Keeping in-tune with the e- governance initiatives and their importance in the future the authors have acquainted us with the e- filing process, digital signature, Director Identification Number (DIN) Corporate Identity Number(CIN) in the last chapter of the section. SECTION SIXTH of the book is a compendium of various social and economic aspects of the legislation like Cooperative Societies Act, 1912 the Multi State Cooperative Societies Act, 2002, Gratuity Act, Payment of Bonus Act, Payment of Wages Act, EPF & Miscellaneous Provisions Act 1952.

The Essential Commodities Act, 1955 was enacted to ensure easy availability of essential commodities to the consumers and to protect them from exploitation by unscrupulous traders. The Act provides for regulation and control of production, distribution and pricing of commodities, which are declared as essential for maintaining or increasing supplies or for securing their equitable distribution and availability at fair prices. This Act is discussed in the first chapter of this section.

Escalating consumer need is the most powerful motivating force of production, yet at the same time consumer is a vulnera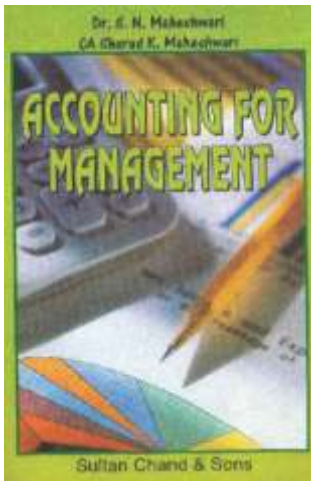ble component of the marketing system. To safe guard the interest of the consumer, Government of India enacted a legislation-Consumer Protection Act which enshrines the rights of the consumer such as right to safety, right to be informed, right to be heard, right to seek redressal and right to consumer education, which is the focus of the second chapter of the sixth section of the book.

Foreign exchange market is very competitive and also most volatile market in the world. It constantly undergoes changes and innovations, which can either be beneficial to a country or expose it to greater risks. The management of foreign exchange market becomes necessary in order to mitigate and avoid the risks. In view of the above objective the authors have explicated the FEMA Act in the 5th chapter which provides guidelines for the free flow of foreign exchange in India. Enactment of FEMA also brought with it the Prevention of Money Laundering Act of 2002, which thwart money laundering and provides for the confiscation of property derived from, or involved in, money laundering. This Act is dealt in the 16th chapter of the sixth section.

The technological revolution in the field of communication has brought out revolutionary changes in the mode of carrying out business and commerce. Physical documents are no longer necessary for carrying out business transactions. The 10th chapter delves with the "IT Act 2000" which provides the legal recognition, to transactions carried out electronically. In addition it also promotes the paper-less form of the communication and storage of information.

In view of the unprecedented growth in the capital market in India, the gigantic rise in the number of investors and the growth of equity cult among the masses, has replaced the traditional modes of trading and leads to the emergence of scripless trading. This requires for the establishment of institutions entrusted with the responsibility of maintaining ownership records of the securities. The Depositories Act, 1996, discussed in the 11th chapter,deals with regulating these institutions and ensuring there transparent functioning. Chapter 12 and 13th focused on Income Tax Act 1966 and Central Exercise Act 1944 & Vat.

In all the book provides a deep insight in the latest developments undertaken in the legislative arena. The lucid presentation style aptly combined with the illustrative material- case laws, questions and practical problems for analytical understanding, makes it a reader's delight. Each section of the book gives a glimpse of authors' rich experience reflected through the content. This book provides a professional background and a strong foundation to both law and management students. It offers enhanced perceptive of law and its managerial implications aiding the students in understanding the concepts in a comprehensive manner.

ACCOUNTING FOR MANAGEMENT

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Advancement of technology, at a rapid pace, has shrunk the world into a global village. Information travels from one place to another in a jiffy, and the arrival of quick information results in making the business world more challenging and competitive. The business structures have also moved from brick and mortar models to click and mortar, thereby adding huge value to speed. Precise and quick decision making has therefore become essential in this tough and competitive global environment to improve the profitability and sustainability of business organizations. Business managers take strategic decisions using, financial and non financial information available in the accounting records of the organisation. Therefore, in the current scenario amongst all available disciplines, accounting is gaining prominence. Every individual be it business owner, manager or any other must have at least basic accounting knowledge to take right decision in this complex business scenario. Conventionally, role of accounting was limited to recording, classifying and summarizing the financial transaction of a business organisation. However, in rapidly changing business milieu accounting professionals, business managers, entrepreneurs and other concerned parties are required to acquaint themselves with basic knowledge of accounting fundamentals and abreast with the latest amendments in the field of accounting. Keeping this fact in view, the authors have brought out the 3rd revised and enlarged edition of the book "ACCOUNTING FOR MANAGEMENT" with all latest concepts, upgradations and updations relevant to the topics. The book provides an exhaustive coverage through FOUR parts and systematically categorized into IV sections which contain Thirty Six comprehensive chapters.

PART I (Section I) covers the "Accounting Principles and Processes" in Thirteen comprehensive chapters (1-13). Chapter 1 discusses the meaning and scope of accounting which sets the ground for further understanding of the subject. Since organisations may well use diverse policies and principles while preparing their financial statements, it might as well become difficult for the stakeholders to understand them in the same light. To overcome this dilemma, certain uniform scientifically laid down standards, termed as accounting principles have been developed for the presentation of financial statements to be commonly understood by all. To make this language worldwide intelligible Accounting Standards, 35 Indian Accounting Standards (Ind ASs) which are in line with corresponding IASs/IFRSs, adoptable under the conditions prevailing in the country have been incorporated in the Chapter 2. As we know accounting is the art of recording, classifying and summarizing the financial transactions and interpreting results thereof Chapters 3 and 4 provide the basic understanding about the procedure of recording the business transactions, classifying and summarizing with the help of journal, ledger and trial balance respectively. Keeping in view the inconvenience faced by large size organizations in recording all transactions at one place, authors have explained the procedure of sub-division of journals in many subsidiary books in Chapter 5.

Negotiable instruments are playing pivotal role in the growth of trade and commerce both nationally and internationally. Feature of free transferability of these instruments has made them very popular in the business world. Therefore, it becomes mandatory for the upcoming business managers to understand the accounting aspect of the same. Chapter 6 elaborates the accounting treatment of widely used negotiable instruments namely; Promissory Note and Bills of Exchange. Chapter 7 is devoted to the bank reconciliation statement. Meaning, objective, and importance and technique of preparing of bank reconciliation statement have been thoroughly elucidated in the chapter.

Financial statements provide the glimpses of true financial position of an organisation to its various stakeholders. It is used as a roadmap to steer the business managers or investors in the right direction and help them in avoiding costly breakdowns. For the preparation of financial statements of the business, classification of income and expenditure in capital and revenue, proper valuation of inventory, and charging depreciation on fixed assets is essential. If in

case, the assets are not properly valued financial statements will not reflect the true picture of the business which will be misleading for all the stakeholders of the business. With help of four elaborative Chapters (9, 10, 11, 12) authors have explained the complete process of portraying the actual results of an organisation.

Trial balance ascertains the arithmetical accuracy of ledger accounts, but still certain errors which are not disclosed by the trial balance. Considering the requirement of complete accuracy of accounts, a separate Chapter 13 has been included in the revised addition of the book to enable the students to understand the comprehensive procedure of rectification of errors. The Part II of the book deals with the "Cost Accounting" in two inclusive sections. Section II incorporates concepts and elements of cost in ten (1-10) elaborative chapters. Traditionally, cost accounting was merely considered to be a technique for ascertainment of cost of products or services on the basis of historical data. In the challenging business milieu, cost control has become essential rather than only cost ascertainment. Chapters 1 & 2 impart indepth understanding of the cost accounting fundamentals which helps the readers in better grasping of the complicated costing techniques.

Globalisation has resulted in expansion of businesses across the world and a wide range of products are entering the market. Appropriate methods and techniques are required for controlling the costs of essential components viz. Material, Labour and Overheads for efficient cost management. An understanding of the procedure of materials control will assist the business managers in continuous and adequate supply of materials for conduct of smooth manufacturing operations. The book serves the purpose with the inclusion of complete procedure of the materials cost control and valuation of materials in chapters 3 and 4 respectively. As is rightly said, "Without labour nothing prospers". The cost of the product largely depends upon the efficiency of labour but achieving effectiveness is easier said than done. It becomes mandatory for the managers to aware with the choice of methods of remuneration, controlling idle time cost and ensuring optimum utilisation of resources to optimise labour costs. All these concepts have been explained by the authors in chapters 6 and 7. Overhead costs are a crucial matter of concern for every organisation, because, everybody has them but nobody owns them. Overheads, also known as supplementary costs, constitute an essential element of cost as they are incurred both for manufacturing a commodity and making it ready for sale. Chapters 9 and 10 deal with the concept of overheads in general and allocation of overhead costs to the end product respectively.

Separate costing method would be applicable on all types of business organisations due to varied nature of operations and characteristics of finished products produced or services rendered. The job of building a house is quite different from running a motor vehicle for a kilometre. Though, in all cases, the basic principles and procedure of costing remain the same but methods and techniques to ascertain cost of their products or services are different. Taking this into consideration, authors have delineated "Costing for Specific Industries" in SECTION THREE comprising of seven chapters (1-7). Chapter 1 discusses the single or output costing; the system is, most

commonly used in case of industries like breweries, brickworks, dairies and sugar mills. All types of manufacturing concerns can broadly be classified into two categories –(i) Mass production concerns (ii) Special order concerns. Special order concerns manufacture products in clearly distinguishable lots in accordance with special orders and individual specifications. In such concerns, it is necessary to keep a separate record of each lot of products or jobs from the time the work on the job or product begins till it is completed. Chapters 2 and 3 present the complete procedure of preparation of accounts according to the job, batch and contract costing. These costing methods are suitable in case of Printing Shops, Construction Companies, Machine Tool Manufacturing, Repair Shops, Wood-Work Shop Etc. When a product passes through different stages of production, each distinct and well defined, process costing is employed. This type of costing is useful in the case of manufacturing rubber products, oils products, chemical products or processed food products, etc.. In Chapter 4 extensive procedure of maintaining the process accounts has been described in very coherent manner. Adequate number of illustrations has been added for better understanding of the subject. Operating costs are the costs incurred by service providers. Most widespread examples of such undertakings are the Transport Concerns, Gas Agencies; Electricity Undertakings; Hospitals; Theatres etc. The varied nature of activities carried out by the service undertakings requires a different costing system. Chapter 5 articulates the concept of operating or service costing and also acquaints the readers with the process of ascertaining the unit cost of a particular service.

The authors have thoroughly revised the book according to the syllabus of GGSIP University MBA students. A new Chapter 7 has been incorporated to comprehend the reconciliation of cost and financial accounts. In large organizations where cost accounts are maintained independent of financial accounts, invariably there is a difference in results shown by the two set of books. Proper reconciliation of cost accounts and financial accounts facilitates managers in effective decisions making.

PART III (Section Four) themed as "Planning and Control" contains 6 chapters (1-6). It is stated that, "Economy is the method by which we prepare today to afford the improvements of tomorrow". Savings of today will help us tomorrow. Effective budgeting techniques are useful in proper planning of future income and expenditure of individuals or business organizations. In large organizations such planning is highly formal while for smaller businesses, it is less formal. Keeping in mind the importance of future planning authors have dedicated Chapter 1 to the immediate future planning i.e. the next year through describing the complete process of budgetary control.

Planning is indispensable for making control effective. Growing competition has made survival of businesses much more complicated than earlier. In this turbulent time, cost control has become a major issue of concern for organizations across the world. To meet the challenges of current business world, standard costing technique help the managers to control costs through setting up standards and comparing it with actual for identifying the deviations in the usage of different elements of costs. Specialized techniques for

calculating variances of materials, labour and overheads have been thoroughly elucidated in chapter 3. With the advent of information technology, exposure and awareness of customers have increased manifold. Customers are demanding high quality products at lower prices. Hence, in the present scenario profit generation has become a challenging task; therefore, marginal costing technique and its use in effective manner have become need of the hour. With the help of marginal costing technique, break-even point, point of margin of safety, effect of change in prices on net profit, effect of change in selling price on profits can be analyzed which will facilitate business managers in taking important decisions regarding how much to produce, what to produce, how to produce, when to produce, at what cost to produce, how to maximize the profits and minimize the costs. Chapter 4 provides insight into the concepts of marginal costing and cost volume profit analysis. Chapter 5 is related to decision involving alternative choices.

Chapter 6 of this section has been re-titled as "Miscellaneous Concepts" in place of "Latest Developments and Concepts". In this chapter, new-fangled concepts viz. Kaizen costing, corporate annual reports and leverages have been added by the authors to acquaint the students with the emerging terms and concepts in the business.

PART FOUR of the book contains suggested answers of the questions which have been asked in the previous years GGS IP

University end term examinations. Solutions of the questions endow with the complete guidance to the students in preparation of their university examinations and various examinations of various professional courses. Solved illustrations along with the working notes make the book self-explanatory to the readers.

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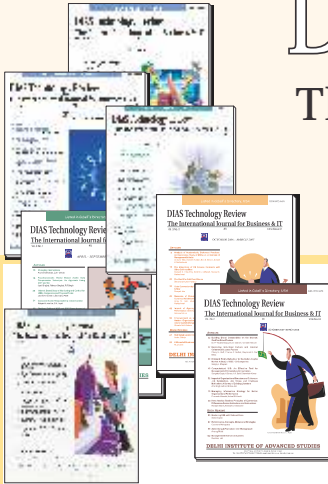… Phone: … … … … … … … … … …

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