

SEMCOM Management & Technology Review

Key Highlights of Finance Bill 2016

Kejal Pandya

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A Causal Study of Finance and Productivity in India

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A Study on Perception of Middle Class People of Some Selected Districts of Gujarat State towards Unorganized Retailing Shops / Traditional Retail Shops / Grocery Shops / Kirana Shops

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Relationship between Emotional Intelligence and Individual Job Performance: Statistical Perspective

Swagat Barot



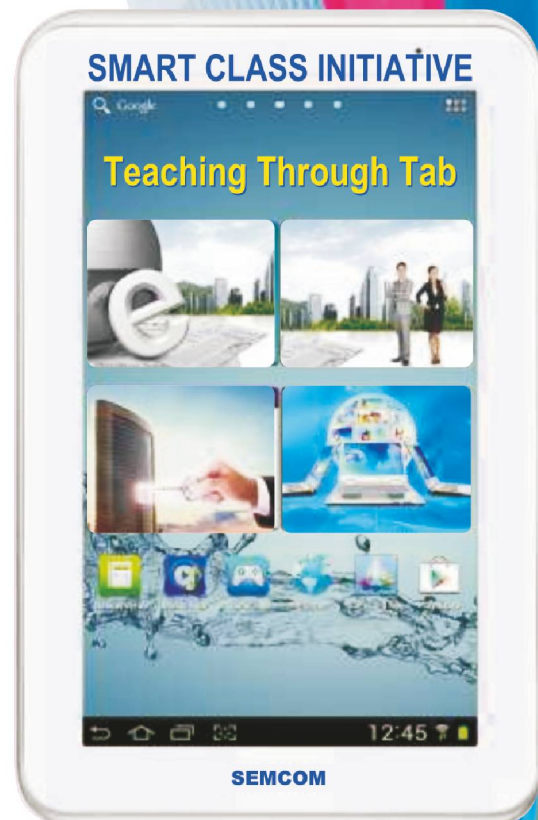
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Editorial

Warm greetings to all readers..!!!

Once again I am pleased to present before you the second issue of third volume of SEMCOM Management and Technology Review (SMTR) March 2016. This time the issue contains variety of inferences based on research outcomes in the areas of Accounts, Finance, Marketing, Human Resource, Economics and Information Technology. The issue begins with a CA's point of view on key highlights of finance bill 2016. Since Indian economy is experiencing transformation towards development, new fiscal strategies have to be evaluated critically. In the global economy, where capital flows freely, it is essential to check the coordination among monetary policies of different countries. A study on monetary policy sans international coordination formulates alternative monetary policy choices for emerging market economies to cope with the spillover effects. Causal study of finance and productivity shows establishment of the causal relationship between finance and productivity through data of last two decades. One more empirical study measures the determinants of financial efficiency of private sectors banks. Other studies in the area of finance are on investor's preferences for various investment avenues and analytical study on need for financial literacy as an inevitable aspect of financial inclusion. Researchers' concerns for the consistent economic performance of the nation continue through research deliberations on Indian accounting standards and finding correlation among revenue, profit and earning per share in the real estate. Country's economic performance is equally related to its import- export activities, especially when they address the needs of rural India. One of the articles identifies and compares the pattern of revealed comparative advantage of Indian dairy export and Chinese dairy export in Asian Market.

Technology integration has become indispensable component of modern business operations. Hence, the research on IT for business has got considerable importance these days. Lot of information on various business functions like supply chain, customer relationship and public relation must be carefully handled and used effectively. Process-driven ontology development methodology ideally addresses the issue of information management on the semantic web. Another IT based study designs the algorithm for calibrating numbers, maintaining their certain properties and original logical equivalence among them. It can effectively be used in university examination system for apportioning the gracing marks among the subject marks.

The marketing issues like customer awareness, perception, satisfaction and behavior are also studied in various research articles. For instance, awareness about women safety products, perception towards retail shops, satisfaction to state postal service and consumer behavior towards Ayurvedic medicines. Research articles on employee satisfaction from welfare facilities, Human Resource Accounting and relationship between emotional intelligence and individual job performance present intellectual exposition in the area of Human Resource.

This is truly an assorted blend of diverse subjects which, I hope, will definitely make an enjoyable reading experience for the readers.

Best Wishes....

Nikhil Zaveri



About SEMCOM

Sardar Gunj Mercantile Cooperative Bank Ltd. (Anand) English Medium College of Commerce and Management (S G M English Medium College of Commerce and Management) popularly known as SEMCOM was established in the year 1997 with the aim/vision to impart quality education to students who desire to graduate in commerce, management and IT. The college has successfully completed 18 years. Its alumni has established themselves in various walks of life across the globe. The college has been established by Charutar Vidya Mandal (CVM), an educational trust with a vision to regenerate society through education. SEMCOM was set up with the generous donation of Rs. 35 lakhs against the total project cost of Rs. 150 lakhs by Sardar Gunj Cooperative Bank Ltd. (Anand) on self-finance basis keeping in mind the changing policy of the government in inviting private institutions to supplement the government's efforts in higher education. **The college has an ISO Quality System since 2004, which upgraded to 9001:2008 in September 2009. The college is re-accredited grade "A" by NAAC with a CGPA of 3.01 on 4 point scale.** The college, within a short span of time has made its presence felt in India and abroad.

The college is affiliated to Sardar Patel University, Vallabh Vidyanagar.

Objectives / Goals

- To focus on integral development of students.
- To offer courses and programs in tune with changing trends in the society as a whole.
- To update the curriculum as per the need of the business and industry.
- To create unique identity in the educational world at the national as well as international level.
- To institutionalize quality in imparting education.
- To incorporate innovations on a continuous basis in the entire process of education at institutional level.
- To create platform for the students for exhibiting their talent and for development of their potentials.
- To generate stimulating learning environment for students as well as teachers.
- To build cutting edge amongst the students to withstand and grow in the competitive environment at the global level



Key Highlights of Finance Bill 2016

Kejal Pandya

Abstract

This budget was presented against the backdrop of collapsing oil prices and global economic gloom, contrasted by “India shining” as the fastest growing economy of the world. In that light the budget missed the opportunity to be transformational and capitalize on the unique economic advantage in which India is placed. The budget rightly focuses on rural economy and infrastructure development. Particularly commendable is the fiscal prudence exercised by sticking to the planned reduction of fiscal deficit to 3.5% of GDP in the face of enormous pressure to postpone this target.

Introduction

The budget has welcome provisions for improvement in tax administration and has introduced provisions to make the tax officers accountable. A rare initiative indeed! The measures to facilitate “Ease of doing Business” in the indirect tax proposals and to give fillip to the “Make in India” campaign are laudable. However, the inability to build political consensus on the road-map to GST implementation is a huge dampener.

Phasing out the incentives was inevitable, but any meaningful reduction in corporate tax rates still remains a distant promise. Increasing the tax on the rich is understandable, but with no change in the tax threshold or tax rates, the neglected minority (middle class tax payer) has little to cheer. In fact the proposal to tax EPF has created an uproar forcing the Government to contemplate roll back.

The budget has also introduced a scheme to forgive past tax transgressions by paying 45% tax. It is to be seen whether this will attract the errant taxpayer.

The tax provisions in the budget are like a chakravayuh; difficult to understand and decipher. This write up will hopefully guide you through this maze.

The following are the key highlights of Finance Bill 2016.

Direct Taxes

1 .Rates of Income-tax

- Tax rates for Individual, HUF, Firm , AOP, BOI and Artificial juridical person remains unchanged subject to increase in surcharge from 12% to 15% for individuals, HUF, AOP, BOI with income exceeding 1 crore. For companies with turnover less than 5 crores, tax rate marginally reduced to 29%.

- Section 115BA is introduced so as to give an option to newly set up domestic companies engaged in the business of manufacture or production of any article or thing to pay tax at a concessional rate of 25%* on fulfilment of certain conditions.

- 10% additional tax proposed on individuals, Hindu Undivided Family (HUF) and firms on receipt of dividends exceeding INR 10 lakh from domestic companies

- Threshold limit for deduction of tax is proposed to be enhanced as follows:

All assesses (corporate and non-corporate) shall be liable to pay advance tax of 15%, 45%, 75% and 100% on or before 15th June, 15th September, 15th December and 15th March respectively, as against only corporate assesseees liable to advance tax in June quarter.

2. Residential status of a company (POEM)

- The implementation of Place of Effective Management (POEM), which was scheduled to be effective from AY 2016-17, has been deferred by one year and the same will now be applicable from AY 2017-18.

3. Additional Resource Mobilisation effective from the 1st April, 2017

- Rationalization of taxation of income by way of dividend
- Change in rate of Securities Transaction tax in case where option is not exercised

Section	Heads	Existing limit (INR)	Existing rate (%)	Revised limit (INR)	Proposed limit(INR) / Proposed Rate(%)
192A	Payment of accumulated balance due to an employee	30,000	10%	50,000	10%
194BB	Winnings from Horse Race	5,000	30%	10,000	30%
194C	Payments to Contractors	30,000 per transaction / 75,000 for aggregate Transactions during the Year.	2% for Co/Firm/co-op housing society 1% Individual/HUF	30,000 per transaction / 100,000 for aggregate transactions during the year	2% for Co/Firm/co-op housing society 1% Individual /HUF
194D	Insurance commission	20,000	10%	15,000	5%
194DA	Payment in respect of Life Insurance Policy	1,00,000	2%	1,00,000	1%
194EE	Payments in respect of NSS Deposits	2,500	20%	2,500	10%
194G	Commission on sale of lottery tickets	1,000	10%	15,000	5%
194H	Commission or brokerage	5,000	10%	15,000	5%
194K		Income in respect of Units		To be omitted	

- Introduction of equalisation levy @ 6% on payment made to a non-resident towards online advertisement/digital advertising, except where such non-resident has a permanent establishment in India

4. Widening of Tax Base and Anti-Abuse Measures effect from 1st June, 2016

- Tax Collection at Source (TCS) on sale of vehicles; goods or
- Tax on distributed income to shareholder
- Levy of tax where the charitable institution ceases to exist or converts into a non-charitable organization.

5. Measures to Phase out Deductions

- Phasing out of deductions and exemptions u/s. 10AA, 32, 35AC, 35, 35AD, 35CCC, 35CCD, 80IA, 80IAB, 80IB

6. Measures to Promote Socio-economic Growth

- Exemption of income of Foreign Company from storage and sale of crude oil stored as part of strategic reserves. This amendment will take effect retrospectively from 1st April, 2016.
- Extension of the benefit of initial additional depreciation under section 32(1)(iia) for power sector
- Introduction of section 115BBF for taxation of Income from Patents, wherein royalty received by a resident, in respect of a patent developed and registered in India, will be taxable at a concessional rate of 10% (plus applicable surcharge and cess) on gross basis i.e. without deduction of any expenditure incurred in respect of such royalty.

This section has been introduced to encourage R&D activities and development of new innovative products in India.

• Tax incentives for start-ups:

A new s. 80-IAC is introduced which provides for a deduction of 100% of the profits and gains derived by an eligible start-up from a business involving innovation development, deployment or commercialization of new products, processes or services driven by technology or intellectual property.

The benefit shall be available to an eligible Start-up which is a company which is setup on or after 1st April 2016 but before 1st April 2019 and shall be available for 3 consecutive assessment years out of 5 years beginning from the year in which eligible Start-up

Eligible start up means a company engaged in eligible business which fulfils the following conditions,

(a) It is incorporated on or after the 1st April, 2016 but before the 1st April, 2019;

(b) The total turnover of its business does not exceed twenty-five crore rupees in any of the previous years beginning on or after the 1st April, 2016 and ending on the 31st March, 2021; and

(c) It holds a certificate of eligible business from the Inter-Ministerial Board of Certification as notified in the Official Gazette by the Central Government.

In order to promote the start-up eco system as per the start – up India Action plan, it is envisaged to establish a Fund of Funds which would raise INR

2,500 crore annually to finance start-ups. Accordingly it is proposed to introduce a new s. 54EE to provide exemption from capital gains tax if the long term capital gains are invested in units of such specified fund, within a period of 6 months after such transfer, subject to the condition that the amount remains invested for three years failing which the exemption shall be withdrawn. The investment in the units of the specified fund shall be allowed upto INR 50 lakh per year and upto INR 50 lakh of capital gain per year.

U/s.54GB, now exemption is being extended to individual or HUF on capital gains arising from the sale of residential property if the same are invested in a company which qualifies to be an eligible start-up and such company utilises the amount invested for purchase of new asset. The definition of new asset has been amended to include computer or computer software for Start-ups

With a view to promote Make in India, start-ups are given encouragement by way of aforesaid deductions/exemptions.

However, there is no exemption to the start-ups from the provisions of MAT.

- A new Section 80-IBA is proposed to be introduced, wherein 100% deduction of the profits derived from developing and building affordable housing projects (which is approved by the competent authority after 1st June, 2016 but on or before 31st March, 2019), will be allowed to an assessee if certain conditions are satisfied. A deduction on loan from residential house property from a financial institution is proposed to be allowed u/s.80EE

7. Relief and Welfare Measures

- Provision for Tax benefits to Sovereign Gold Bond Scheme, 2015 and Rupee Denominated Bonds
- The transfer from one plan to another plan on account of consolidation within the same scheme would not be considered as transfer for the purpose of determination of capital gains.
- Deduction allowable for rent paid by an individual who is not granted HRA by an employer is been increased from INR. 2,000/- pm to INR 5000 pm u/s 80GG
- Interest earned on Deposit Certificates under the Gold Monetization Scheme, 2015 is exempt; deposit certificates under this scheme are excluded from definition of "Capital Asset"
- Rationalization of section 56 of the Income-tax Act
- Amount of rebate from tax payable subject to the maximum amount of tax available to resident individuals, whose total income does not exceed

INR 5,00,000/-, has increased from INR 2,000/- to INR 5,000/-.

- Deduction for interest on loan for residential property from a Financial Institution – s. 80EE
Amount of deduction – INR 50,000/- p.a. till repayment of loan continues;

Loan has to be sanctioned by the financial institution during the FY 2016-17;

Amount of loan should not exceed INR 35 lakh;

Value of residential house property should not exceed INR 50 lakh;

Assessee should not own any other residential house property on the date of sanction of loan

- Provisions of Section 25A, 25AA and 25B is proposed to be merged under a new Section 25A to simplify and consolidate the provisions for taxing unrealised rent and arrears of rent in the year of its receipt. Therefore, the 30% deduction is proposed to be allowed even in respect of the unrealised rent realised subsequently, such deduction was earlier restricted only to arrears of rent received.

8. Ease of doing Business & Dispute Resolution effective from 1st April, 2017

- Exemption from Dividend Distribution Tax (DDT) on distribution made by an SPV to Business Trust effective from the 1st day of April, 2016

- Presence of fund manager not to constitute business connection in India – Sec. 9A; In addition to the existing countries with which agreement has been entered into, the clause provides that the fund may be registered or incorporated in a country or a specified territory notified by the Central Government; The condition of fund not controlling and managing any business in India or from India is restricted only to the activities in India. The changes are relatively insignificant and the number of conditions to be fulfilled is still too onerous and rigid.

- Enabling provision for implementation of various provisions of the Act in case of a foreign company held to be resident in India.

- Introduction of Presumptive taxation scheme for persons having income from profession – Sec.44ADA; Gross receipts not to exceed Rs. 50 lacs, presumptive profit 50% of gross receipt, else tax audit is applicable

- Increase in threshold limit for audit for persons having income from profession from Rs.25 Lacs to Rs.50 Lacs

- Increase in threshold limit for presumptive taxation scheme for persons having income from business from 1 crore to 2 crores

- Deduction in respect of provision for bad and doubtful debt in the case of Non-Banking Financial companies.

- Deduction of Investment Allowance u/s 32AC is allowable if acquisition of the assets is done in the previous year and installation of these assets is done in the subsequent year upto 31st March 2017. In such cases, deduction would be allowed in the year of installation of the asset.
- Exemption from requirement of furnishing PAN under section 206AA to certain non-resident effective from the 1st day of April, 2016
- Applicability of Minimum Alternate Tax (MAT) on foreign companies for the period prior to 01.04.2015.
- MAT shall not be applicable to a foreign company, w.r.e.f. 01.04.2001 if the foreign company does not have a – (a) PE in India under relevant DTAA or (b) where there exists no DTAA and the foreign company is not required to seek registration in India under any law relating to companies
- Application made by the assessee u/s 220, 273A and 273AA shall be disposed off by the officers mentioned therein, within a period of 12 months from the end of the month in which such application is received. Further, no application under the aforesaid sections shall be rejected without giving the assessee the opportunity of being heard.
- Provision of legal framework for automation of various processes and paperless assessment effective from the 1st day of April, 2016

9. Rationalisation Measures

- Rationalization of tax deduction at source provisions relating to payments by Category-I and Category-II Alternate Investment Funds to its investors – secs. 194LBB & 197
- New Taxation Regime for securitisation trust and its investors – Income to be taxable in the hands of investor and not Securitisation Trust – Sec. 10(23DA) / New Sec. 194LBC introduced for TDS by Securitisation Trusts
- BEPS action plan – Country-By-Country Report and Master file: constituent entity which is part of an international group shall also be required to maintain such information and documentation as to be prescribed in respect of the international group – amendment to sec.92D / new sec.286 for list of documents to be maintained
- Exemption of Central Government subsidy or grant or cash assistance, etc. towards corpus of fund established for specific purposes from the definition of Income
- Extension of scope of section 43B to include certain payments made to Railways
- In addition to non-allowance of expenditure against the deemed undisclosed income such as cash credit, unexplained investments u/s 68, 69, losses also cannot be set off against such income.

- Taxation of Non-compete fees and exclusivity rights in case of Profession as business income
- Clarification regarding the definition of the term 'unlisted securities' for the purpose of Sec. 112 (1) (c) – capital gain arising from transfer of shares of a company in which public are not substantially interested, shall be chargeable to tax at 10%
- Loss under Sec. 73A shall not be allowed to be carried forward and set off if such loss has not been determined in pursuant of a return filed in accordance with the provisions of sec.139(3)
- Amortisation of spectrum fee for purchase of spectrum
- No interest shall be charged u/s 234C in respect of assessee having income under the head "Profits and gains of business or profession" for the first time, subject to fulfillment of conditions specified therein – Sec.211
- In cases where the Return of Income is filed after the due date, interest u/s 244A shall be granted for a period beginning from the date of filing of return. An assessee shall be eligible to interest on refund of self-assessment tax for the period beginning from the date of payment of tax or filing of return, whichever is later, to the date on which the refund is granted. where a refund arising out of appeal effect is delayed beyond 3 months from the end of the month in which the order is received by the tax officer as prescribed u/s153(5), the assessee shall be entitled to receive additional interest on such refund amount @ 3% p.a., for the period beginning after the expiry of the aforesaid period of 3 months to the date on which the refund is granted.
- Amended section 271AAB(1)(c), provides for penalty leviable at a flat rate of 60% of the undisclosed income, in cases where search has been initiated against current provision of penalty of 30% to 90%
- Amendment of Sec. 272A – penalty of Rs.10,000/- for each default or failure to comply with notice u/s.142(1) or 143(2) or direction u/s.142(2A)
- Provision for bank guarantee under Sec. 281B to revoke provisional attachment of property
- Extension of time limit by 60 days to Transfer Pricing Officer in certain cases where proceedings are stayed by any court etc.
- Legislative framework to enable and expand the scope of electronic processing of information
- New section 270AA has been proposed for grant of immunity from penalty and prosecution if the assessee pays the entire amount of tax and interest as per the assessment order within the specified time and does not prefer an appeal against such order. However this immunity would not be applicable in cases of misreporting of income.

Indirect Taxes

“Mum” is the word on GST – a clear indication that the political "lojiam" over GST is far from over

A flurry of simplification measures announced to facilitate ease of doing business

A slew of measures announced for mitigating potential tax litigations and for settlement of existing tax disputes

Series of changes made in Customs/Excise Tariffs to support the Government's "Make in India" initiative- benefitted sectors include IT, Hardware, Capital Goods, Defence Production, Textiles, Mineral Fuel/Oils, Chemicals and Petrochemicals, Paper and MRO of aircrafts and ships

Infrastructure Cess ranging from 1% to 4% introduced on different types of motor cars

No change in the peak rate of Basic Customs Duty @ 10% and Excise Duty @ 12.5%

Service tax increased marginally from 14.5% to 15%, with the introduction of a New Cenvatable Cess, Krishi Kalyan Cess (@ 0.5% on value of all taxable services)

Peak interest rates applicable for service tax defaults mercifully brought down from 30% p.a. to a more realistic rate of 15% p.a. (24% p.a. in case of tax collected but not paid)

Rationalisation of CCR to smoothen credit flows, reduce compliance burden and mitigate litigation with regards to reversal of credit attributable to exempted services

Rationalisation of indirect taxes relating to the IT Software Industry

Conclusion

All the initiatives for rural and infrastructure development proposed through this budget for boosting the economic development of the nation will show results in expected time if the plans are implemented as planned. Amidst the plans for smart cities, the government has also emphasized on the need for strengthening the rural India by enhancing domestic demand through empowered rural consumer.

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A Novel Process-driven Ontology Development Methodology Engineered from Existing Methodologies

Nehal Daulatjada, Paresh Virparia

Abstract

The current trend over the web is moving from just posting information to presenting information that “makes-sense”. The concept of Semantic Web requires the information to be presented in a formal way. For this, Ontology can be one of the solutions. Developing ontologies is a tedious job and given the number of methodologies available, some applicable to some extent for your requirement, it becomes necessary to customize an ontology engineering process to suit your requirement. Hence during my research, We have developed our own Engineering process which can be followed in developing ontologies.

Introduction

Fernández-López & his colleagues (1997) proposed the Ontology Development process and the Ontology Lifecycle in the Methontology framework based on the IEEE standard for software development. The Ontology Development process is the set of activities performed when building ontologies. The Lifecycle of Methontology has been modified to take into account the fact that more ontologies are available in ontology libraries or over the Internet and that their reuse by other ontologies and applications is possible thus allowing reusability of existing ones to build others of more granularity and coverage, or can be merged with others to create new ones. Several methods and methodologies have been proposed for either the whole ontology development lifecycle or for the main phases of the lifecycle. The selection of the same depends on the characteristics and the context of the ontology to be developed.

Ontology Engineering Process

The top-level partitioning of a generic ontology engineering process can be realized by taking into account available process-driven methodologies in this field. The generic Ontology Development process is derived from this Methontology. According to them ontology building consists of core steps as given in Figure 1.

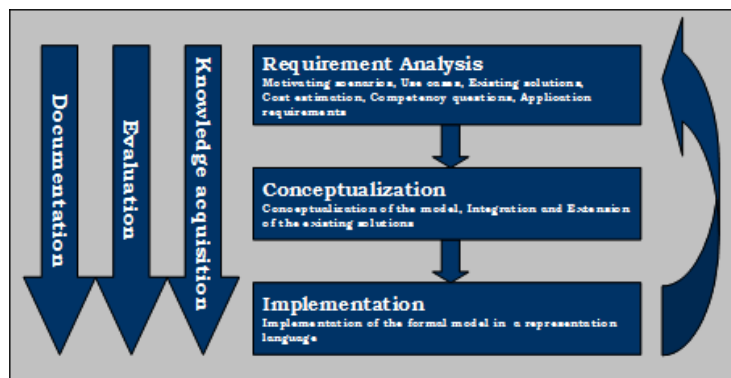


Figure 1: Ontology Engineering Process

i. Requirements Analysis

The team of domain experts and ontology engineers analyze the project setting with respect to a set of predefined requirements. This step includes Knowledge Acquisition (KA) from sources like reuse of existing ontologies or extracting domain information from text, databases etc. If such techniques are used then the resulting ontologies have to be customized in the conceptualization and/or implementation phases. The result of this step is an Ontology Requirements Specification (ORS) document which contains a set of natural language questions, called competency questions describing the domain to be modeled by the prospected ontology. It also contains information about its use cases, the expected size, the information sources used, the process participants and the engineering methodology to be used.

ii. Conceptualization

The application domain is modeled in terms of ontological primitives like concepts, relations and axioms.

iii. Implementation The conceptual model has to be implemented using a formal representation language, whose expressivity is appropriate for the richness of the conceptualization. If required, existing ontologies and other information sources may be integrated in the final data model.

iv. Evaluation

The ontology is evaluated against the set of competency questions. The evaluation may be performed automatically, if the competency questions are represented formally, or semi-automatically, using specific heuristics or human judgment. The result of the evaluation works as feedback and is reflected as modifications/refinements at the requirements, conceptualization or implementation level.

Study of Existing Methodologies

Depending on the ontology lifecycle underlying the process-driven methodology, the aforementioned four steps may be performed as sequential workflow or as parallel activities. There are various methodologies developed, based on the generic methodology, some of which are as follows:

- **Methontology**, which applies prototypical engineering principles, considers KA, Evaluation and Documentation as support activities performed in parallel to the main development process. Other methodologies following a classical waterfall model consider these support activities as sequential process. Methontology is a methodology that can be used to create domain ontologies that are independent of the application where they will be used. This methodology proposes specific techniques to carry out each of the activities identified there. The main phase in the process is the Conceptualization phase.
- **The OTK Methodology or On-To-Knowledge methodology** additionally has an initial Feasibility Study to assess the risks associated with ontology building. Other optional steps are Ontology Population/Instantiation, Evolution and Maintenance. Ontology Population/Instantiation deals with aligning application data to the implemented ontology whereas Evolution and Maintenance relates to modifications of the ontology according to new user requirements, updates of the reused sources or changes in the modeled domain. Reusing existing knowledge sources is the key to ontology development and is considered a KA task. This methodology is based on an analysis of usage scenarios. The steps proposed by the methodology are: Kick-off, where ontology requirements are captured and specified, competency questions are identified, potentially reusable ontologies are

studied and a first draft version of the ontology is built; Refinement, where a mature and application oriented ontology is produced; Evaluation, where the requirements and competency questions are checked, and the ontology is tested in the application environment; and Ontology Maintenance.

- The CYC method, is mainly supports the KA activity and is structured in three phases. The objective is to derive common sense knowledge that is implicit in different sources which are groups of assertions in the same domain. The difference between them is the degree of automation of the KA process (from manual to automatic).
- The Uschold and King's method proposes four phases: Identify the purpose of ontology, Build and integrate with other ontologies if necessary, Evaluate, and Document. Depending on the characteristics of the ontology three strategies are proposed for identifying the main concepts in the ontology: a top-down approach in which the most abstract concepts are identified first, and then, specialized into more specific concepts; a bottom-up approach in which the most specific concepts are identified first and then generalized into more abstract concepts; a middle-out approach, in which the most important concepts are identified first and then generalized and specialized into other concepts.
- **Grüniger and Fox methodology** is based on the development of Knowledge-Based systems using First Order Logic (FOL). First step is to identify intuitively the possible applications where the ontology will be used and determine the Scope of the ontology using Competency questions. These questions and their answers are used to extract the main ontology components (expressed in FOL). This methodology is very formal and can be used as a guide to transform informal scenarios into computable models.
- The SENSUS method aims at promoting the sharability of knowledge, as it proposes to use the same base ontology to develop ontologies in particular domains. It is a top-down approach where we need to identify a set of "seed" terms relevant to a particular domain. These terms are linked manually to broad-coverage ontology, the Sensus ontology, which contains more than 50,000 concepts. Then, all the concepts in the path from the seed terms to the ontology root are included. For those nodes that have a large number of paths through them, the entire subtree under the node is sometimes added, based on the idea that if many of the nodes in a subtree have been found to be relevant, then, the other nodes in the subtree are likely to be relevant as well. Though this method may introduce additional processing burden on the application.
- In the KACTUS method the ontology is built on the basis of an application KB, using abstraction through a bottom-up strategy. The more applications

are built using this method, the more reusable and sharable the ontology becomes.

Ontology Engineering

Ontology engineering in Computer Science and Information Science is a new field, which studies the methods and methodologies for building ontologies. Ontological Engineering may include representation of abstract concepts such as actions, time, physical objects and beliefs, etc.

Ontology engineering aims at making explicit the knowledge contained within software applications, and within enterprises and business procedures for a particular domain. Ontology engineering offers a direction towards solving the inter-operability problems brought about by semantic obstacles, i.e. the obstacles related to the definitions of business terms and software classes. Ontology engineering is a set of tasks related to the development of ontologies for a particular domain.

Ontologies provide a common vocabulary of a domain and define formally the meaning of the terms and the relationships between them. Ontologies are widely used in the areas of Knowledge Engineering, Artificial Intelligence and Computer Science; in applications related to Knowledge Management, Natural Language Processing, E-Commerce, Intelligent Information Integration, Bio-Informatics and Education; and in an emerging area like the Semantic Web. Ontological engineering is a new field of study concerning the Ontology Development process, the Ontology Life Cycle, the methods and methodologies for building ontologies and the tool suites and languages that support them.

The Process-driven Ontology Development Methodology

The Ontology Engineering is the study of the methods and methodologies for building ontology, whereas the Ontology Engineering process is the step by step procedure that guides how ontology can be developed for some domain efficiently and effectively. The order in which these steps are executed depends on several factors including the process model being followed. The selection of steps will mainly depend on the type and context of ontology being developed. Since the research focused on the development of a domain specific ontology, from the study of the generic ontology engineering process Methontology and OTK Methodology were found closer to the kind of process that was required to be performed. Hence a combination of steps from these engineering processes has been used as my Ontology Engineering methodology.

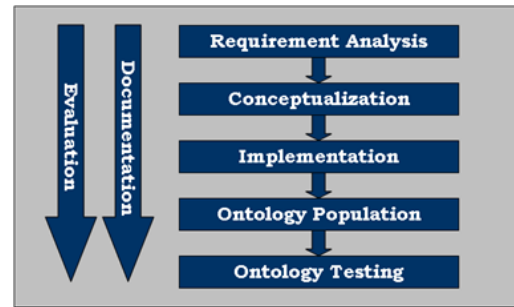


Figure 2: My Ontology Engineering Process

From the Generic ontology engineering process, first three steps, namely Requirement analysis, Conceptualization and Implementation have been used. From Methontology, Evaluation and Documentation steps have been carried out in parallel to the three steps of generic process. From the OTK methodology, the Ontology population step has been incorporated. Hence my customized Ontology building methodology consists of the steps as depicted in Figure 2, along with these Evaluation and Documentation occurring at every stage:

1. Requirement Analysis: It deals with the study and collection of the domain knowledge from domain experts, databases, documents, etc. It also deals with identifying the scope of the study as well as knowledge acquisition from existing ontologies. The technique used was documents review, bio-data reviews, interviews. The result was an ORS, listing all the entities, properties and relationships to be modeled.

2. Conceptualization: The details collected in the ORS are modeled and classified in terms of the Ontology constructs. Identification of classes, properties, naming schema, relationships, including upper ontology are performed at this stage.

3. Implementation: The concepts so identified in previous phase are converted into formal representation using an ORL. Additionally an Ontology editing tool may be used.

4. Ontology population: This phase deals with instantiation of the ontology with the data. The data may be test cases to check for consistency and completeness of the model.

5. Ontology testing: This phase deals with the testing of the ontology for consistency, hierarchy, completeness, etc. It can be performed through reasoners or consistency checkers or querying language.

The steps which go parallel along with the above five stages are:

1. *Evaluation:* At every stage of the ontology development, evaluation of the outcomes is performed to align them with the final result expected from the research work. If any discrepancy is found, then it is rectified before proceeding to the next phase.
2. *Documentation:* At every stage,

documentation is maintained so as to relate the progress of the Ontology development.

Conclusion and Future Work

The Ontology development stands to be an important building block for the new age semantic web. All the technologies for knowledge sharing and reuse are dependent on the creation of reliable, reusable and extendable ontologies. The methodology proposed is very similar to the process flow in a classical system development life cycle and hence can be easily comprehended by an ontology engineer.

Since the proposed methodology was created keeping in mind my research requirements of a Domain-specific ontology, this process can be refined or modified to suit a more generic approach of development for a specific application.

References

Bernaras, A., Laresgoiti, I., & Corera, J. (1996). Building and reusing ontologies for electrical network applications. In Wahlster, W. (Ed.), Proc. of the 12th European Conf. on Artificial Intelligence (ECAI'96). Budapest. Hungary. Pp.298-302. Chichester. UK. John Wiley & Sons. 1996.

De Nicola, A., Missikoff, M., Navigli, R. (2009). A software engineering approach to ontology building. Information Systems. 34(2):258-275. 2009.

Fernández-López, M., Gómez-Pérez, A., & Juristo, N. (1997). Methontology: From Ontological Art to Ontological Engineering. In Workshop on Knowledge Engineering: Spring Symposium Series (AAAI'97). pp.33-40. Menlow Park. CA. AAAI Press. 1997.

Fernández-López, M., Gómez-Pérez, A., Pazos-Sierra, A., & Pazos-Sierra, J. (1999). Building a Chemical Ontology using METHONTOLOGY and the Ontology Design Environment. IEEE Intelligent Systems & Their Applications. 4(1):37-46. 1999.

Gómez-Pérez, A., Fernández-López, M., & Corcho, O. (2004). Ontological Engineering: With Examples from the Areas of Knowledge Management, E-commerce and the Semantic Web. ISBN 9781852335519. London. Springer. 2004.

Grüniger, M. & Fox, M.S. (1995). Methodology for the design and evaluation of ontologies. In Skuce, D. (Ed.), Proc. of IJCAI'95 Workshop on Basic Ontological Issues in Knowledge Sharing. International Joint Conf. on Artificial Intelligence (IJCAI 1995). Montreal. Pp.6.1-6.10. 1995.

Hepp, M., Leenheer, P., de Moor, A., & Sure, Y. (2008). Ontology Management: Semantic Web, Semantic Web Services, and Business Applications. Semantic Web and Beyond. Vol.7. ISBN 9780387699004. Springer. 2008.

IEEE. (1996). IEEE standard for developing software life cycle processes. IEEE Std. 1074-1995. IEEE Computer Society. New York. 1996.

Lenat, D.B., & Guha, R.V. (1990). Building Large Knowledge-based Systems: Representation and Inference in the CYC Project. Addison-Wesley. Boston. Massachusetts. 1990.

Pouchard, L., Ivezic, N., & Schlenoff, C. (2000). Ontology Engineering for Distributed Collaboration in Manufacturing. AIS2000 Conf. March 2000.

Smith, B. (2004). Beyond Concepts: Ontology as Reality Representation. In Varzi, A. & Vieu, L. (Eds.), Proc. of FOIS 2004 International Conf. on Formal Ontology and Information Systems. Turin. November 2004. Published on-line at <http://ontology.buffalo.edu/bfo/BeyondConcepts.pdf>

Staab, S., Schnurr, H.P., Studer, R., & Sure, Y. (2001). Knowledge processes and ontologies. IEEE Intelligent Systems. 16(1):26-34. 2001.

Sure, Y., Staab, S., & Studer, R. (2002). Methodology for Development and Employment of Ontology based Knowledge Management Applications. SIGMOD Record. 31(4):18-23. 2002. Sure, Y., Tempich, C. & Vrandecic, D. (2006).

Ontology Engineering Methodologies. In Davies, J., Studer, R., & Warren, P. (Eds.), Semantic Web Technologies: Trends and Research in Ontology-based Systems. ISBN 9780470025963. John Wiley & Sons Ltd. Chichester. UK. April 2006.

Swartout, B., Ramesh, P., Knight, K., & Russ, T. (1997). Toward Distributed use of Large-Scale Ontologies. In Farquhar, A., Gruninger, M., Gómez-Pérez, A., Uschold, M., & van der Vet, P. (Eds.), Proc. of the AAAI'97 Spring Symposium on Ontological Engineering. pp.138-148. Stanford University. 1997.

Uschold, M., & King, M. (1995). Towards a methodology for building ontologies. In Skuce, D. (Ed.), Proc. of the IJCAI'95 Workshop on Basic Ontological Issues in Knowledge Sharing. Pp.6.1-6.10. Montreal. Canada.

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A Causal Study of Finance and Productivity in India

Dhiren Jotwani

Abstract

Economic progress is a very complex process. Researchers have identified certain key factors that affect it, of which finance is one. In recent years, there have been studies using econometric time-series analysis to study the short-run and long-run relationships between finance and growth. This paper is a study of the Indian economy, where the causal relationship between finance and productivity is studied. Data from 1989 to 2012 for the Indian economy has been used for this study, and tests of cointegration, causality and error-correction are run. The results suggest that finance leads to productivity. However, an increase in productivity may not increase overall financial availability in the economy. It does lead to an increase in the amount of bank credit that is provided to industry. In other words, there is unidirectional causality from bank credit to growth; and from growth to industrial credit. There is also unidirectional causality from stock market turnover to growth, but not the other way round. Stock market capitalization doesn't have any relationship with productivity.

Introduction

It is well documented and widely studied in economic literature that economies grow at different rates. This holds true for economic zones, countries, states, districts etc. This inquiry of economic growth and differences in growth patterns leading to long run paths of growth is perhaps one of the oldest and yet still most widely pursued questions in economics.

In the current economic context, policy makers are constantly attempting to balance expectations and actual performance of the economy, with important parameters like inflation, interest rates, exchange rates etc. The implications on business studies are enormous. For instance, if policy makers could predict with certainty the results of their decisions, they would make much better decisions. Over the past few decades, scholars have used quantitative and qualitative techniques to study this phenomenon.

Economic growth in any economy is achieved as a result of various factors. Growth will be facilitated by capital accumulation and technological progress. Human capital and physical capital are essential in the process. The private and public sector needs to work together in this regard. This is where finance is crucial. For any kind of investment to occur, and for improvements in technology to occur, finance is necessary.

In India the financial sector is very large and widespread comprising of various entities. However, the main sources of finance for corporations are still banks and stock markets. Further, for regular and immediate needs of corporations, banks are very often the preferred means of raising finance. Hence, a study of how finance determines overall growth in the economy is necessary.

Literature Review

As mentioned in the previous section, the origins of this strand of investigation can be traced back to a few centuries. Based on current records, the study by Bagehot is one of the earliest studies that link financial development and economic growth. His study gave illustrations of how money market developments in England aided the flow of capital towards productive industries. The study also articulated the relation between finance, trade and growth. Further, Schumpeter described how financial intermediation is the centre of economic development. Several other prominent economists have studied this relation and made immense theoretical and empirical contributions.

Over the years, new theories of economic growth were developed. The most recent theory of endogenous growth very appropriately blends the concept of financial development with economic growth. The prominent initial contributions in this area were by Greenwood and Jovanovic, Pagano and King and Levine. Their research shows that financial development does have a positive impact on economic growth through investment, saving, productivity of capital and effective management of information.

Further, there is no particular differentiation needed between the proportion of banks or stock markets in the economy. Although this argument still goes on, it is believed that both banks and stock markets

behave as complements, rather than rivals in the finance-growth nexus. This is shown in several papers.

The techniques used for econometric analysis have also evolved over the years. From basic descriptive analyses, to cross sectional studies, the focus has now gradually shifted to multivariate models. In recent years, researchers have used techniques of time-series analysis. The most prominent ones are among others. Among earlier and recent work in the Indian context, some important ones are. Usage of stationarity tests, cointegration techniques, causality, vector autoregressive and error correction models, multiple regression etc. are most common in recent empirical work.

Econometric Technique

Continuing with the preceding discussion, current studies on the finance-growth nexus try to analyze the extent and nature of causality between the two variables. While it is well established that finance indeed plays an important role in productivity, there are debates over the issue of causality. For this, the usage of certain econometric techniques is required. The data used in this study is time-series data, from 1989 to 2012. It has been collected from the extensive database of the Reserve Bank of India.

Many current studies have employed cointegration and granger causality tests. Time-series analysis of data requires various diagnostic checks. For non time-series data, the researcher may directly proceed to the data analysis technique.

However, for time-series data, the very first check is that of stationarity. The augmented Dickey-Fuller tests are employed here. The results were also checked with other tests, and confirmed to be consistent.

Table 1: Tests of stationarity

Variable	ADF stat			
	Levels		First difference	
	C	C&T	C	C&T
TGG	0.2	-2.3	-4.5***	-4.5***
TBC	2.4	0.2	-3.8***	-4.2**
SMC	-2.4	-2.8	-5.1***	-5.2***
SMT	-1.4	-1.3	-3.7**	-3.6**

***, **, * indicates test value is significant at 1%, 5% and 10% level of significance respectively; C refers to constant, C&T refers to constant and trend.

For the sake of brevity, the author has named Total GDP Growth as TGG, Total Bank Credit as TBC,

Stock Market Capitalization as SMC and Stock Market Turnover as SMT for the remainder of the text.

The tests of stationarity have to be performed for different possibilities, all of which have been included in the table. All of the variables are not stationary at levels. This implies that they need to be tested at first differences for the same. If analysis is run on level data, it is likely to generate meaningless or spurious results. Thus, it is required to further perform the tests of stationarity at first differences. Now, all the calculated ADF values exceed the critical values. These indicate that all variables are stationary at first differences, and thus it is possible to proceed to pair wise cointegration tests. First, the cointegration between TGG and TBC:

Cointegration between TGG and TBC

Selecting the appropriate lag length is crucial, as the test of cointegration is sensitive to lag lengths of the VAR system. We select the lag length that fulfils various criteria. In this case, it is 2. This is shown in table 2 below.

Table 2: Lag Length Selection

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-63.3	NA	0.1	3.4	3.5	3.5
1	135.1	365.5	0.0	-6.8	-6.5*	-6.7
2	142.3	12.4*	0.0*	-6.9*	-6.5	-6.8*
3	144.6	3.8	0.0	-6.9	-6.3	-6.7

* indicates lag order selected by the criterion; LR: sequential modified LR test statistic (each test at 5% level); FPE: Final prediction error; AIC: Akaike information criterion; SC: Schwarz information criterion; HQ: Hannan-Quinn information criterion

Table 3: Statistics to check for cointegration

Null	Alternate	Trace Statistic	Max-eigen Value Statistic
r=0	r=1	28.2 (20.2)***	25.97 (15.89)***
r<=1	r=2	2.23 (9.16)	2.23 (9.16)

Figure in parenthesis is critical value; *** denotes rejection of hypothesis at 0.01 level, ** denotes rejection at 0.05 level

The results indicate that there exists one cointegrating vector. Both the criteria, i.e., the trace statistic and the max-eigen value statistic, indicate the presence of one cointegrating vector, and the pantula principle selects model 2, i.e., intercept in CE and no trend or intercept in VAR. This model selection is once again based on minimizing of certain criteria.

Table 4: Cointegrating Vector

	TGG	TBC	C
Coint. Vector	1.00	-1.85	5.67

Normalized ECM: $TGG = 1.85TBC - 5.67$

There is one cointegrating vector, and the TBC shows positive sign. This indicates a positive relationship between TBC and TGG.

Table 5: Adjustment Coefficients

Error Correction	D(TGG)	D(TBC)
CointEq1	-0.044	0.001
	[-5.44]***	[0.073]
D(TGG(-1))	0.113	0.132
	[0.68]	[0.376]
D(TGG(-2))	-0.279	0.236
	[-1.963]**	[0.788]
TBC(-1))	-0.296	0.404
	[-3.213]***	[2.079]**
D(TBC(-2))	-0.135	0.1636
	[-1.28352]	[0.73833]
R-squared	0.40	0.203
F-statistic	5.508	2.105

Figures in parentheses are t-values; *** denotes significance at 0.01 level; ** at 0.05 level; * at 0.10 level

This table gives the estimated coefficients of the variables in the ECM. We find that TGG has a statistically significant error correction coefficient with the correct sign. The adjustment coefficients indicate that 4.3% disequilibrium in TGG is corrected each year. However, no significant error correction is seen in TBC. This makes it weakly exogenous. But, t-values for TBC are significant. Therefore, in the long run, there seems to be unidirectional causality from TBC to TGG. This is indicated by the individual ECM regressions as well.

Cointegration between TGG and BCI

Once again, selection of the appropriate VAR lag length is the first crucial step in the test of cointegration. We select the lag length that fulfils various criteria. We see that, once again, it is 2. This is shown in table 6 below.

Table 6: Lag Length Selection

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-56.2	NA	0.1	3.1	3.2	3.1
1	115.6	316.4	0.0	-5.8	-5.5	-5.7
2	123.2	13.2*	0.0*	-5.9*	-5.5*	-5.8*
3	124.6	2.4	0.0	-5.8	-5.2	-5.6

* indicates lag order selected by the criterion; LR: sequential modified LR test statistic (each test at 5% level); FPE: Final prediction error; AIC: Akaike information criterion; SC: Schwarz information criterion; HQ: Hannan-Quinn information criterion

Next, the author once again applies the pantula principle to test for cointegration.

Table 7: Statistics to check for cointegration

Null	Alt.	Trace Statistic	Max-eigen Value Statistic
r=0	r=1	18.97(12.3)***	15.74 (11.2)***
r<=1	r=2	3.22 (4.1)	3.22 (4.1)

Figure in parenthesis is critical value; *** denotes rejection of hypothesis at 0.01 level, ** denotes rejection at 0.05 level

The results indicate that there exists one cointegrating vector. Both the criteria, i.e., the trace statistic and the max-eigen value statistic, indicate the presence of one cointegrating vector, and the pantula principle selects model 1, i.e., no intercept or trend or intercept in CE and VAR. This model selection is once again based on minimizing of certain criteria.

Table 8: Cointegrating Vector

	TGG	BCI
Coint. Vector	1.00	-1.76

Normalized ECM: $TGG = 1.76BCI$

There is one cointegrating vector, and BCI shows positive sign. This once again indicates a positive relationship between BCI and TGG.

Table 9: Adjustment Coefficients

Error Correction	D(TGG)	D(BCI)
CointEq1	-0.014	0.012
	[-4.104]***	[1.29]
D(TGG(-1))	0.419	0.917
	[2.439]**	[1.985]**
D(TGG(-2))	-0.267	0.396
	[-1.569]	[0.86]
D(BCI(-1))	0.010	-0.083
	[0.159]	[-0.465]
D(BCI(-2))	0.036	0.146
	[0.59480]	[0.885]
R-squared	0.196	0.191
F-statistic	2.011	1.944

Figures in parentheses are t-values; *** denotes significance at 0.01 level; ** at 0.05 level; * at 0.10 level This table gives the estimated coefficients of the variables in the ECM. It is found that TGG has a statistically significant error correction coefficient with the correct sign. The adjustment coefficients indicate that 1.4% disequilibrium in TGG is corrected each year. BCI has no significant error

correction. Further, the author fails to find any significant t-values. However, on examining the individual ECM regressions, the author finds that TGG affects BCI. So, there must be causality from TGG to BCI.

After checking for cointegration and error correction between the two sets of variables, a check for causality between finance and growth can be conducted, by running tests of granger causality. This will confirm the findings from the earlier VECM.

Table 10: Granger Causality Tests

Null Hypothesis	Chi-sq	df	Prob.
TBC does not cause TGG	12.56***	2	0.002
TGG does not cause TBC	0.91	2	0.633
BCI does not cause TGG	0.36	2	0.835
TGG does not cause BCI	7.4**	2	0.025
SMT does not cause TGG	11.95***	2	0.002
TGG does not cause SMT	0.55	2	0.589
SMC does not cause TGG	0.82	2	0.459
TGG does not cause SMC	0.59	2	0.567

*** denotes rejection of hypothesis at 0.01 level, ** denotes rejection at 0.05 level

The tests indicate that while TBC causes TGG, TGG doesn't cause TBC. This confirms the previous finding of unidirectional causality from TBC to TGG.

However, the author finds that TGG causes BCI, but BCI doesn't cause TGG. This confirms the previous finding of unidirectional causality from TGG to BCI. It is also observed that there is unidirectional causality from SMT to TGG, but no relationship between SMC and TGG.

Conclusion

The study utilized Indian macroeconomic data from 1989 to 2012, to analyze the causal relationship between Bank credit and GDP growth, and Stock markets and GDP growth.

The results indicate unidirectional causality from total bank credit and stock market turnover to economic growth and from economic growth to bank credit to industry. This leads to the idea that financial availability, in the form of bank credit and equity, does indeed lead to productivity. Once there is economic growth, there is a further positive effect on provision of finance especially to the industry.

In an economy that is growing rapidly with a thriving industry, there will be further need of funds, especially in the secondary sector of the economy.

This particular trend has been observed from the data analysis. Another important point to remember is that during periods of high economic growth most industries look forward to expand operations, for which they borrow money from banks and equity markets.

However, during periods of slow economic growth if banks and other financial institutions provide funds at attractive rates, it is bound to act as a catalyst to raise productivity. Similarly, once adequate growth is achieved it will lead to further expansion of the banking sector itself, and a greater availability of industrial credit.

There will also be more diverse range of financial instruments and arrangements that crop up to meet the increased demand for credit.

It is clear that a majority of the funds of the business sector are raised through banks, and causality between stock markets and growth is quite weak, at the most.

References

Bagehot, W, (1873), *Lombard Street*, Homewood, IL: Richard D. Irwin, (1962 Edition).

Schumpeter, JA (1912), "Theorie der Wirtschaftlichen Entwicklung. Leipzig: Dunker & Humblot", [The Theory of Economic Development, 1912, translated by R. Opie. Cambridge, MA: Harvard University Press, 1934.]

Patrick, H, (1966), "Financial Development and Economic Growth in Underdeveloped Countries", *Economic Development and Cultural Change* 14, 174-89.

Goldsmith, RW, (1969), "Financial Structure and Development", New Haven, Conn.: Yale University Press.

McKinnon, RI (1973), "Money and Capital in Economic Development", Washington, D.C.: Brookings Institution, 1973.

Greenwood, J, and B Jovanovic (1990), "Financial Development, Growth, and the Distribution of Income", *Journal of Political Economy* 98 (Oct. 1990): 1076-1107.

Pagano, M (1993), "Financial Markets and Growth: An overview", *European Economic Review*, 37, 613-622.

King, RG, and R Levine (1993), "Finance and Growth: Schumpeter Might Be Right", *Quarterly Journal of Economics* 108 (Aug. 1993): 717-738.

Boyd, JH and EC Prescott, (1986), "Financial intermediary-coalitions", *Journal of Economic Theory*, 38, 211-232.

Boyd, JH and BD Smith (1998), "The evolution of debt and equity market in Economic development", *Economic Theory* 12, 519-560.

Blackburn, K, Bose, N, and S Capasso, (2005), "Financial development, financing Choice and economic growth", *Review of Development Economics*, 9, 135-149.

Jung, WS (1986), "Financial Development and Economic Growth: International Evidence", *Economic Development and Cultural Change*, 34: 333-346.

Demetriades, PO, and KA Hussein, (1996), "Does Financial Development Cause Economic Growth? Time-Series Evidence from 16 Countries" *Journal of Development Economics* 51 (Dec. 1996): 387-411.

Neusser, K, and M Kugler (1998), "Manufacturing Growth and Financial Development: Evidence from OECD Countries" *Review of Economics and Statistics* 80 (Nov. 1998): 638-646.

Bell, C and PL Rousseau (2001), "Post-independence India: a case of finance-led Industrialization?" *Journal of Development Economics*, 65, 153-175.

Rousseau, PL, and R Sylla, (2005), "Emerging Financial Markets and Early U.S. Growth", *Explorations in Economic History* 42 (Jan. 2005): 1-16.

Acharya D, S Amanulla and S Joy, (2009), "Financial Development and Economic Growth in Indian States: An Examination", *International Research Journal of Finance and Economics*, Issue 24.

Chakraborty, I, (2007), "Does Financial Development Cause Economic Growth? The case of India", *Occasional Paper 9*, Institute of Development Studies, Kolkata.

Chakraborty, I, (2010), "Financial Development and Economic Growth in India: An analysis of the post reform period", *South Asia Economic Journal*, 11:287.

Chakraborty, I and S Ghosh, (2011), "The relationship between Financial Development and Economic growth and the Asian financial crisis: An FMOLS analysis", *International Journal of Economic Research*, 2(3): 88-101.

Mishra, PK, KB Das and BB Pradhan (2009), "Credit Market Development and Economic Growth in India", *Middle Eastern Finance and Economics*, Issue 5.

Jotwani, D and Singh S (2013), "Bank Credit and GDP Growth in India: A Study of Causality", *Journal of IMS, Ghaziabad*, 10 (2): 82-87.

Jotwani, D (2014), "A Study of Causality between Bank Credit and GDP Growth in India", *Drishtikon - A Management Journal of SCMHRD*, 6 (1): 13-22.

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Revealed Comparative Advantage of Dairy Export in Asian Market – An Analysis for India and China

Waheeda Thomas

Abstract

Dairy products form an important segment of processed livestock products in India. Apart from providing employment and income dairy sector also contribute valuable exchange rate. Asia is major market for Indian dairy products. International dominant exporters of dairy command more than half of the Asian market share. India is gradually increasing its presence in the dairy products in Asian Market. Reducing share of traditional exporters is giving rise to dairy exports of India and China in Asian market. Present study explores the magnitude of growth and temporal changes in composition Indian dairy export. A comparative analysis of revealed symmetric competitive advantage of dairy export of India and China is carried out in the study. The paper identifies and compares the pattern of revealed comparative advantage of Indian dairy export and Chinese dairy export in Asian Market.

Introduction

Livestock is significant source income, employment and foreign exchange earnings for India. Production of processed livestock products provide long term employment opportunities to the labour force engaged in agriculture. Milk revolution in India increased milk production from 17 million tons in 1950-51 to an estimated 140 million tons in 2013-14. India has world's biggest dairy industry in terms of milk production with 16.43 percent share in total milk production in the world far ahead of the second largest producer United Nation. Compared to the milk production, the processing of milk in India is very small. Increasing domestic demand leaves negligible surplus for export. Dairy products contribute significantly towards foreign exchange earnings of India. Also dairy and livestock sector contribute 25 percent to the total agricultural GDP of India. International dairy trade is dominated by four players EU, New Zealand, Australia and US. The Chinese focus has shifted from increasing milk quantity to improving milk quality and the milk production is expected to grow at an average of 2% per annum compared with the previous decadal growth of 7% per annum. India's milk production is expected to grow to 176 million tons by 2022 and far exceed the total milk production of the entire European Union. India is located amongst milk deficit countries of Asia and Africa. Asia has been the traditional market for Indian exports. 53 per cent of the total dairy and poultry export goes to Asian continent. Increasing demand in the Asian market and India's proximity to this market provides opportunity for increasing dairy export and competing with the dominant dairy exporters as well as emerging dairy exporter i.e. China, in the Asian market needs Indian dairy exports to have competitive advantage in Asian market.

Review of Literature

Concept of revealed comparative advantage has been used by several studies. A majority of these studies use data on export shares. Balassa (1977) has undertaken an analysis of the pattern of comparative advantage of industrial countries for the period 1953 to 1971. Yeats (1997) uses index of revealed comparative advantage in conjunction with the changes in the regional orientation of exports to identify any apparent inefficiencies in trade patterns for the Mercusor group of countries. Richardson and Zhang (1999) have used the Balassa index of RCA for the United States of America to study the patterns of variation across time, sectors and regions. Yue (2001) uses the RCA index to demonstrate the fact that China has changed its export pattern to coincide with its comparative advantage and that there are distinct differences in export patterns between the coastal regions and the interiors in China. Bender and Li (2002) examine the structural performance and shift of exports and revealed comparative advantage of the East Asian and Latin American regions over the period 1981-1997. The Vollrath (1991) index that accounts for double counting in world trade has been used for analysis. Ferti and Hubbard (2002) assess the competitiveness of Hungarian agriculture vis-à-vis EU using four indices of revealed comparative advantage i.e., original Balassa index, relative trade

advantage, relative export advantage, logarithm of the relative export advantage based on original Balassa index and relative competitiveness.

Chinese comparative advantage has been undertaken in Hinloopen and Marrewijk (2004) where Balassa index is used with some innovations to identify the dynamics. The pattern of China's revealed comparative advantage and its implications in terms of competition for other exporting countries has been analyzed using the methodology of market share changes. Weiss (2004), Lall and Albaladejo (2003) and Lall and Weiss (2004) analyze the aspect of threat/opportunity in the context of China's economic relations with South East and East Asia.

Objectives of the Study

Present study examines (1) Magnitude of growth of dairy export of India in Asian Countries, (2) Temporal changes in the export composition Indian dairy products in Asia, and (3) Comparative export competitiveness of dairy products of India and China in Asian Market.

Data and Methodology

Present study uses data pertaining to the period 2009 to 2013. The data on the value of exports of dairy products for India and the world were compiled electronic database of Directorate General of Commercial Intelligence and Statistics (DGCIS) and Food and Agriculture Organisation of the UN (FAO) Trade Yearbook, respectively. All the values of exports have been referred in US dollars. To study the composition of exports of different dairy products, per cent shares were worked out in the value of exports. Compound annual growth rate is computed to examine the trends in dairy products export. The growth rates were calculated for the period 2009 to 2013. The Export Performance Ratio (EPR), as suggested by Balassa (1965), has been used to indicate the comparative advantage of the dairy sector. Since this is revealed by the observed pattern of trade flows, it is called Revealed Comparative Advantage (RCA).

However, since first suggested by Balassa (1965), the definition of RCA has been revised and modified such that an excessive number of measures now exist. Some studies measures RCA at the global level (Vollrath, 1991), others at a sub-global / regional level (Balassa's original index), and while some others evaluates the measurement as bilateral trade between two countries or trading partners. Present study uses Balassa's (1965)

measure of relative export performance by country and commodity, defined as a country's share of world exports of a commodity divided by its share of total world exports. The RCA is measured using post-trade data.

The index for country I commodity j is calculated as follows:

$$RCA_{ij} = (X_{ij}/X_{wj}) / (X_i/X_w)$$

Where

X_{ij} = Country i's export of commodity j in Asian Market

X_{wj} = World export of commodity j in Asian Market

X_i = Total agricultural export of country i in Asian Market

X_w = World agricultural export in Asian Market

If RCA is greater than unity, the country has the comparative advantage and not if RCA is less than unity. However, it should always be adjusted to make it symmetric (Keld Laursen 1998). The index has been made symmetric and was obtained as $(RCA-1)/(RCA+1)$. This measure ranges from -1 to +1 and the measure is labelled as 'Revealed Symmetric Comparative Advantage' (RSCA).

Thus

Since the RCA turns out to produce an output which cannot be compared on both side of 1. Dalum et. al. (1998); laursen (1998); Widodo (2009) have obtained revealed symmetric comparative advantage (RSCA), this measure ranges from -1 to 1 that is formulated as:

$$RSCA_{ij} = (RCA_{ij}-1)/(RCA_{ij}+1)$$

The magnitude index of RSCA_{ij} about zero up to one ($-1 \leq RCA_{ij} \leq 1$). When RSCA_{ij} index of country i above zero is to be comparative advantage for product j. and is RSCA_{ij} index of country below zero is to be comparative disadvantage for product j.

Findings and Discussion

During the study period it has been observed that the Indian dairy export has grown faster than the Indian agricultural export in the world as well as Asia. CAGR value for Indian agricultural export to world has been 22.1 whereas in the Asian continent it is 19.4 per cent. Compared to total agricultural export the growth of dairy products export in the world as well as Asian market is higher. Value of

India’s dairy export to Asia increased from 56232 thousand USD in 2009 to 382268 thousand USD registering a compound annual growth rate of 46.7 per cent. Asian continent is the largest destination for Indian agricultural export varying between 65 per cent in 2009 to 58.1 per cent in 2013.

Table 1: Compound Annual Growth Rate

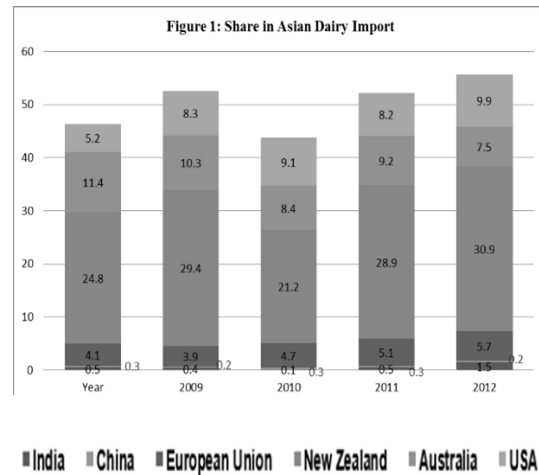
Particular	Percentage
World Agricultural Export	8
Indian Agricultural Export	22.1
Indian Agricultural Export to Asia	19.4
Indian Dairy Export	47
Dairy Export to Asia from	
1) World	16.8
2) India	46.7
3) European Union	24.4
4) New Zealand	22.1
5) Australia	7.4
6) United States of America	32.8
7) China	11.8

Source: Researcher’s Calculation from the data collected from electronic data bases of FAO and DGCIS

Share of processed livestock products increased from 2.1 per cent of the total agricultural export in 2009 to 3.0 per cent in 2013. The compound annual growth rate of export of processed livestock products is 27.3 per cent. It is worth noting that the CAGR for Indian dairy export to Asian countries is highest, to the tune of 46.7 per cent and dairy export to the world is 47 per cent. Indian dairy export share out of total processed livestock has increased from 25 per cent in 2009 to 52 per cent in 2013. Moreover, India’s dairy exports share out of world dairy export in the Asian market has increased from 0.5 to 1.5 per cent during the study period. World dairy export has been dominated by New Zealand, Australia, United States of America and European Union. Asia is no exception to it. Table 1 shows dairy CAGR values for world dairy export to Asia increased by 16.8 per cent. Compounded growth from Export from India, New Zealand, Australia, European Union and United States of America are higher than the world average. Whereas China dairy exports CAGR is less than the world average in Asian Market.

The above mentioned international majors in dairy export have dominated the Asian markets. New

Zealand’s percentage share increased from 24.8 per cent to 30.9 per cent. India’s export share though is very minimal in comparison to these dominant players, has grown from 0.5 per cent to 1.5 per cent. Chinese dairy exports have declined from 0.3 per cent to 0.2 per cent.



Composition of India’s dairy export in the Asian Market

India is exporting a range of dairy products namely butter, buttermilk, processed cheese, skimmed milk, condensed milk, whole milk dried, whey condensed and dried. Table 2 gives the absolute amount of value of export as well as the percentage share of these products.

Except for the skimmed milk dried there is fluctuation in the export percent and value of export of all other products. Skimmed milk dried has witnessed continues rise from 67.7 per cent in 2009 to 89.4 per cent in 2013, showing a CAGR of 55 per cent. Products like Milk, products of natural constituent, skimmed cow milk, whole evaporated milk,, whey, condensed and dried have experienced negative CAGR. Major importers of dairy products from India are – Bangladesh, Nepal, Saudi Arabia, Singapore, Maldives, Kuwait Oman and UAE.

Revealed Competitive Advantage of India and China

Result of RCA as can be seen in table 3 for India reveals that Indian dairy export in Asian market does not have the competitive advantage during the period under observation as the values are less than 1. RCA index from 2009 to 2013 for Indian dairy export is fluctuating. Though less than 1, there is an increase in the value from 0.13 to 0.29, indicating a positive trend towards competitive advantage.

Table 2: Composition of India's Export of Dairy products in Asian Market(Export Value in '000 USD, Values in parenthesis is per cent)

		2009	2010	2011	2012	2013	CAGR
1	Butter, cow milk	3237(5.8)	NIL	NIL	NIL	NIL	NA
2	Buttermilk, curdled, acidified milk	108(0.2)	374(0.6)	767(3.1)	465(0.5)	461(0.1)	33.7
3	Cheese, processed	1735(3.1)	2726(4.0)	1973(8.0)	1989(2.1)	3372(0.9)	14.2
4	Cheese, whole cow milk	4433(7.9)	4875(7.2)	5218(21.2)	9921(10.3)	9820(2.6)	17.2
5	Milk, products of natural constituents nes	NIL	NIL	85(0.3)	138(0.1)	83(0.0)	-0.8
6	Milk, skimmed cow	NIL	329(0.5)	NIL	687(0.7)	194(0.1)	-12.4
7	Milk, skimmed dried	38073(67.7)	46529(68.7)	9050(36.8)	76415(79.1)	341883(89.4)	55.1
8	Milk, whole condensed	441(0.8)	272(0.4)	183(0.7)	103(0.1)	634(0.2)	7.5
9	Milk, whole dried	4237(7.5)	8139(12.0)	1935(7.9)	107(0.1)	21232(5.6)	38.0
10	Milk, whole evaporated	187(0.3)	215(0.3)	26(0.1)	19(0.0)	89(0.0)	-13.8
11	Milk, whole fresh cow	3003(5.3)	1970(2.9)	4846(19.7)	5791(6.0)	4241(1.1)	7.1
12	Whey, condensed	NIL	NIL	278(1.1)	59(0.1)	71(0.0)	-36.6
13	Whey, dry	778(1.4)	2303(3.4)	201(0.8)	879(0.9)	188(0.0)	-24.7
	Total	56232	67732	24562	96573	382268	46.7

Source: Researchers' calculation based on the data collected from electronic databases of DGCIS

Table 3: Revealed Competitive Advantage of Dairy Export of India and China in Asian Market

Year	Revealed Competitive Advantage		Revealed Symmetric Competitive Advantage	
	India	China	India	China
2009	0.13	0.04	-0.77	-0.91
2010	0.11	0.04	-0.79	-0.92
2011	0.03	0.05	-0.94	-0.91
2012	0.11	0.05	-0.80	-0.90
2013	0.29	0.04	-0.55	-0.92

China too has revealed competitive disadvantage in the dairy export in the Asian market.

The RCA values for Chinese dairy export in Asian market have remained same except for the year 2011 and 2012.

A comparison revealed competitive advantage of dairy export of India and China in the Asian market shows that both the countries have competitive disadvantage in the dairy export to Asian countries. India however has been performing better than China.

Result of Revealed Symmetric Comparative Advantage' (RSCA) index, obtained as $(RCA-1)/(RCA+1)$, reveals that dairy export of both India and China have negative advantage in Asian Market for all the five years of study.

However Indian performance can be considered better than Chinese performance.

Conclusion

Indian dairy export in Asian market is increasing but it is concentrated towards dried skimmed milk only.

India is located amidst milk deficient nations and has largest livestock population in the world.

With successful implementation of operation flood and increasing domestic demand dairy industry in India has to improve its productivity and efficiency.

The international competition from European Union, USA, New Zealand and Australia needs to be taken seriously. Proximity to Asian market is advantage for India as against the international dairy giants.

References

Ana Shohibul,(2013) “Revealed Comparative Advantage Measure: ASEAN-China,” Trade Flows, Journal of Economics and Sustainable Development, Vol.4, No.7, pp 136-145.

Balassa, B., (1965). “Trade Liberalization and “Revealed” Comparative Advantage”. The Manchester School of Economics and Social Studies, Vol. 33, No. 2, pp. 99-123.

Dalum, B., K. Laursen, G. Villumsen, (1998). ”Structural change in OECD export specialization patterns: de-specialization and stickiness”. International Review of Applied Economics, Vol. 12, 447-467.

Ferti, Imre and Lionel J. Hubbard (2002) “Revealed Comparative Advantage and Competitiveness in Hungarian Agri-Food Sectors”, Institute of Economics, Hungary Academy of Sciences, Discussion paper series 2002/8

Laursen, K, (1998). “Revealed Comparative Advantage and The Alternatives as Measures of International Specialization”, DRUID Working Paper, No. 98-30, Danish Research Unit for Industrial Dynamics (DRUID).

Utkulu Utku and Dilek Seymen (2004) “Revealed Comparative Advantage and Competitiveness: Evidence for Turkey vis-à-vis the EU/15”, paper prepared for the European Trade Group 6th Annual Conference, ETSG 2004.

Widodo, Tri, (2009). “Comparative Advantage: theory, empirical measures and case studies”. Review of Economic and Business Studies. Issue 4, 57-82.

Yue, Changjun (2001) “Comparative Advantage, Exchange Rate and Exports in China”, China Economic Review 13(2002) 276–296.

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A Study on Perception of Middle Class People of Some Selected Districts of Gujarat State towards Unorganized Retailing Shops / Traditional Retail Shops / Grocery Shops / Kirana Shops

Dipak Patel

Abstract

Across the globe, for any country whether it is developed or developing, retailing activities contribute lots to the economic growth and prosperity. Retailing business is gaining the attention of people across the globe and today it is recognized as an industry which is divided into organized retailing and unorganized retailing. The behavior of customers differs from area to area and class to class and situation to situation. Normally people buy different items from traditional retail shops and shopping malls. This research paper concentrates on the perception of middle class people of Anand, Vallabh Vidya Nagar, Kheda and Nadiad of Anand and Kheda districts of Gujarat state towards unorganized retailing shops / traditional retail shops / grocery shops / kirana shops.

Introduction

As time passes we see many changes in business. Before 50 years there was not that much importance of marketing function in the business which is prevailing as on today. In the present era of cutthroat competition in the business, the success of any business depend upon how efficiently and effectively the marketing department working. As on today there is change in taste and preference of customers which is part and parcel of consumer behavior and marketer has to study all these changes and to incorporate in marketing strategy to attract the customers. Customers buy different items from shopping malls as well as from nearby grocery shops. The behavior of customers for buying different items from shopping malls and nearby grocery shops differs due to different factors. This paper concentrates on the perception of middle class people of selected cities of Anand and Kheda districts towards unorganized retailing shops / traditional retail shops / grocery shops / kirana shops.

Retailing Industry

Retailing industry is gaining the attention of government, researchers, academicians and policy makers. For any country Retailing is a distinct, diverse and dynamic sector which is of huge economic significance to any country. It generates revenue and wealth for nation, encourages investments and brings technological advancements. It also brings employment and creates wealth of the economy and vibrant part of our changing society and a major source of employment.

Retailing Industry is divided into two sectors: Organized Retailing Sector and Unorganized Retailing Sector.

Organized Retailers - Organized Traders/Retailers are those who are licensed for doing trading activities and registered to pay different taxes to the government.

Unorganized Retailers – Unorganized Retailers are those consisting of unauthorized small shops - conventional Kirana shops, general stores, corner shops among various other small retail outlets selling different items in small quantity, normally not paying tax to the government and majority of them are managed or controlled by the local government authorities.

Retailing in unorganized sector is not a profit oriented vocation but a mere source of livelihood. Naturally, the capital investment is very low and the infrastructure is rudimentary. The organized retailing sector dominates the total retailing activity in India. It includes thousands of small retail shops spread over the entire geographical area of the country. It refers to the traditional format of retail industry. This sector is mainly characterized by small retailers and is subject to tax evasion and lack

of labour law system. Example: Local kirana shops, pan bidi shops etc.

India has been a nation of ‘dukandars’ – around 12 million retailers – consisting of more retail shops than those in the rest of world put together. Retailing has been in our blood - as shopkeepers or as shoppers. But things are changing in the country in the way shopping is done, the way retailing is getting modernized and organized, and the way people are viewing this industry – as students, as shoppers and as academicians. -----Kishore Biyani--- CEO Future Group

Meaning Of Retailing and Retail Marketing

Retail comes from the French word *retailier* which refers to “cutting off, clip and divide “in terms of tailoring (1365). It first was recorded as a noun with the meaning of a “sale in small quantities” in 1433 (French). Its literal meaning for retail was “to cut off, shred, paring”.

Like the French, the word retail in both Dutch and German (*detailhandel* and *Einzelhandel* respectively) also refer to sale of small quantities or items.

Selling in small quantities as opposed to wholesale is called as retailing. Retailing is the set of activities that markets products or services to final consumers for their own personal or household use.

The retail transaction is at the end of the supply chain. Manufacturers sell large quantities of products to retailers, and retailers attempt to sell those same quantities of products to consumers in small lots. Retail marketing is the range of activities carried out by a retailer to promote awareness in the market and sale of the marketer’s products.

Size of Indian Retail Market (Organized market / Shopping Malls & Traditional Market / Nearby Grocery Shops) Percentage Share

The following table shows the proportion of Organised and Unorganised Retail Sales in India.

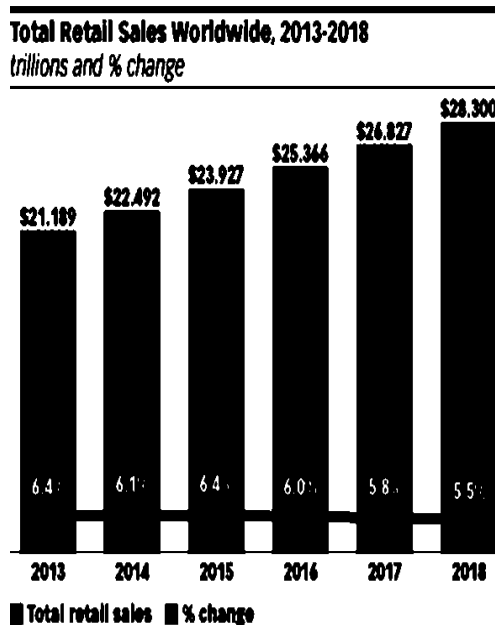
The table is adapted from Research Paper titled “Retail Sector in India: Present Scenario, Emerging Opportunities and Challenges “ by Prof. Kalpana Singh (Amity School of Economics/ Amity University, Noida, U.P., India) published in IOSR Journal of Business and Management (IOSR-JBM) e-ISSN: 2278-487X, p-ISSN: 2319-7668. Volume 16, Issue 4. Ver. I (Apr. 2014), PP 72-81.

Year	Organized Retail Sales	Traditional Retail Sales
2005	3.6	96.4
2007	4.1	95.9
2010	5.0	95.0
2012	8.0	92.0
2015E	21.0	79.0
2020E	24.0	76.0

E=Expected

Total Retail Sales Worldwide

The following chart shows total retail sales worldwide from 2013 to 2018.



Note: excludes travel and event tickets

Source: eMarketer, December 2014.

Total Retail Sales Worldwide, By Country, 2013-2017

The following table shows total retail sales country wise from 2013 to 2018.

	2013	2014	2015	2016	2017
US*	\$4,528.22	\$4,706.21	\$4,908.58	\$5,104.92	\$5,309.12
China**	\$3,783.78	\$4,237.84	\$4,704.00	\$5,174.40	\$5,640.09
Japan	\$1,423.20	\$1,453.78	\$1,482.85	\$1,520.81	\$1,555.84
Germany	\$851.81	\$862.88	\$870.65	\$877.61	\$883.76
France	\$817.52	\$829.78	\$839.74	\$848.14	\$854.92
Russia	\$743.03	\$794.30	\$845.93	\$900.06	\$959.92
India	\$635.25	\$717.83	\$818.33	\$941.08	\$1,082.24
UK*	\$608.03	\$632.05	\$651.60	\$666.25	\$679.85
Italy	\$496.38	\$479.01	\$469.43	\$463.32	\$461.01
Canada	\$467.74	\$478.03	\$488.07	\$498.32	\$508.74
Brazil	\$395.90	\$428.76	\$460.06	\$490.42	\$517.89
South Korea	\$360.63	\$368.93	\$376.31	\$383.83	\$391.51
Mexico	\$355.78	\$366.45	\$386.60	\$405.93	\$426.23
Spain	\$341.63	\$336.84	\$334.16	\$333.15	\$333.48
Sweden	\$239.30	\$246.48	\$253.87	\$262.00	\$269.86
Indonesia	\$203.25	\$245.93	\$293.15	\$337.71	\$379.93
Argentina	\$181.21	\$239.20	\$299.00	\$337.87	\$371.65
Australia	\$222.09	\$231.41	\$238.59	\$245.75	\$253.12
Netherlands	\$184.59	\$185.51	\$187.37	\$189.81	\$192.46
Denmark	\$95.90	\$97.53	\$99.38	\$101.47	\$103.70
Norway	\$92.06	\$93.90	\$96.25	\$98.94	\$101.91
Finland	\$65.22	\$65.55	\$66.08	\$66.74	\$67.51

Note: excludes travel and event tickets, *forecast from Sept. 2014, ** excludes HongKong
Source: eMarketer, December 2014.

Factors Responsible For Growth of Organised Retailing in India

Organised Retailing is new concept in India but in developed countries like USA, Canada, Britain and France it is already there since 100 years ago. The following are the factors responsible for the growth of organised retailing in India.

- (1) Increase in the number of working women.
- (2) Emerging rural market.
- (3) Growth of middle class consumers.
- (4) Rise in income.
- (5) Entry of foreign retailers.
- (6) Entry of corporate sector.
- (7) Media explosion.
- (8) Technological impact.

OBJECTIVE: The broad objective of this research paper is to get the idea about perception of middle class people of selected district towards unorganized retailing shops / traditional retail shops / grocery shops / kirana shops.

Hypothesis

During the data analysis the following hypothesis were tested.

- (1) Brand Loyalty is independent of gender of customers.
- (2) There is no association between gender of customers and benefits of brand loyalty.
- (3) There is no association between age of customers and brand loyalty.
- (4) There is no association between age of customers and benefits of brand loyalty

Review of Literature

Extensive research has been carried out in the area of consumer behavior and retailing industry at different levels.

Adil Zia, Khalid Mohammad Azam (2013) in their research has explored fifteen dimensions and from this eleven have optimistic impact on shopping experience. In the opinion of Ms. Monika Talreja and Dr. Dhiraj Jain (2013), modern and traditional retailers will co-exist in India in a years to come as they have their own competitive advantages. Traditional Retail shops have low- cost structure, location advantage, and customer familiarity and on the other side shopping malls offer combination of product width and depth and excellent buying / shopping experience. Modern retailing is becoming a mart to shop for buying fresh fruit and vegetable. Mitul Deliya ,Bhavesh Parmar and Dr. K. K. Patel(2012) have carried out the research study on the impact of organized retailers on unorganized retailers and concluded that there is a decline in footfall of the customer visiting unorganized retail due to emergence of more organized retailers. U. Dineshkumar and P.Vikkrman (2012) are of the opinion that shopping malls offer better value added services as compared to the traditional retail outlets. According to Panneerselvam S(2012). Indian organized retail sector is rising and the role of supply chain becomes more important because the retailing activity is possible if the product has reached to the shelf. Growth of the organized sector is also improving the supply chain of our country. Kushwaha(2011),compared the perception of consumers in both local retail shops and modern shopping malls and realized there are several factors that affect traditional retailing shops. According to Dr. Ramnathan V. and Dr. Hari K.(2011), customers prefer to buy products both from organized and unorganized retailers due to changes in the demographic system of customers and the awareness of quality consciousness consumption and retailers provide various value added services to customers for their pleasant shopping experience. . Goswami& Mishra (2009), tried to know whether consumers are probable to move from Kirana shop to shopping malls for buying groceries. The research finding highlighted that both local retail shops and modern shopping malls have some competitive advantages over other. In the opinion of Piyush Kumar Sinha & Sanjay Kumar Kar (2007), India's retail development is inevitable. Most of the organized retailers in India are harping on quality, service, convenience, satisfaction and assured benefits to lure shoppers into the store. Retailers should create value for the consumer and must decide suitable vehicle to deliver desired consumer value.Kalhan (2007), analyzed the effect of shopping malls on nearby grocery shops and there is downfall in the turnover of traditional retails shops due to superior shopping environment, convenience, availability of variety, ambience of shop, and availability of parking space and perception of quality of products sold in shopping malls. According to Dholakia (1999), the justification for shopping is making visit

in person to a shopping site. It is presumed to be as a household task as well as a form of recreation, relaxation and entertainment. Shopping is most positive attribute of being a leisure activity along with work.

Research Methodology

The research methodology of this paper includes the following.

Primary and Secondary Data Collection

Primary data are collected through structured questionnaire having close ended answer. Secondary data are collected from the various on line and of line sources in the area of consumer behaviour and retailing.

Population

Researcher has used target population in form of middle class people visiting unorganized retailing shops / traditional retail shops / grocery shops / kirana shops.

Geographical Area for Research / Sampling Area
Selected city like Anand and Vallabh Vidya Nagar and Nadiad and Kheda of Anand and Keheda district of Gujarat state.

Research Instrument: Questionnaire

Sampling Unit: Middle class people who are engaged in job or they are professional or house wife.

Sample Size: For collecting data for the research work, 730 numbers of respondents were considered.

The sample is divided into four different groups for four different cities namely Nadiad, Kheda, Anand and Vallabh Vidya Nagar.

Table: Sample Size of Respondents

Sr. No	City	Number of Respondents
1	Nadiad	215
2	Kheda	130
3	Anand	175
4	Vallabh Vidya Nagar	210
Total		730

Statistical Tools Used For Data Analysis

The statistical package for social sciences (SPSS) has been utilized to analyse the data collected through survey work. Chi-square test, Factor Analysis have been used for proper presentation of the findings.

Limitations of the Study

This study cannot be applied to other area due to difference in demographic, economic and social factors and shopping preference of middle class people. The sampling procedure is non-probability convenience sampling and thus it inherently brings all the limitations of it. Sample size of 730 respondents is acceptable size but for any consumer research like this, using a larger sample size will be preferable and more representative of the whole population of retail customers in this area or elsewhere. The findings of the research cannot be generalized for entire state or nation.

Data Analysis

In the data analysis hypothesis were tested and factor analysis was carried out to get the idea about perception of middle class people towards unorganized retailing shops / traditional retail shops / grocery shops / kirana shops

(1) TESTING OF HYPOTHESIS

Hypothesis No 1

H0: Brand Loyalty is independent of gender of customers.

H1: Brand Loyalty is dependent of gender of customers.

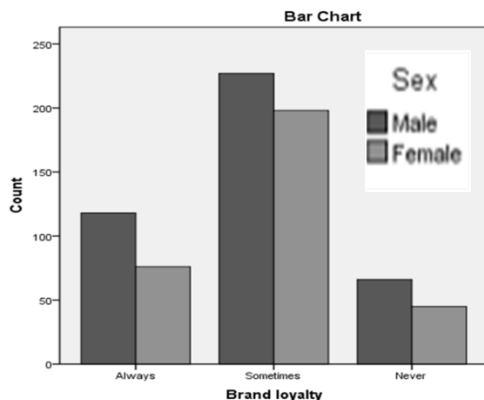
Brand Loyalty	Sex		Total
	Male	Female	
Always	118	76	194
Sometimes	227	198	425
Never	66	45	111
Total	411	319	730

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	3.506 ^a	2	.173
Likelihood Ratio	3.517	2	.172
Linear-by-Linear Association	.381	1	.537
N of Valid Cases	730		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 48.51

Since the calculated chi-square value is 3.506 and P Value is .173 which is greater than 0.05 Therefore



Ho is accepted and it is inferred that brand Loyalty is independent of gender of customers.

Hypothesis No 2

H0: There is no association between gender of customers and benefits of brand loyalty.

H1: There is association between gender of customers and benefits of brand loyalty.

Benefits of brand loyalty	Sex		Total
	Male	Female	
Good quality	201	158	359
Fair price	70	70	140
Easy to remember	20	15	35
Benefits of scheme	46	25	71
Value for money	74	51	125
Total	411	319	730

Chi Square Test

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	4.790 ^a	4	.310
Likelihood Ratio	4.815	4	.307
Linear-by-Linear Association	1.372	1	.241
N of Valid Cases	730		

0 cells (.0%) have expected count less than 5. The minimum expected count is 15.29. Since the calculated chi-square value is 4.790 and P Value is .310 which is greater than 0.05 Therefore Ho is accepted and it is inferred that there is no association between gender of customers and benefits of brand loyalty.

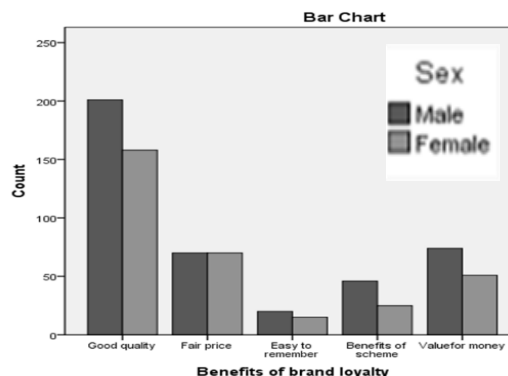
Hypothesis No 3

Ho: There is no association between age of customers and brand loyalty.

H1: There is association between age of customers and brand loyalty.

1 cells (6.7%) have expected count less than 5. The minimum expected count is 3.80

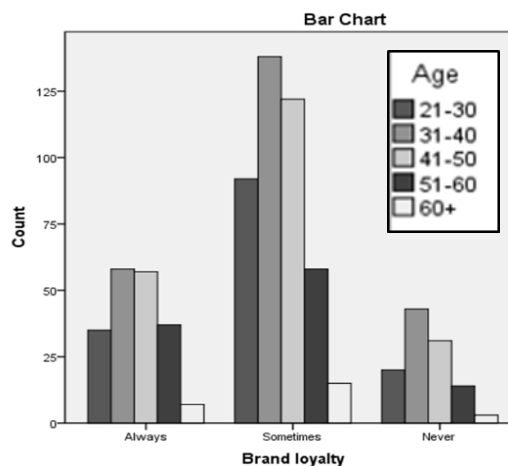
Since the calculated chi-square value is 6.212 and P Value is .623 which is greater than 0.05 Therefore Ho is accepted and it is inferred that there is no association between age of customers and brand loyalty.



Brand loyalty	Age					Total
	21 to 30	21 to 30	21 to 30	21 to 30	21 to 30	
Always	35	58	57	37	7	194
Sometimes	92	138	122	58	15	425
Never	20	43	31	14	3	111
Total	147	239	210	109	25	730

Chi Square Test

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	6.212 ^a	8	.623
Likelihood Ratio	6.039	8	.643
Linear-by-Linear Association	2.376	1	.123
N of Valid Cases	730		



Hypothesis No 4

Ho: There is no association between age of customers and benefits of brand loyalty.

H1: There is association between age of customers and benefits of brand loyalty.

Benefits of brand loyalty	Age			
	21-30	31-40	41-50	51-60
Good quality	80	111	102	50
Fair price	20	50	39	25
Easy to remember	9	8	11	7
Benefits of scheme	10	22	26	11
Value for money	28	48	32	16
Total	147	239	210	109

Benefits of brand loyalty * Age Cross Tabulation Count

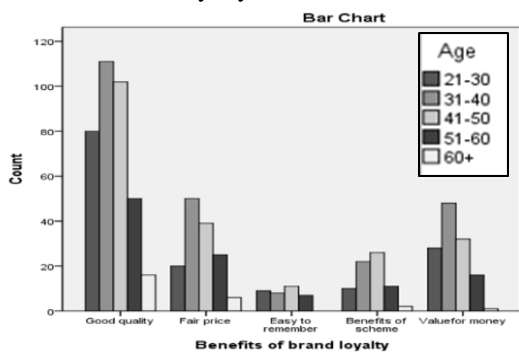
Benefits of Brand Loyalty	Age 60+	Total
Good quality	16	359
Fair price	6	140
Easy to remember	0	35
Benefits of scheme	2	71
Value for money	1	125
Total	25	730

Chi Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	17.780 ^a	16	.337
Likelihood Ratio	20.212	16	.211
Linear-by-Linear Association	.916	1	.338
N of Valid Cases	730		

4 cells (16.0%) have expected count less than 5. The minimum expected count is 1.20

Since the calculated chi-square value is 17.780 and P Value is .337 which is greater than 0.05 Therefore, Ho is accepted and it is inferred that there is no association between age of customers and benefits of brand loyalty.



(2) FACTOR ANALYSIS

Factor analysis was carried out to know the perception of middle class people of selected cities towards unorganized retailing shops / traditional retail shops / grocery shops / kirana shops and for that 12 questions were asked. The analysis is as under.

No	Factors
1	Does not encourage Impulse Buying
2	Low Price
3	Loyalty to the Traditional Shops / Outlet
4	High Quality products
5	Good Store / Shop Image
6	Availability of Credit Facility
7	Positive attitude of sales personnel
8	Near to residence
9	Home delivery of products
10	Return facility
11	Availability of preferred brands
12	Due to habit (Habitual)

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.878	
Bartlett's Test of Sphericity	Approx. Chi-Square	2077.731
	Df	66
	Sig.	.000

Communalities

	Extraction
Does not encourage impulse buying	.300
Low price	.477
Loyalty to local shop	.491
High Quality products	.606
Good shop image	.461
Availability of credit facility	.146
Positive attitude of salesmen	.517
Near to home	.553
Home delivery of products	.442
Return facility	.586
Availability of preferred brands	.400
Due to habit	.344

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings
	Total	% of Total Variance	Cumulative %	Total
dimension0	14.193	34.946	34.946	3.064
	21.129	9.410	44.356	2.258

Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Rotation Sums of Squared Loadings	
	% of Variance	Cumulative %
dimension0	1	25.537
	2	18.819

Extraction Method: Principal Component Analysis.
Rotated Component Matrix^a

	Component	
	1	2
High Quality products	.778	
Low price	.683	
Loyalty to local shop	.682	
Availability of preferred brands	.599	
Positive attitude of salesmen	.555	
Good shop image	.550	
Due to habit		
Availability of credit facility		
Return facility		.715
Near to home		.698
Home delivery of products		.589
Does not encourage impulse buying		.536

List of Extracted Factors

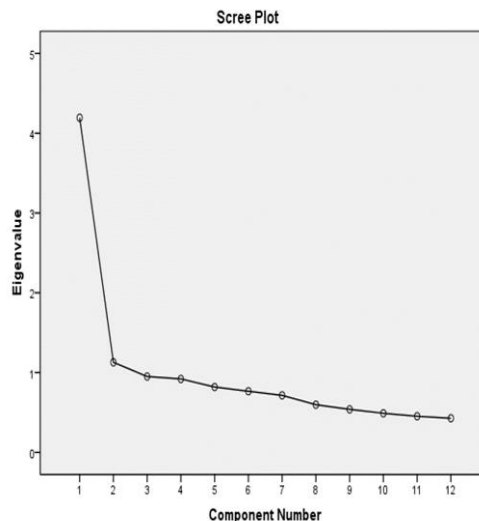
Factor Extractions				
Factor Number	Factor Designation	Maximum Variance	Eigen Value	Variables Included
F1	Preference While buying	25.537	4.193	High Quality products (Variable 4)
				Low price (Variable 2)
				Loyalty to local shop (Variable 3)
				Availability of preferred brands (Variable 11)
				Positive attitude of salesmen (Variable 7)
				Good shop image (Variable 5)
F2	Value Added facility for customers	18.819	1.129	Return facility (Variable 10)
				Near to home (Variable 8)
				Home delivery of products (Variable 9)
				Does not encourage impulse buying (Variable 1)

Factors loading of variables

Factors	Variables	Factors	
		F1	F2
1	V 4	.778	
	V2	.683	
	V3	.682	
	V11	.599	
	V7	.555	
	V5	.550	
2	V10		.715
	V8		.698
	V9		.589

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.



		Factors	
Factors	Variables	F1	F2
	V1		.536

Analysis and Interpretation

The results of factor analysis expose the following parameters about preference of customers about shopping from Traditional Retail Shop.

Parameter 1: Preference while buying: The factor with maximum variance of 25.537 percent of total variance with Eigen value of 4.193 is named as 'Preference while buying'. Six variables has high factor loading on this factor. First one is V4: High

Quality Products with highest factor loading of 0.778. This implies that consumers prefer traditional retail shop because of availability of high quality products.

The second highest factor loading under this factor is V2: Low Price with a factor loading of 0.683. It means that consumers prefer going to traditional retail shop as products are available at low price.

The variable with third highest factor loading is V3: Loyalty to Local Shop with a factor loading of 0.682. It means that customers prefer to buy from local shop because of loyalty to local shop.

The variable with fourth highest factor loading is V11: Availability of preferred brands with a factor loading of 0.599. It means that the customers prefer to buy from the traditional retail shop if their preferred brands are available

The variable with fifth highest factor loading is V7: Positive attitude of sales personnel with a factor loading of 0.555. It means that the customers prefer to buy from the traditional retail shop if there is positive attitude of salesman while dealing with customers whether customers visiting the shop for the first time or they are regular customers of the shop.

The variable with sixth highest factor loading is V5: Good Image of the shop with a factor loading of 0.550. It means that the customers prefer to buy from the traditional retail shop if the image of retail shop is good in the mind of common people in surrounding of the shop.

Parameter 2: Value Added Facility for Customers: The next factor with maximum variance of 18.819 percent of total variance with Eigen value of 1.129 is named as 'Value Added Facility for Customers'. Four variables has high factor loading on this factor. First one is V 10 : Return Facility with highest factor loading of 0.715. This implies that Customers will prefer to buy from traditional retail shop because of return facility offer by traditional retail shop.

The second highest factor loading under this factor is V8:Near to residence with a factor loading of 0.698. The consumers prefer to buy from traditional retail shop as it may near to residence.

The variable with third highest factor loading is V3: Home delivery of Products with a factor loading of 0.589. It means that customers prefer to buy from nearby shop because of value added service like free home delivery of products purchased from the nearby retail shop.

The variable with fourth highest factor loading is V1: Does not encourage Impulse Buying with a

factor loading of 0.536. It means that customers prefer to buy from nearby shop because it does not encourage impulse buying.

Findings

The following are the major findings of the study.

- Brand Loyalty is independent of gender of customers.
- There is no association between gender of customers and benefits of brand loyalty.
- There is no association between age of customers and brand loyalty.
- There is no association between age of customers and benefits of brand loyalty.
- Middle Class people prefer traditional retail shop because of availability of high quality products.
- Middle Class people prefer going to traditional retail shop as products are available at low price.
- Loyalty to nearby grocery shop encourage middle class people to give preference while buying..
- Good return facility offered by traditional retail shop attract middle class people.
- Middle Class people prefer to buy from traditional retail shop as it may near to residence.
- Value added service like free home delivery of products purchased from the nearby retail shop catch the attention of middle class people.
- Middle Class people prefer to buy from nearby shop because it does not encourage impulse buying.

References

Azam, A. Z. (January 2013). Unorganized Retail Shopping Experience in India: An Empirical Investigation. Pacific Business Review International Volume 5 Issue 7, 7-15.

Deliya Mitul, B. P. (May 2012) . A STUDY ON IMPACT OF ORGANIZED RETAILER ON UNORGANIZED. International Journal of Research in Management, Economics and Commerce ISSN: 2250- 057X Volume2, Issue 5, 64-82

Dholakia, R. R. (1999). Going shopping: key determinants of shopping behaviour and motivations. International Journal of Retail and Distribution Management Bradford, 27, 154–165.

Dr. Ramnathan V. and Dr. Hari K.: A study on Consumer Perception about Organised VS Unorganised Retailers at Kanchipuram, Tamil Nadu. Indian Journal of Marketing Volume 41, Number12, December-2011, Page No 11 to 23.

Goswami, P., Mridula, S. Mishra, (2009). Would Indian consumers move from kirana stores to organized retailers when shopping for groceries? Asia Pacific Journal of Marketing and Logistics, 21(1), 127 – 143.

<http://info.shine.com/industry/retail/7.html>
<http://www.yourarticlelibrary.com/retailing/10-major-factors-responsible-for-the-growth-of-organised-retailing-in-india/7574/>

Kalhan, A. (2007). Impact of Malls on Small Shops and Hawkers. Economic Political Weekly, 6, 2063-2066.

Kushwaha, S. and Gupta, M. K. (2011). Customer perception in Indian retail industry: A comparative study of organized and unorganized retail industry. Research Journal of Economics and Business studies, 1(1), 61-73. 63.

Ms. Monika Talreja and Dr. Dhiraj Jain changing consumer perceptions towards organized retailing from unorganized retailing -an empirical analysis ISSN 2277 - 3622 international journal of marketing, financial services & management research vol.2, no. 6, June (2013).

Sinha Piyush Kumar & Kar Sanjay Kumar (2007) “An Insight into the Growth of New Retail Formats in India” IIM-Ahmadabad Research and publication W.P. No. 2007- 03-04

S., P. (n.d.). FOOD RETAIL AND RETAIL SUPPLY CHAIN IN INDIA – LITERATURE. IJRIME Volume2, Issue3 ISSN: 2249-1619, 88-99.

Vikkraman P., U. D. (Sep,-Oct. 2012)). Customers’ Satisfaction towards Organized Retail Outlets in Erode City. IOSR Journal of Business and Management (IOSRJBM) ISSN: 2278-487X Volume 3 , , 34-40.

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An Analytical study of Revenue, Profitability and EPS of Selected Construction Companies

Subhash Joshi, Bhupendra Patel

Abstract

The entrepreneur is very much concerned about generation of required rate of surplus in their business. This can be net profit shown by the books of accounts or EPS, which is average earning per share. Amount of EPS may decide the rate of dividend payable to equity shareholders. Similar study for construction companies is undertaken in this research paper. The study covers all major construction /infrastructure companies of India. Group wise (on the basis of level of revenue) study of profitability reveals that in this industry, EPS (amount of profit generated) has no correlation with revenue.

Introduction

Construction industry occupies a crucial position in the economy. Good Buildings and efficient infrastructure is required for offices, commercial establishments, markets, public institutions, factories and residential units. Economic infrastructure is also a major component for construction industry. After 1991, there has been a phenomenal growth in infrastructure development. The importance given to the growth of infrastructure in the five year plans, commercial establishments and the dire need of residential houses has triggered increase in construction activities. Construction activity has multiplier effect in the sense that it is connected with other industries like Cement, steel, wood and related industries. Construction industry is the generator of employment on a big scale.

Objectives of the Study

The activities, nature and scope of work carried out by construction companies is multifarious. Well known construction companies are involved in different type of construction/infrastructure creation activities. They require huge amount of capital, debt as well as a big amount of working capital. The scope and cost structure of various projects is different. Profit margin also varies in different projects handled by the construction companies. The accounting and recognition of profit is to be done as per accounting standard: AS: 7. In this backdrop, the objectives of the study are:

- (1) To calculate, evaluate and compare the net profit ratios (profitability) of the construction companies covered in the study. The analysis/comparison is to be made among the companies as well as the trend of profitability during 2007 and 2013.
- (2) To calculate and analyse the earning per share (EPS) of different construction companies for the period of 2007 to 2013.
- (3) To have a suitable statistical analysis of revenue/income and EPS to establish the relationship, if any, for the companies covered for the period of 2007-2013.
- (4) To analyse and find out whether there is any relation between revenue (income) and earning per share in case of business of construction companies.
- (5) To study periodical trend (2007-2010 and 2010-2013) in the profitability and E P S of the companies covered.
- (6) To study and analyse whether EPS is higher of the companies having higher revenue and vice versa.

(7) To study the trend and variations in the profitability and E P S of construction companies, and other relevant issues throughout the period of study.

Economics of Construction Industry

Construction and infrastructure activity in itself covers many related economic activities. The importance of infrastructure/construction has been growing in India's economic development during the post liberalization phase. For example, the construction of urban areas to India's GDP has increased from 29 per cent in 1950-51 to 47 per cent in 1980-81, to 62 per cent by 2007 and is expected to increase to 75 per cent by 2021 (Planning Commission, 2008). It is also being emphasized that 9 to 10 per cent of growth in GDP depends fundamentally on making Indian cities more livable and inclusive.

The availability of adequate infrastructure facilities is imperative for the overall economic development of the country. Infrastructure adequacy helps determine success in diversifying production, expanding trade, coping with population growth, reducing poverty and improving environmental conditions. Today, it is necessary to broaden one's concern from increasing the quantity of infrastructure stocks to improving the quality of infrastructure services. In recent years, there has been a revolution in thinking about who should be responsible for providing in structure stocks and services, and how these services should be delivered to the user.

Infrastructure is generally defined as the physical framework of facilities through which goods and services are provided to the public. Its linkages to the economy are multiple and complex, because it affects production and consumption directly, creates negative and positive spillover effects, and involves large flow of expenditure. Infrastructure contributes to economic development, both by increasing productivity and by providing amenities which enhance the quality of life. The services provided lead to growth in production in several ways:

- (1) Infrastructure services are intermediate inputs to production and any reduction in these input costs raises the profitability of production, thus permitting higher levels of output, income and employment.
- (2) They raise the productivity of other factors including labour and other capital. Infrastructure is thus often described as an unpaid factor of production, since its availability leads to higher obtainable from other capital and labour.

The physical infrastructure sector covers a wide spectrum of services: urban infrastructure, urban mass transportation system, Ports, roads (transportation), railways, air ways and water transportation, power generation, water supply and sewage disposal and irrigation. Social infrastructure includes medical, educational and other primary services and urban housing. Some of these services have direct impact on the working of a business enterprise, while others are important from the societal point of view. Urban housing is an important sub group of infrastructure/construction industry. Housing is a crucial sector for any economy as it has inter linkages with nearly 269 other industries. The development of housing sector can have direct impact on employment generation, GDP growth and consumption pattern in the economy.

House prices are an important determinant of household sectors' gross and net wealth and thereby of consumption and savings. In many countries, including India, house property is the householder's largest asset and price developments in housing markets can impact growth directly but mainly through credit channel since real estate can serve as collateral for consumer borrowing.

As per McKinsey Global Institute, India's urban population is projected to increase from 340 million (2008) to 590 million (2030). This surge in growth will bring about employment opportunities. But urban expansion is also expected to take place at a rate unlike anything the country has experienced before. As per the opinion of McKinsey Institute, with proper planning, Indian cities could produce 70 percent of the GDP and drive a near fourfold increase in per capita income across the nation by 2030.

The specific characteristics of construction industry are:

- (1) The industry implies different activities like housing for communities, commercial and industrial construction, projects of national importance (i.e. the infrastructure) like dams, bridges, air ports, sea ports, roads, civic amenities and their maintenance.
- (2) This industry has multiplier effect in the sense that it helps other industries/activities like cement, steel, construction material, electricity, entrepreneurship, educated employment and labour, banking and finance.
- (3) Many projects involve tenor of more than five years.
- (4) It involves very big amount of financial resources.

- (5) It is labour intensive activity.
- (6) Usually, the actual costs are increasing by the time the project is complete (cost overrun).
- (7) It requires comprehensive planning and monitoring of different interfaces of the project.
- (8) Different infrastructure projects have varying level of profitability.
- (9) The activity involves many agencies in the business like architects, engineers, planners, lawyers, sub-contractors and accountants.
- (10) It requires accounting as per Accounting Standard "Construction Contract."

The goals to be targeted/achieved through well-conceived infrastructure policy in a developing economy can be:

- (1) To achieve Sound and efficient infrastructure for faster economic growth.
- (2) To generate employment and surplus for the entrepreneur.
- (3) To build capacity for sustained infrastructure maintenance.
- (4) Socio economic equity through well planned urban/rural infrastructure, human well being and ecological sustainability.
- (5) All people must have access to safe and adequate resources to fulfill basic needs, in ways that are ecologically sustainable and culturally appropriate.

- (6) All infrastructure development must be ecologically sustainable and socio-economically equitable.
- (7) All service and welfare sectors must integrate principles and practices of ecological sustainability.
- (8) Safeguard of integrity of natural ecosystems, wildlife and biodiversity.
- (9) Sustainable employment and livelihood for different communities.
- (10) Sustainable socio economically equitable production and consumption, using a mix of incentives and disincentives.

Profile of Construction Companies

The growth of construction/infrastructure industry is phenomenal in last two decades.

There are well known infrastructure companies in India, like Gammon India, Hindustan Construction, DLF, Punj Lloyd and J P Associates.

Sixteen (16) successful construction/infrastructure companies of national importance are selected for study.

Sr. No	Name of the Company	Revenue (2006-07) (Rs. Crores)	EPS (2006-07) (Rs) / Face value of Equity share (Rs.)	Revenue (2012-13) (Rs. Crores)	EPS (2012-13) (Rs) / Face value of Equity share (Rs.)
1	Anant Raj Construction Ltd.	169	3/2	520	3/2
2	Ansal Properties Ltd.	718	12/5	988	3/5
3	B L Kashyap Ltd.	808	26/5	1497	1/1
4	D L F Ltd.	1135	2/2	2150	3/2
5	Era Infra Ltd.	763	34/10	4693	10/2
6	Gammon India Ltd.	1859	5/2	5197	00/2
7	Gayatri Projects Ltd.	502	23/10	2022	21/10
8	Hindustan Construction Co. Ltd.	3082	4/1	3832	00/1
9	IVRCL Ltd.	2346	10/2	6178	00/2
10	JMC Projects Ltd.	500	9/10	2538	7/10
11	JP Associates Ltd.	3461	4/2	13208	2/2
12	Patel Engineering Ltd.	1098	18/1	3060	7/1
13	Pratibha Industries Ltd.	295	12/10	1643	9/2
14	Punj Lloyd Ltd.	2251	2/2	8518	1/2
15	Simplex Infra Ltd.	1708	10/2	5807	12/2
16	Unity Infra Ltd.	542	31/10	2039	12/2

Research Methodology

- 1) Sample companies selected on convenient basis from the data available from Capital Market.
- 2) Secondary data about revenue, profit, share capital and number of shares obtained from Capital Market. This data is the authentic data of companies from their audited accounts.
- 3) Working of data about income and EPS (earning per share) covering the period 2007 to 2013.

- 4) The companies covered were classified in three categories, small, medium and large (on the basis of revenue). This is with an idea that at least in case of large companies, there must be some correlation between revenue and EPS.
- 5) Group wise correlation and regression analysis.

Data Analysis

The construction/infrastructure companies are classified in three categories: large, medium and small. This classification is based on their revenue.

(A) Revenue/EPS: (Amount: Rs.)

Sr. No.	Year	2007		2008		2009		2010		2011		2012		2013	
		Revenue (Rs. Crores)	EPS (Rs)	Revenue (Rs. Crores)	EPS (Rs)	Revenue (Rs. Crores)	EPS (Rs)	Revenue (Rs. Crores)	EPS (Rs)	Revenue (Rs. Crores)	EPS (Rs)	Revenue (Rs. Crores)	EPS (Rs)	Revenue (Rs. Crores)	EPS (Rs)
1	J P Associates	3461	4	3985	5	5764	6	10088	5	12965	4	12755	3	13208	2
2	Punj Lloyd	2251	2	4495	7	6852	11	7116	3	5878	2	5913	2	8518	1
3	I V R C L	2346	10	3698	16	4969	17	5477	6	5651	6	4959	1	6178	0
4	Simplex Infra	1708	10	2812	18	4688	25	4447	25	4751	25	5897	17	5807	12
5	Gammon India	1859	5	2344	10	3657	13	4472	11	5509	7	5536	7	5197	0
6	Hindustan const.	3082	4	3082	4	3313	3	3644	3	3991	0	3678	0	3832	0
7	Era Infra	763	34	1464	52	2376	14	3415	14	3799	13	4348	11	4693	10
8	D L F	1135	2	5532	15	2833	9	2401	5	2916	7	2704	5	2150	3
9	Patel Engg	1098	18	1330	25	1478	29	2352	19	2537	15	2618	9	3060	7
10	JMC Project	500	9	915	16	1309	18	1309	20	1373	16	2059	20	2538	7
11	B L Kashyap	808	26	1542	56	1457	38	1016	20	1532	2	1400	2	1497	1
12	Unity Infra	542	31	225	45	1130	52	1476	12	1701	13	1975	14	2039	12
13	Gayatri Projects	502	23	752	40	1004	41	1252	47	1440	20	1677	19	2022	21
14	Pratibha Ind.	295	12	475	20	746	25	929	34	1168	7	1192	6	1643	9
15	Ansal Prop	718	12	859	14	640	5	698	5	1039	5	1088	7	988	3
16	Anant Raj	169	3	538	15	413	12	287	8	388	6	425	7	520	3

Revenue / EPS: (%):

Sr. No.	Year	2007		2008		2009		2010		2011		2012		2013	
		Revenue (Rs. Crores)	EPS (%)	Revenue (Rs. Crores)	EPS (%)	Revenue (Rs. Crores)	EPS (%)	Revenue (Rs. Crores)	EPS (%)	Revenue (Rs. Crores)	EPS (%)	Revenue (Rs. Crores)	EPS (%)	Revenue (Rs. Crores)	EPS (%)
1	J P Associates	3461	200	3985	250	5764	300	10088	250	12965	200	12755	150	13208	100
2	Punj Lloyd	2251	100	4495	350	6852	550	7116	150	5878	100	5913	100	8518	50
3	I V R C L	2346	500	3698	800	4969	850	5477	300	5651	300	4959	50	6178	00
4	Simplex Infra	1708	500	2812	900	4688	1250	4447	1250	4751	1250	5897	850	5807	600
5	Gammon India	1859	250	2344	500	3657	650	4472	550	5509	350	5536	350	5197	0
6	Hindustan const.	3082	400	3082	400	3313	300	3644	300	3991	0	3678	0	3832	0
7	Era Infra	763	340	1464	520	2376	700	3415	700	3799	550	4348	550	4693	500
8	D L F	1135	100	5532	750	2833	450	2401	250	2916	350	2704	250	2150	150
9	Patel Engg	1098	1800	1330	2500	1478	2900	2352	1900	2537	1500	2618	900	3060	700
10	JMC Project	500	90	915	160	1309	180	1309	200	1373	160	2059	200	2538	70
11	B L Kashyap	808	520	1542	1120	1457	760	1016	2000	1532	200	1400	200	1497	100
12	Unity Infra	542	310	225	450	1130	520	1476	600	1701	650	1975	700	2039	600
13	Gayatri Projects	502	230	752	400	1004	410	1252	470	1440	200	1677	190	2022	210
14	Pratibha Ind.	295	120	475	200	746	250	929	340	1168	350	1192	300	1643	450
15	Ansal Prop	718	240	859	280	640	100	698	100	1039	100	1088	140	988	60
16	Anant Raj	169	150	538	750	413	600	287	400	388	300	425	350	520	150

Revenue / Earning per Share (EPS): (Average percentage: 2007-13)

Sr. No	Name of the Company	Revenue (Rs. Crores)	E P S (Percent)	Rank (Revenue)	Rank (E P S)
1	J P Associates	8889	207	1	12
2	Punj Lloyd	5869	200	2	13
3	I V R C L	4754	467	3	6
4	Simplex Infra	4301	942	4	2
5	Gammon India	3896	378	5	8

Sr. No	Name of the Company	Revenue (Rs. Crores)	E P S (Percent)	Rank (Revenue)	Rank (E P S)
6	Hindustan Construction	3517	200	6	14
7	Era Infra	2980	565	7	4
8	D L F	2810	328	8	9
9	Patel Engineering	2068	1742	9	1
10	JMC Projects	1429	151	10	15
11	B L Kashyap	1322	700	11	3
12	Unity Infra	1298	547	12	5
13	Gayatri Projects	1236	300	13	10
14	Pratibha Industries	921	287	14	11
15	Ansal Properties	861	146	15	16
16	Anant Raj	391	385	16	7

Sr. no. 1 to 5: Large companies, Sr. no. 6 to 9: Medium companies, Sr. no. 10 to 16: Small companies. This classification is based on revenue (income) of the companies covered in the study.

Dependent Variable: EPS

Correlations

Group			Revenue	EPS_
1.00	Revenue	Pearson Correlation	1	-.574
		Sig. (2-tailed)		.312
		N	5	5
	EPS	Pearson Correlation	-.574	1
		Sig. (2-tailed)	.312	
		N	5	5
2.00	Revenue	Pearson Correlation	1	-.909
		Sig. (2-tailed)		.091
		N	4	4
	EPS	Pearson Correlation	-.909	1
		Sig. (2-tailed)	.091	
		N	4	4
3.00	Revenue	Pearson Correlation	1	.184
		Sig. (2-tailed)		.694
		N	7	7
	EPS	Pearson Correlation	.184	1
		Sig. (2-tailed)	.694	
		N	7	7

Findings

General findings:

1) During the period covered in the study (2007-13), J P Associates Ltd. is having highest revenue/income. Other companies having substantial revenue are Punj Lloyd Ltd., IVRCL Infrastructure Ltd., and Simplex Infra Ltd. Anant Raj is having the lowest revenue/income. Other companies having lower comparable revenue/income are Ansal Properties Ltd., Pratibha Industries Ltd. And Gayatri Projects Ltd.

2) During the period of study, Patel Engineering Ltd., is having substantial E P S (Earning per Share). Other companies having substantial EPS are Simplex Infrastructure Ltd., B L Kashyap and Era Infra. Ansal Properties has lowest EPS. Other companies having lower comparable EPS are JMC Projects Ltd., Hindustan Construction Co. Ltd., and Punj Lloyd.

3) J P Associates and Punj Lloyd are having substantial revenue. However, their EPS is lower.

4) Patel Engineering, Simplex Infra and B L Kashyap do not have substantial revenue. However, their EPS is very much satisfactory.

5) During the period of study, in case of J P Associates, Simplex Infra, Gammon India, Era Infra, Patel Engineering, JMC Projects and Gayatri Projects the revenue shows increasing trend. DLF, Ansal Properties and Anant Raj shows up and down trend in revenue earning.

6) During the period of study, in case of all the companies covered, the EPS shows up and down trend. In no case EPS shows increasing trend.

7) J P Associates is having highest revenue/income in 2007 as well as 2013.

8) Patel Engineering is having highest EPS both in 2006-07 and 2012-13.

9) During the period of study, highest increase in revenue is in the case of Era Infra and lowest increase is observed in case of Ansal Properties.

10) During the period of study, highest increase in EPS is in case of Pratibha Industries and EPS is turned into negative in case of B L Kashyap, Ansal Properties and Punj Lloyd.

11) In terms of average income (revenue) during the period of study, J P Associates, Punj Lloyd and IVRCL rank first, second and third respectively. However, their rank in E P S is twelfth, thirteenth and sixth respectively.

12) In terms of average EPS (profitability) during the period of study, Patel Engineering, Simplex Infra and B L Kashyap rank first, second and third respectively. However, their rank in average revenue is ninth, fourth and eleventh respectively.

13) As per the study, EPS is not related to income in all the cases, i.e. small companies, medium companies as well as large companies.

Major Findings

(1) As evident from the correlation and regression analysis, earning per share has no relation with revenue (income) generated by construction companies. Revenue and EPS are not statistically correlated ($p = 0.312$). The construction companies covered in study were classified into three categories (groups), small, medium and large (on the basis of revenue). Group wise also, revenue and EPS are not related.

(2) This is a study of infrastructure/construction companies. Usually and factually, in case of manufacturing industry, there is a direct correlation between revenue and profit margin. When income increases, the rate of profitability increases. This is because of existence of fixed costs. This research reveals that, irrespective of size of enterprise (level

of revenue), level of income has no relation with rate of earning/EPS.

(3) As evident from general findings (sr. no. 11 and 12), profitability (EPS) of construction companies has no relation with revenue. This is on account of peculiar cost structure of such companies.

Conclusion

Profitability and productivity are the relevant yardsticks against which the performance of any business is judged. In case of manufacturing companies (like cement, sugar, engineering etc.), the operations are very specific. However, on account of economies of scale/operating leverage, as the sales/revenue increases, the net profit margin is increasing in most of the cases. Construction activities cover heterogeneous activities and there is no specific cost structure. This research throws light on the nature of construction industry as well as its cost structure, and proves that the hypothesis, when revenue increases, profitability also magnifies is not valid.

References

- Yojana (Govt. of India), Sept., 2014 (P. 1).
Infrastructure Development and Financing: G. Raghuram, Rekha Jain, Siddharth Sinha, Prem Pangotra & S. Morris. Macmillan, New Delhi. (P. 1).
Infrastructure Development and Financing: G. Raghuram, R. Jain, S. Sinha, P. Pangotra & S. Morris. Macmillan, New Delhi. (P. 5-6).
Indian Journal of Economics and Business: Housing Market in India. Vol. 13, No. 2. (July-Dec., 2014). P. 219.
Kiyotaki N. and J. Mave (1997) "Credit Cycles." Journal of Political Economy. 105 (2) P. 222.
Business India (18-31 August, 2014). Creating the Smart Cities Code. P. 37. Yojana (GOI), June, 2013. (P. 7-9).
Annual Reports of the Companies.

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An Empirical Study on Determinants of Financial Efficiency of Selected Private Sector Banks in India

Lata Ved, Sangita Prajapati

Abstract

The objective of this paper is to measure the financial efficiency of selected private sector banks based on different determinants. There are so many determinants which need to be considered for analysing the efficiency of banks. The paper examines the determinants of financial efficiency of private sector banks. A sample of 5 private sector banks has been taken for the study. In the present study, an attempt is made to examine the impact of determinants on financial efficiency of the private sector banks by using parametric technique, analysis of variance (ANOVA), and correlation analysis which provides significant insights on efficiency of selected banks. The result shows all determinants are affecting the efficiency of the private sector banks in India. The study found that HDFC Bank, AXIS Bank, ICICI Bank, Federal Bank and Kotak Mahindra Bank got good position at their efficiency level during the study period. It is suggested that, banks if concentrate more on these determinants; they would be able to enhance efficiency and generate better profitability in the present competitive business environment across the globe.

Introduction

The Indian Banking Sector is a backbone of the Indian economy. It keeps the savings of the public and finance the development of business and enterprises. The "private-sector banks" are banks where greater parts of stake or equity are held by the private shareholders and not by government. They have grown faster and bigger over the two decades since liberalization using the latest technology, providing contemporary innovations and monetary tools and techniques. The objectives of banks are controlling the commanding heights of the economy and to meet the needs of the economy in conformity.

In the above context, it is meaningful to identify the determinants of banking efficiency of private sector banks with focus trend, because an efficient management of the banking operations aimed at ensuring growth in profits and efficiency requires up-to date knowledge of all those factors on which bank's efficiency depends. The efficiency of private sector banks is of great importance and interest for various stakeholders such as regulators, customers, investors, and the general. The determinants of efficiency of banks play vital role for enhancing capital adequacy, asset quality, management, earnings and liquidity. The present study is related to different determinant of efficiency of private sector banks. For this purposes five private sector banks were selected. Financial efficiency is evaluated based on selected dependent and independent variables such as Interest Income, Non- Interest Income, Deposits, Investments, Labour Cost and Advances for comparative study of selected banks to find out the most efficient bank during the period from 2010 to 2014.

Review of Literature

Misra (2003) conducted a field study in which he examined whether allocative efficiency of the Indian Banking System has improved after the introduction of financial sector reforms in the early 1990s. For this study, allocative efficiency has been studied for 23 states of India and also estimated for two periods (1993-2001) to get a comparative perspective. This study concludes that improvement has been observed in the overall allocative efficiency in the post-reform period for the majority of the states and the improved allocative efficiency is more marked for the services sector than for industry across the states.

Rammohan and Ray (2004) compared the revenue maximizing efficiency of banks in India in 1990's. Deposits and operating costs were taken as inputs while loans, investments and other income were taken as outputs. Their research found that public sector banks were significantly better than private sector banks on revenue maximization efficiency. However it was found that the difference in efficiency between public sector banks and foreign banks was not significant.

Sanjeev (2006) studied the efficiency of private banks, public banks, and foreign banks in India during 1997-2001 using DEA. He also extended his study to uncover the possibility of any relationship between the efficiency and NPA of the banks and found that efficiency has increased post-reforms and that NPA and efficiency are negatively related.

Abhiman Das, Saibal Ghosh (2006) conducted a study with regard to financial deregulation and Envelopment Analysis (DEA) three different approaches viz., intermediation approach, value-added approach and operating approach several efficiency estimates of individual banks are evaluated using nonparametric Data Envelopment Analysis (DEA). Three different approaches viz., intermediation approach, value-added approach and operating approach to determine how efficiency scores vary with changes in inputs and outputs.

- i. There is a large asymmetry between banks regarding their technical efficiency over the years.
- ii. Technical efficiency estimates were found to be higher value-added approach then under the intermediation approach. Under the later approach, Indian bank were marked with relatively low level of technical efficiency and there was a persistent but apparently declining trend in technical efficiency.

Musonde, A. (2008) conducted a study on the determinants of cost efficiency in the Zambian Banking Sector for a time period of 1998 to 2006. Using translog stochastic frontier cost function, conditional mean inefficiency model, stochastic frontier approach, data envelopment analysis, the study concludes that the efficiency gap between domestic banks and foreign banks remains wide. Bank continues to exhibit poor risk assessment technique as exemplified by higher loan loss provisions.

Kumar Ashish (2011) studied the efficiency of private banks, public banks and foreign banks in India using DEA. For analyzing data he used interest income & other income as outputs and interest expenses & operating expenses as inputs. Major finding of the study was that the mean efficiency scores of public, private and foreign category banks did not show any significant differences.

Vinod R. R. (2013) conducted a study for efficiency of old private sector banks in India using DEA Approach. This study assessed the consistency of efficiency of old private sector banks from 2008 to 2012 using DEA method.

Data Envelope Analysis involves the use of linear programming method to construct a non-parametric value piecewise surface over the data

It takes data from actual operations of the firm under the study and frontier is formed as the piecewise liner combination of the “the most efficient observations”. Thus efficiency is relative to the “observed best” rather than an absolute value.

efficiency of Indian banks during the post reform period of 1992 to 2002. Using nonparametric Data

Research Gap

The banking system in India should not only be hassles free but it should be able to meet the new challenges posed by the technology and the factors influencing to financing efficiency of banks. With banking sector regulations and banking sector reforms, there is increase need to aware about the facilities to be provided to their customers.

To know the efficiency of the banks, interest income, non-interest income, deposits, investments, labour cost and advances are the most important basic determinants for the growth of any bank which helps to know position of banks. The study is confined to new private sector banks operating in India.

Research Methodology

OBJECTIVES OF THE STUDY

1. To understand the financial efficiency of private sector banks in India.
2. To analyze the different determinants of private sector banks.
3. To study and analyze the trend (growth) in financial efficiency of Indian private sector banks.
4. To suggest various measures for determining the financial efficiency of private sector bank.

TYPES OF DATA COLLECTION

The study has been carried out on the basis of secondary data.

SOURCES OF DATA

The information pertaining to the dependent and independent variables has been taken from statistics available at the websites of selected banks.

VARIABLES

The variables considered for the study are divided into independent and dependent variables.

Dependent Variables

The dependent variables are interest income and non-interest income.

Independent Variables

The independent variables are deposits, investments, labor cost and advances.

SAMPLING TECHNIQUES AND SELECTION OF SAMPLE

For selection of five private sector banks of India the convenience sampling technique is used.

FORMULATION OF HYPOTHESIS

H0 – There is no significant difference in dependent and independent variables on financial efficiency of selected private sector banks in India.

H1 – There is significant difference in dependent and independent variables on financial efficiency of selected private sector banks in India.

TOOLS FOR TESTING HYPOTHESES

The study includes following tests for hypotheses,

- ANOVA Test
- Correlation

The data analysis and conclusion were drawn on the basis of parametric value test at 5% level of significance.

PERIOD OF THE STUDY

The period of study is 5 years from 2010 to 2014.

Table 1: Interest Income of Selected Private Sector Banks from 2010 to 2014 (₹ in crore)

Banks \ Years	Mar '14	Mar '13	Mar '12	Mar '11	Mar '10
HDFC BANK	41,135.53	35,064.87	27,286.35	19,928.21	16,172.90
AXIS BANK	30,735.96	27,182.57	21,994.65	15,154.81	11,638.02
ICICI BANK	44,178.15	40,075.60	33,542.65	25,974.05	25,706.93
KOTAK MAHINDRA	11,985.90	8,042.49	6,180.24	4,189.75	3,255.62
FEDERAL BANK	6,946.08	6,167.57	5,558.39	4,052.03	3,673.24

RESULT AND ANALYSIS

It reveals from the Table – 1 that the highest interest income of ICICI bank was Rs. 44,178.15 crores in

2014 and lowest interest income of Kotak Mahindra bank was Rs. 3,255.62 crores in 2010.

Table 2: Non-Interest Income of Selected Private Sector Banks from 2010 to 2014 (₹ in crore)

Banks \ Years	Mar '14	Mar '13	Mar '12	Mar '11	Mar '10
HDFC BANK	7,919.64	6,852.62	5,243.69	4,335.15	3,810.62
AXIS BANK	7,766.25	6,551.11	5,420.22	4,632.13	3,945.78
ICICI BANK	10,427.87	8,345.70	7,502.76	6,647.89	7,292.43
KOTAK MAHINDRA	5,282.39	1,160.66	977.35	780.53	420.97
FEDERAL BANK	693.85	664.44	532.34	516.81	530.91

It presents from the Table – 2 that highest non-interest income of ICICI bank was Rs. 10,427.87

crores in 2014 lowest non-interest income of Kotak Mahindra Bank was Rs.420.97 crores in 2010.

Table 3: Deposits of Selected Private Sector Banks from 2010 to 2014 (₹ in crore)

Banks \ Years	Mar '14	Mar '13	Mar '12	Mar '11	Mar '10
HDFC BANK	367,337.48	296,246.98	246,706.45	208,586.41	167,404.44
AXIS BANK	280,541.07	252,613.59	220,104.30	189,237.80	141,300.22
ICICI BANK	331,913.66	292,613.63	255,499.96	225,602.11	202,016.60
KOTAK MAHINDRA	56,929.75	51,028.77	38,536.52	29,260.97	23,886.47
FEDERAL BANK	59,731.28	57,614.86	48,937.12	43,014.78	36,057.95

It reveals from the table – 3 that the highest deposits of HDFC bank was Rs. 367,337.48 crores in 2014 and

lowest deposits of Kotak Mahindra bank was Rs. 23,886.47 crores in 2010.

Table 4: Investments of Selected Private Sector Banks from 2010 to 2014

Banks \ Years	Mar '14	Mar '13	Mar '12	Mar '11	Mar '10
HDFC BANK	120,951.07	111,613.60	97,482.91	70,929.37	58,607.62
AXIS BANK	113,548.43	113,737.54	93,192.09	71,991.62	55,974.82
ICICI BANK	177,021.82	171,393.60	159,560.04	134,685.96	120,892.80
KOTAK MAHINDRA	38,791.05	28,873.43	21,566.81	17,121.44	12,512.66
FEDERAL BANK	24,117.85	21,154.59	17,402.49	14,537.68	13,054.65

It depicts from the table – 4 that the highest investment of ICICI bank was Rs. 177,021.82 crores

in 2014 and lowest investments of Kotak Mahindra bank was Rs. 12,512.66 crores in 2010

Table 5: Labor Cost of Selected Private Sector Banks from 2010 to 2014

Banks \ Years	Mar '14	Mar '13	Mar '12	Mar '11	Mar '10
HDFC BANK	4,178.98	3,965.38	3,399.91	2,836.04	2,289.18
AXIS BANK	2,973.05	2,376.98	2,080.17	1,613.90	1,255.82
ICICI BANK	4,220.11	3,893.29	3,515.28	2,816.93	1,925.79
KOTAK MAHINDRA	1,915.12	1,075.14	902.36	783.83	583.48
FEDERAL BANK	771.54	626.46	543.85	480.41	366.05

It indicates from the table – 5 that the highest labour cost of ICICI bank was Rs. 4,220.11 crores in 2014

and lowest labour cost of Federal bank was Rs. 366.05 crores in 2010.

Table 6: Advances of Selected Private Sector Banks from 2010 to 2014

Banks \ Years	Mar '14	Mar '13	Mar '12	Mar '11	Mar '10
HDFC BANK	303,000.27	239,720.64	195,420.03	159,982.67	125,830.59
AXIS BANK	232,381.73	196,965.96	169,759.54	142,407.83	104,343.12
ICICI BANK	338,702.65	290,249.44	253,727.66	216,365.90	181,205.60
KOTAK MAHINDRA	71,692.52	48,468.98	39,079.23	29,329.31	20,775.05
FEDERAL BANK	43,436.10	44,096.70	37,755.99	31,953.23	26,950.11

It presents from the table – 6 that the highest advance of ICICI bank was Rs. 338,702.65 crores in 2014

and lowest advances of Kotak Mahindra bank was Rs. 20,775.05 crores in 2010.

Table 7: Correlation Analysis of Different Determinants of Efficiency

Banks	Interest Income	Non-Interest Income	Deposits	Investment	Labor Cost	Advances
	1					
HDFC bank	0.978369059	1				
AXIS bank	0.973204629	0.951637521	1			
ICICI bank	0.972510413	0.984873784	0.920414	1		
Kotak Mahindra bank	0.973420242	0.925923821	0.951816631	0.900284227	1	
Federal bank	0.998080177	0.984544915	0.978871094	0.977605801	0.9605725	1

- The analysis represents that there is positive relation in interest income of HDFC bank, AXIS bank, Kotak Mahindra Bank and Federal Bank.
- ICICI bank is having positive relation in case of non-interest income with value 0.984873784.
- Correlation of federal bank is 0.998080177 which shows positive relationship with Interest Income.

- Correlation of deposits is 0.978871094 which is more than level of significance value 0.05 means a null hypothesis is accepted.
- Investment is having positive relation in case federal bank with value 0.977605801.

Table 8: ANOVA of Different Determinants of Efficiency

Particulars	Source of Variation	SS	df	MS	F	P-value	F crit
Interest Income	Between Groups	439271878.52	4	109817969.63	0.57	0.69	3.06
	Within Groups	2880662908.71	15	192044193.91			
	Total	3319934787.23	19				
Non- Interest Income	Between Groups	23990157.88	4	5997539.47	0.47	0.75	3.06
	Within Groups	189710819.03	15	12647387.94			
	Total	213700976.90	19				
Deposits	Between Groups	16758730214.88	4	4189682553.72	0.31	0.87	3.06
	Within Groups	201676806068.87	15	13445120404.59			
	Total	218435536283.75	19				
Investments	Between Groups	6508033450.93	4	1627008362.73	0.51	0.73	2.87
	Within Groups	63788296283.85	20	3189414814.19			
	Total	70296329734.78	24				
Labor Cost	Between Groups	7001526.76	4	1750381.69	1.04	0.41	2.87
	Within Groups	33602966.26	20	1680148.31			
	Total	40604493.03	24				
Advances	Between Groups	33996841765.04	4	8499210441.26	0.83	0.52	2.87
	Within Groups	205697166714.83	20	10284858335.74			
	Total	239694008479.87	24				

Table 8 demonstrates the analysis of variance (ANOVA). The significant level of five determinants of income namely, Interest Income (0.69), Non-Interest Income (0.75), Deposits (0.87), Investment (0.73) and Advances (0.52) is greater than 0.05, which means that a null hypothesis is rejected. While P-value of labor cost 0.41 is less than 0.05, it means that null hypothesis is accepted.

Findings

1. As far as the efficiency in terms of dependent variables namely, interest income and non-interest income appear good in case of selected private sector banks. There is increasing trend found on interest income of Rs. 44,178.15 crore as compared to other private sector banks.
2. In case of non-interest income mix trend was found for ICICI Bank and Federal Bank, increasing trend was depicted for remaining banks during the study period from 2009 to 2014. ICICI bank was having highest non-interest income of Rs.10, 427.87 crore compared to other private sector banks.

3. As far as independent variables are concerned namely, deposits, investments, labor cost and advances shows good growth in efficiency. In case of deposits, increasing trend was found for the study period. HDFC bank recorded highest deposits of Rs. 3, 67,337.48 crore under the study.
4. In case of investments, it showed increasing trend for all the selected private sector banks.
5. Considering labour cost of the selected banks, increasing trend was found for the period from 2009 to 2014. ICICI bank was having highest labour cost of Rs. 4,220.11 crore in the March 2014.
6. Advances also showed increasing trend during the study period from 2009 to 2014. ICICI bank enjoyed highest advances of Rs. 3, 38,702.65 crore as compared to other private sector banks under the study.
7. Among the selected private sector banks, HDFC Bank, AXIS Bank, ICICI Bank was holding outstanding position in terms of investments, advances, labor cost, interest income and non-interest income.

Suggestions

1. To bring about tangible improvement in Income generation, bank should look towards diversifying in to a wide range of financial services.
2. The selected private sector banks HDFC Bank, AXIS Bank, ICICI Bank, Kotak Mahindra Bank and Federal Bank Ltd. should implement new technique of financial management for better performance in future.

Conclusion

An overall examination of the analysis of selected private sector banks based on different efficiency determinants, it is realized that efficiency of HDFC Bank, AXIS Bank, ICICI Bank Kotak Mahindra bank and Federal bank was found outstanding at their performance. ICICI bank was having dominant position as compared to all other banks under the study. In this study, if banks want to secure their position in market to enhance income and reduce labor cost, they really fight hard to maintain their customer base, profitability, and efficiency with using the available resources because if once they lost their customers, it is impossible to gain their faith again.

References

- Das, Abhiman & Ghosh, Saibal (2006), "Financial Deregulation and Efficiency: An Empirical Analysis of Indian Banking during the Post-Reform Period", *Review of Financial Economics*, Vol. 15, Pp: 193-221.
- Gunjan M. Sanjeev (2006), "Data Envelopment Analysis (DEA)-Measuring Technical Efficiency of Banks", *The Journal of Business Perspective*, Vol.10, Pp: 13-27.
- Kumar, A. (2011), "Analysis of Efficiency of Banks in a Developing Economy: A Case Study of India", *International Journal of Computer Science and Management Studies*, Vol. 11 No. 3, Pp: 17-27.

Mishra, A., Jigar N. Gadhia, J., Kar, B., Patra, B. and Anand, S. (2013), "Are Private Sector Banks More Sound and Efficient than Public Sector Banks? Assessments Based on Camel and Data Envelopment Analysis Approaches", *Research Journal of Recent Sciences*, Vol. 2, No. 4, Pp-28-35.

Mishra, B. S. (2003), "Allocative Efficiency of the Indian Banking System in the Post- Reform Period- A State Level Analysis", *Reserve Bank of India Occasional Paper*, Vol. 24, No.3.

Musonde, Anthony (2008), "An Investigation into the Determinants of Cost Efficiency in the Zambian Banking Sector", 13th Annual African Econometric Society Conference, 9-11 July.

Nandi, J. (2013), "Efficiency Analysis of Selected Public and Private Sector Banks in India through Data Envelopment Analysis", *Vidyasagar University Journal of Commerce*, Vol. 18, Pp: 1-12.

Ram Mohan, T. T. & Subhash C. Ray (2004), "Comparing Performance of Public and Private Sector Banks: A Revenue Maximization Efficiency Approach", *Economic and Political Weekly*, Vol. 39, No. 12, Pp: 1271-1276.

Uppal, R. K. & Juneja (2012), "Determining Factors of Profitability and Banks Performance - An Empirical Study", *Arth Praband: A Journal of Economics and Management*, Vol. 1, No. 3, Pp: 56-68.

Vinod R. R. (2013), "Assessing the Efficiency of Old Private Sector Banks in Kerala", *Indian Journal of Research in Management, Business and Social Sciences (IJRMBSS)*, Vol. 1, No. 2, Pp: 58-62.

Websites

- <http://www.axisbank.com/>
<http://www.hdfcbank.com/>
<http://www.icicibank.com/>
www.federalbank.com
www.kotakmahindra.com
www.moneycontrol.com

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An Algorithm for Calibration of Numbers so as to minimize the variance along with maintaining original Logical Equivalence (relational equality) among numbers.

Kamlesh Vaishnav

Abstract

This paper presents the design of algorithm that can be used for calibrating the marks (numbers) in an university system while gracing marks are apportioned among the subject marks and it is required to maintain certain properties, particularly, logical equivalence among them.

Introduction

In an University Examination System it is required to apportion the gracing marks, say N , among the marks (numbers) obtained by students in various subjects of the examination. The gracing marks are apportioned for various reasons such as to pass the students who are on border line of passing marks in few subjects, or to upgrade the class (grade) of students who are short for few marks to get higher class (grade).

During the apportioning of gracing marks some properties related to marks needs to be maintained. These properties are described below.

- Marks should be apportioned so that student fails in minimum number of subjects, i.e., to pass them in maximum number of subjects by distributing gracing marks in required subject marks.
- The original marks of any subject should not be less than the subject marks with gracing. However, they may be equal. For example, assume that the marks of subject-1 and subject-2 are 25 and 29, where passing marks are 28. Let us assume that available gracing marks are 5. It cannot be straightforward added to pass the students in subject-1 marks. Because in this case marks of subject-1 augmented with added gracing marks is 30 (25+5) and it exceeds the originally scored marks of the subject-2 (29). Thus, it needs to be re-apportioned as follows: add 4 marks in subject-1 and 1 mark in subject-2, leading them to 29 and 31 respectively. Hence, their logical equivalence is maintained. This is required to keep the valid reasoning indicating that student's performance is better in subject-2 in comparison to that of in subject-1. If logical equivalence is not maintained, the original rational behind the student's performance will be lost.
- If student is not failing in any subject, then gracing can be done arbitrarily, but; again it is required to maintain logical equivalence among them. For example, if original marks of subject-x is less than the original marks of subject-y, then after gracing the marks to both the subjects the new marks of subject-x must still be less than the new marks of the subject-y.
- Obviously, the gracing marks can be added to the subject up to the limit of maximum marks of respective subject (for the time being, not given due weightage by present algorithm).

Even for a reasonable number of subjects (approx. 10) this process of marks calibration, with required properties as stated above, requires few trial and error by human intelligence when performed manually. It takes anything between 2 minutes to 5 minutes. Thus, when number of students are large, say 1000, it takes from 2000-5000 human minutes (equivalent to 33 to 83 Hours). If this task can be automated, this task can be completed with the machine in merely 5 minutes. The automated process must imitate a little human intelligence to perform this task due to the nature of problem.

Methodology

First of all, it was required to understand what exactly human does while using trial and error method to apportion the gracing marks. Because, if this process can be formulated as a mathematical problem (at least, partially), then only it can be automated. So, initially the spreadsheet

program is used to understand the process of gracing marks allocations. Various logical reasoning is applied such as: Identifying the numbers (from ascending list of numbers) in which gracing will take parts, what is the difference between each pair of numbers and difference between the current number and last number in this list, and how gracing can be apportioned maintaining the desired properties. Although, a spreadsheet program could not solve this problem, it has provided more insight of the problem. Thus, it was required to develop an algorithm, which can solve the problem when implemented using some programming language.

The first approach used to design the algorithm was Randomization Algorithm. In Randomized Algorithm; in addition to input, algorithm takes a source of random numbers and makes random choices during execution. The randomized algorithm can be used with several types of problems, particularly, when the desired properties of the final output is known. For example, while sorting an array, it is known that in a sorted array $a[i]$ must be less than or equal to $a[j]$ for all i and j whenever $i < j$. Hence, one can apply randomized algorithm here to randomize the positions of array elements and the desired property (whether they are in order) can be tested on new set of elements. The algorithm stops when they satisfy the desired property, otherwise the process is repeated with new randomized positions for elements. The randomized algorithm can generate the solution without using any conventional logic to sort the array such as quick sort or bubble sort. As another example, it can also be used to find position of a given element in an array. The position i can be selected randomly and $a[i]$ element can be compared with the given element. If match is found, then algorithm terminates, else next random position is selected and algorithm is repeated

This randomized algorithm can be applied to present problem as it is known property of final output that after distributing and adding the gracing marks among the marks of different subjects, the original equivalence among them must be maintained. However, when implemented this algorithm takes more (unacceptable) time in most of the run and sometimes do not converge even to solution within the limit of specified number of iterations. Also, it is not scalable at all for calibration of many numbers (more than few tens).

Hence, a more systematic algorithm using conventional logic needs to be designed which can generate solution within deterministic time duration and depicts the required level of human intelligence. The core logic (partial) of first successful draft version of the newly designed algorithm is shown below. As the algorithm is self-explanatory, it is not elaborated here. However, few points related to syntax used are listed below.

- The Break Loop statement breaks/ends the current loop and jumps to the next statement after the loop (just like break statement of C Programming Language).
- The Continue Loop statement skips the remaining statements of the current loop and jumps to the beginning of the loop to perform next iteration, if any. (Again just like continue statement of C Programming Language)
- $A[i]$ represents i th element of an array.

Testing and Evaluation

The algorithm is tested with many input datasets. Some of them along with the output is shown in following table.

Subject Marks	Gracing Marks	Original Marks, Gracing Apportion and Final Marks
35 34 34 34 34 34 34 34	16	35 34 34 34 34 34 34 34 02 02 02 02 02 02 02 02 37 36 36 36 36 36 36 36
30 34 30 34 30 34 33 33	16	30 34 30 34 30 34 33 33 03 01 03 01 03 01 02 02 33 35 33 35 33 35 35 35
32 29 30 32 33 33 27 32	16	32 29 30 32 33 33 27 32 01 04 03 01 00 00 06 01 33 33 33 33 33 33 33 33

The algorithm provides advantages of better accuracy and speed over the manual process which is time consuming, monotonous, and prone to error. The effectiveness of an algorithm on sample datasets is 100%. That is, it correctly generates output for all inputs. The efficiency of algorithm is not measured fully but approximately the execution time is in the

order of $M!$ (M factorial), where M is the Total Gracing Marks to be allocated.

If programming language supports variable number of nested loops, the algorithm can be generalized for N number of subject very easily.

Gracing Marks Apportioning Algorithm

```
//Let A is an Array containing the subject marks
A = {30, 34, 30, 34, 30, 34, 33, 33}
Sort Array A
//Let TGM contains Total Gracing Marks to be apportioned
TGM=16
//Let DONE is a Boolean variable which indicates that process is completed
DONE=False
Repeat Nested Loops FOR I=1 to NumberOfSubject times
    FOR Index1=TGM to 1 DO
        //Subject-1
        IF DONE Break Loop
        IF Index1=TGM THEN
            IF (A[1]+Index1 <= A[2]) Then
                Print Index1
                DONE=True
                Break Loop
            END IF
        End IF
        FOR Index2=Index1 to 1 DO
            //Subject-2
            IF DONE Break Loop
            IF (Index1+Index2 > TGM) Then Continue Loop
            IF (A[1]+Index1 > A[2]+Index2) Then Continue Loop
            IF (Index1+Index2=TGM) Then
                IF (A[1]+Index1 <= A[2]+Index2 AND A[2]+Index2<=A[3]) THEN
                    PRINT Index1, Index2
                    DONE=True
                    Break Loop
                End IF
            End IF
            FOR Index3=Index2 to 1 DO
                //Subject-3
                IF DONE Break Loop
                IF (Index1+Index2+Index3 > TGM) Then Continue Loop
                IF (A[2]+Index2 > A[3]+Index3) Then Continue Loop
                IF (Index1+Index2+Index3=TGM) Then
                    IF (A[1]+Index1 <= A[2]+Index2 AND
                        A[2]+Index2<=A[3]+Index3 AND
                        A[3]+Index3 < A[4]) THEN
                        PRINT Index1, Index2, Index3
                        DONE=True
                        Break Loop
                    End IF
                End IF
            End IF
        End IF
        //Similar Loops need to be extended for remaining subjects
    END FOR
END FOR
END REPEAT
```

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Awareness of Women Safety Products and Applications amongst Ahmedabad Women

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Abstract

Crime against women have increased from 2002 to 2012 by 80%, one crime against women takes place in every 3 seconds. In the year 2013, there was an alarming 30% rise in crimes against women in Gujarat particularly Ahmedabad has reported a significant jump in rape complaints compared to the preceding year, says the National Crime Records Bureau (NCRB) report.

As precautionary measure to curb such incidents Government and NGOs have taken initiative to start women safety help lines and self defence training. There has also been substantial increase in women safety products like pepper spray, anti rape nail paint, stun gun etc. and also women safety applications.

This paper attempts to study the awareness and usage of women safety products in Ahmedabad region. A primary research would be conducted on 200 women in the age group of 15-25 years in Ahmedabad.

After studying the respondent response we would be able to give our findings regarding safety products/applications in future. This research would not only give an insight of current state of adoption of the safety products among women but also would help all the stakeholders of the women safety products.

Introduction

Crime against women have increased from 2002 to 2012 by 80%; One crime against women in every 3 minutes; One molestation case every 15 Minutes. Gujarat is considered safe state for women as compared to the other states but the recent crime bureau reports suggest that in the year 2013, there was an alarming 30% rise in crimes against women in Gujarat compared to the preceding year. Incidents of rape and assault on women have risen by almost 50%, says the National Crime Records Bureau (NCRB) report.

The NCRB report says that, in 2012, 473 rape complaints were reported in Gujarat. This rose to 732 in 2013. Among cities, Ahmedabad and Surat have reported a significant jump in rape complaints. In the former, 116 complaints were reported in 2013 against 63 in 2012

The trend of the suspected rapist being someone known to the survivor continued in 2013 also. Out of the total rape cases reported in the state, the survivors knew the accused in 97.13% cases. In 21% cases the rapists were neighbours while in 8.5% incidents, family members or relatives of the survivors were named as accused.

In the light of above information this paper attempts to study whether women feel safe in Ahmedabad and are they aware of various personal safety products and apps that are available in the market.

Conceptual Framework

Although women may be victims of any of the general crimes such as 'murder', 'robbery', 'cheating', etc, only the crimes which are directed specifically against women are characterized as 'crimes against women'. Various new legislations have been brought and amendments have been made in existing laws with a view to handle these crimes effectively. These are broadly classified under two categories.

(1) The crimes under the Indian Penal Code (IPC)

i) Rape (Sec. 376 IPC) ii) Kidnapping & abduction for specified purposes (Sec. 363 - 373 IPC) iii) Homicide for dowry, dowry deaths or their attempts (Sec. 302/304-B IPC) iv) Torture - both mental and physical (Sec. 498-A IPC) v) Assault on women with intent to outrage her modesty (Sec. 354 IPC) vi) Insult to the modesty of women (Sec. 509 IPC) vii) Importation of girl from foreign country (upto 21 years of age) (Sec. 366-B IPC)

(2) The crimes under the Special & Local Laws (SLL)

Although all laws are not gender specific, the provisions of law affecting women significantly have been reviewed periodically and amendments carried out to keep pace with the emerging requirements. The gender specific laws for which crime statistics are recorded throughout the country are - (i) The Immoral Traffic (Prevention) Act, 1956 (ii) The Dowry Prohibition Act, 1961 (iii) The Indecent Representation of Women (Prohibition) Act, 1986 (iv) The Commission of Sati Prevention Act, 1987.

The Concept of Right to the City which came in 2004-05, talks about protection of all types of human rights and promoting social inclusion in cities. It talks about freedom, inclusion, the right to take part in all decisions, transparency and equity for all sections of the society, lack of women safety is serious obstacle in achieving gender equality. Women's right to city includes the right to live free from violence and fear in a more democratic and equitable city.

A step in this direction is 'Police Heart' an initiative by Ahmedabad police, a pilot project currently in nascent stage. HEART- Help Emergency Alert Rescue Terminal. HEART server is kept at police control room. Women are asked to register at Police heart no. 1091 and save the number on speed dial of the mobile or landline, the police control room will speak to the woman or will try to understand the situation by background voices and will immediately send SMS alerts to Family and friends of woman, this will make the tracing of woman easier and try to reach and help the woman as soon as possible.

The Delhi Government has launched the app Himmat for Delhi women on Jan1, 2015 through which women can send a message to police control room, for women commuters in rails an app has been launched in January by Union Railway Minister Suresh Prabhu. Amidst all government measures a private auto-rickshaw service provider, G-Auto, in Ahmedabad has launched an App for his customers as well as non-customers. The SOS button on home page of the app will send the message to three preselected numbers with the location so that help can reach in time.

Government Initiative alone cannot be the solution to safety concerns unless women are aware of these initiatives and the products and applications that are available to help them feel safer.

Literature Review

The Research articles on women safety explores crime against women, crime rate and role of morality by Bipin P Vargeese, S John Michael Raj (2014) ; women Safety by H Morell(1996); Crime against Women R Ahuja(1987); J Tajaden etal (1987); G Omvedt (1990) and C Mukherjee, P Rustagi, N Krishnaji (2001) analyses the types and motives crime against women. M Ellsberg, L Heise, R Pena, S Agurtosecurity (2001) researched on domestic Violence on women.

A lot of studies explore the women safety apps available BRP Babu, S Patil, T Gayathri (2014); PJ Rao, R Duvvuru, GN Rao (2014); K Viswanath, A Basu(2015); S Mandapati, S Pamidi, S Ambati (2015). A few studies have also attempted to

identify whether the women are living in sense of false security and are they doing everything they can to ensure that any mishap could be avoided or dealt with in the best possible manner. One such study explores awareness among women of Chandigarh Kaur Kuldeep (2015); S Mandapati, S Pamidi, S Ambati (2011) studies safety awareness in few cities of Kerala.

A survey by CNN – IBN in December, 2013 suggests that Ahmedabad is one of the safest city in India, another survey by Tripadvisor conducted among women travelers in Mumbai, Delhi, Hyderabad, Ahmedabad, Surat, Chennai, Kolkata, Mumbai, Jaipur; rates Ahmedabad as the safest city for women. The reports of National Crime Bureau are in contrast to this rosy picture indicating increase in crime against women in the city. The government, administration, NGOs and a few private players are taking steps to keep Ahmedabad safe, this study is to understand whether women are threatened by the increase in crime rate in Gujarat and are they aware of safety measures available, are they using these measures or feel the need to use in future.

Material Methods / Research

Methodology

Objectives of Study -The main objective of this study was to find

1. To study if women feel the need for the safety products
2. To study if the women are aware of personal safety products and application available
3. To find if they are using or have an intention to use such products in near future.

Sampling Design – This was a descriptive research to understand the extent of awareness amongst women of Ahmedabad, A Convenience Random sample of 135 was being taken out of which 7 responses were discarded, questionnaire was used as primary data collection tool, the responses were collected both physically and via google forms.

Hypothesis to be tested

A Hypothesis testing is a special proposition, formulated to be tested in a certain given situation as a part of research which states what the researcher is looking for, the broader hypothesis for the research are as follows :-

(1) Hypothesis 1 (H1): There is a association between perceived need for safety and intention to purchase women safety product in future.

Null Hypothesis (H01): There is no association between perceived need for safety and intention to purchase women safety product in future.

Women's Safety Products

1. Pepper Spray is an inflammatory agent. Pepper spray, also known as OC spray (from "oleoresin

capsicum"), OC gas, and capsicum spray, is a lachrymatory agent (a chemical compound that irritates the eyes to cause tears, pain, and temporary blindness) used in policing, riot control, crowd control, and personal self-defense. It causes immediate closing of the eyes, difficulty breathing, runny nose, and coughing. The duration of its effects depends on the strength of the spray but the average full effect lasts around thirty to forty-five minutes, with diminished effects lasting for hours. It comes with an expiry of 5-7 years is available in various sizes, in price range of 150-600. This is the most well-known type of safety product available in various forms like keychain, lipstick shaped, perfume bottle shaped from various brands like cobra, bodyguard, chill guard, besafe Etc.

2. Stun Gun A Taser or conducted electrical weapon is an electroshock weapon It fires two small dart-like electrodes, which stay connected to the main unit by conductors, to deliver electrical current to disrupt voluntary control of muscles. Someone struck by a Taser experiences stimulation of his or her sensory nerves and motor nerves resulting in strong involuntary muscle contractions giving victim time to run. It can be easily taken along in ladies' purse or handbag. One can use it at the slightest threat with the click of a button. Also it does not cause any permanent damage or serious injuries to the attacker, so there is no risk of any counter litigation. It comes with an extended wear rechargeable battery which gives long standby time. Once used it can be recharged from power source anywhere. It comes in various disguised shapes like torch, mobile phone, key chain

3. Alarm- This innovative personal security alarm is designed to be kept on display as a fashion accessory. It can be clipped to handbag, or used as a key ring; it looks like a fashion accessory. In a threatening situation, just pull the chain and you will activate an ear-piercing 130Db female scream. Research has shown that others are more likely to respond to a woman screaming than a traditional alarm this disorients and scares the attacker running back to the shadows!

4. Batons Batons made of steel, iron or titanium for extra hardness is used. They come in different sizes and are foldable for easy carrying, when an attacker is hit by it with force it causes acute pain for a few minutes, repeated hits will give the victim time to flee to a safe place.

5. Knuckles - Brass knuckles, also sometimes called knuckles, knucks, brass knucks, knucklebusters, or knuckledusters, are weapons used in hand-to-hand combat. Brass knuckles are pieces of metal shaped to fit around the knuckles. Despite their name, they are often made from other metals, plastics or carbon fibers. Designed to preserve and concentrate a punch's force by directing it toward a harder and smaller contact area, they result in increased tissue

disruption, including an increased likelihood of fracturing the victim's bones on impact.

6. Anti Rape Nailpaint Since 97.13% of the rapes are by a known person it is important to be cautious even with known people. Especially for female students or working, who are dating or socializing in parties. Undergraduate students at North Carolina State University created a nail polish called "Undercover Colors" that changes color in the presence of common date rape drugs like Rohypnol, Xanax, and GHB (Gamma-Hydroxybutyric acid). To see if one of the drugs has been slipped into her drink, a woman has to stir it with her finger.

Women Safety Apps

Raksha - An app developed by an NGO Bharat Seva that allows a women to send SOS messages with location to pre-selected people, even when the app is switched off. The location of the selected people can also be sent to women in distress. In no internet zone the app sends Sms, and also has danger buzzer.

With U app A safety app that allows a woman to send emergency message to 4 preselected contacts with the location, the alarm with flashlights goes on to attract immediate help. The app functions without internet connection also.

B Safe A safety app with some enhanced features along with emergency messages and siren. A GPS trace system which keeps a track of the path followed by a girl which is especially useful when going to unknown areas, and a fake call option which makes the ringer of the phone go off thus scaring an attacker or potential attacker. It also has a start recording option which serves as an evidence to crime.

Smartshehar women safety shield: A safety app with regular features like SOS messages and Location tracing also has an additional feature of photo taking. The photos later serve as evidence.

Suspects Registry Is a facebook linked app which immediately posts the pictures or messages of risky areas or public transport and drivers, it serves as a database of offenders or suspects. The app sends SOS message with location to contacts and the alarm goes off on hitting the panic button

Scream Alarm Is a basic app with one feature it screams in women's office on hitting the panic button it scares the attacker and attracts the attention of any passersby.

Pukar A app that instantly allows the users to send SOS messages to family and friends and location of the user to local police station (in a few cities). It keeps on sending periodic messages to the selected

contacts to ensure higher chances of message being read.

Women safety Totem SOS Help This is more advanced app which can be connected with the Bluetooth also without touching the phone the user can send SOS message with location to selected contacts, it can also be activated by touching the selfie button and works both online and offline. The app designed by ex-superintendent of police is winner of Assocham award 2013. The app has an additional feature for frequent travelers the 3 digit fire, police and ambulance number.

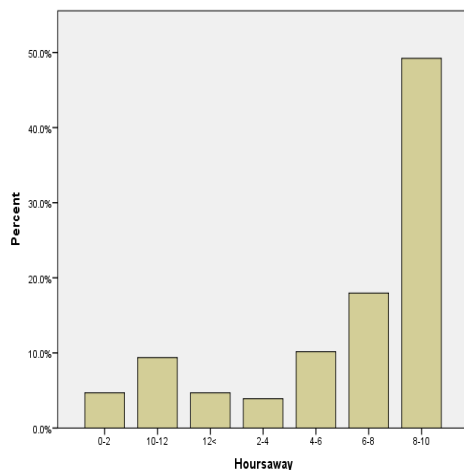
IGO A personal safety app that can be activated by taking the headphone pin off or by a strong shake to the handset which immediately sets off the alarm and only entering the right code switches off the alarm.

In case a wrong code is entered it keeps on sending SOS messages to contacts every 60 seconds until it is switched off by entering the right code.

App	No. of Installs	Current Version	Basic Requirement	Developer	Last Updated On	Paid/ Free App
Raksha	5000-10,000	1.0	Android 2.2	Bharat sewa	March 14,2014	Free
Be safe	10,00,000 – 50,00,000	3.3.9	Android 2.3	Bipper	April 21,2015	Free(Basic) Paid
With You	10,00,000 – 50,00,000	1-1	Android 2.2	Star India Pvt. Ltd.	November 26,2013	Free
SmartShehar	5,000 - 10,000	14.01.20	Android 2.2	SmartShehar.com - Chetan Tember	June 14, 2014	Free
Scream Alarm	10,000-50,000	1.2	Android 2.1	GoPal Maker	November 25, 2013	Free
Pukar	5,000 - 10,000	1.26	Android 2.3	People for Parity foundation	February 28,2015	Free
Women safety help totem sos	10,000-50,000	60.0s	Android 2.2	TOTEMSOS Firoze Zia Hussain	May 15, 2015	Free
IGO Safety	1000-5000	1.3.7	Android 2.1	Hashtag Planet	December 21,2014	Free

Findings

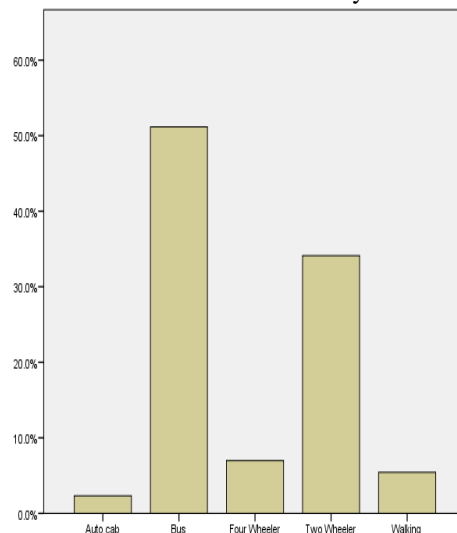
1. Chart showing average hours women stayed away from home



X axis: % of Women, Y axis: Hours

The chart clearly states that the average hours an women in Ahmedabad stays away from home is 8-10. So, a majority time of the day they spend outside their homes.

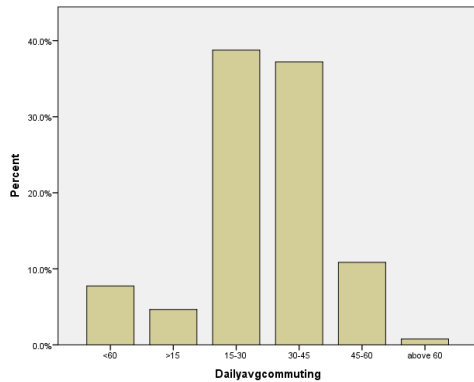
2. Chart showing the mode of transport used by women in Ahmedabad while they out of their homes



X axis: % of Women, Y axis: Mode of transport

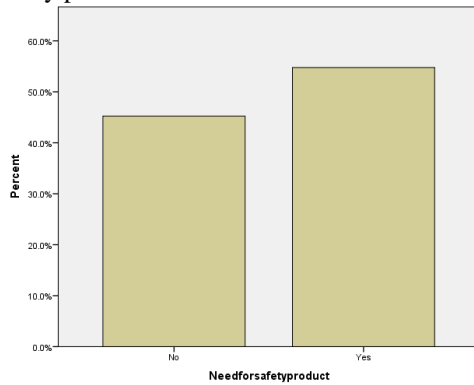
The chart above indicates that the women in Ahmedabad generally chooses bus (Public Transport) for travelling.

3. Chart showing details of daily average commuting of Ahmedabad women



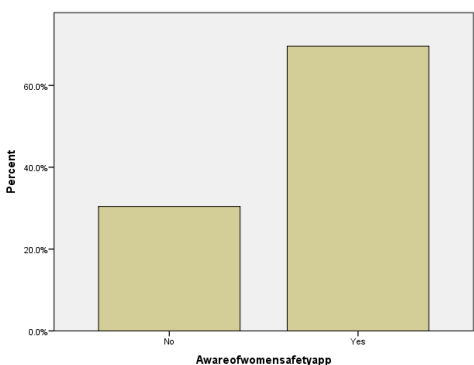
The above chart shows that around 39% percent women commute between 15-30 minutes every day and 38% women commute 30-45 minutes everyday.

4. Chart showing if the women perceive the need for safety products



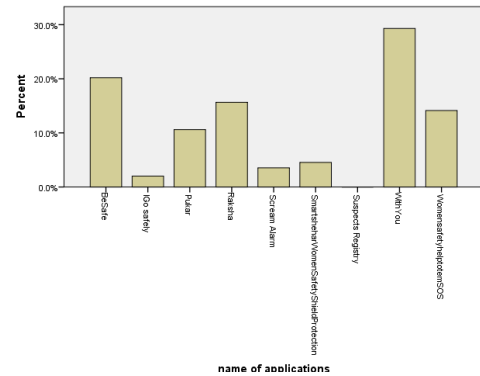
The chart above shows that 52% women feel in Ahmedabad perceive the need for the safety products

5. Chart showing awareness among women regarding safety application



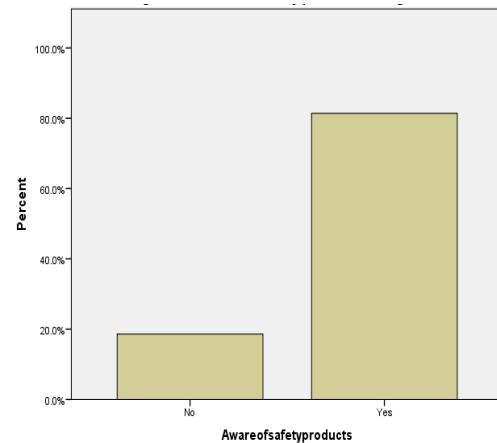
The above chart shows that 64% of women are aware of women safety applications.

6. Chart showing awareness regarding different applications



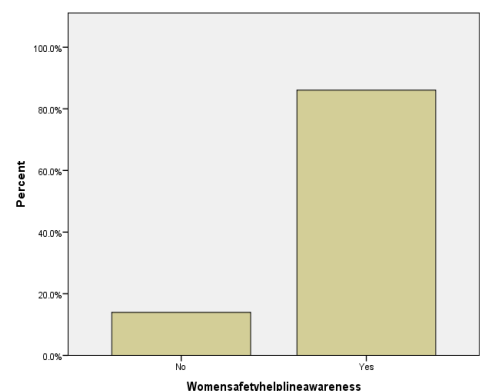
The above chart shows that among the women who have heard about the women safety application With U is the most popular application.

7. Chart showing awareness regarding different safety applications among women



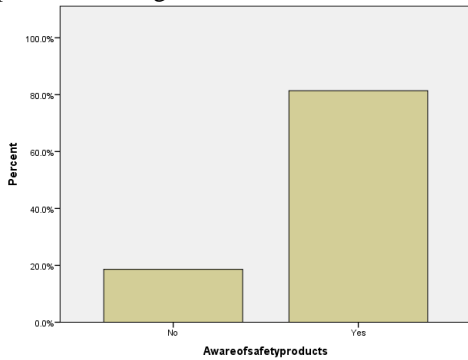
The above chart shows that 80% of women are aware about safety products and 20% women are not aware about the available safety products

8. Chart showing awareness among women for safety helpline numbers



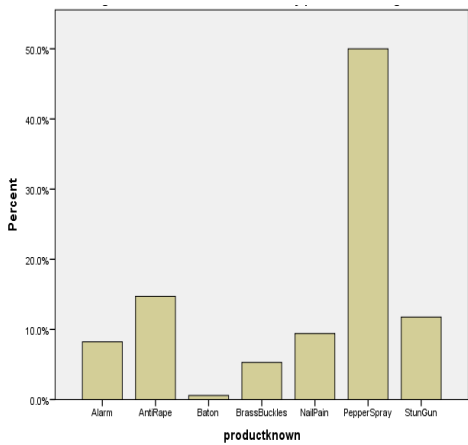
The above chart shows that 81% women are aware about the women safety helpline number.

9. Chart showing awareness regarding safety products among women.



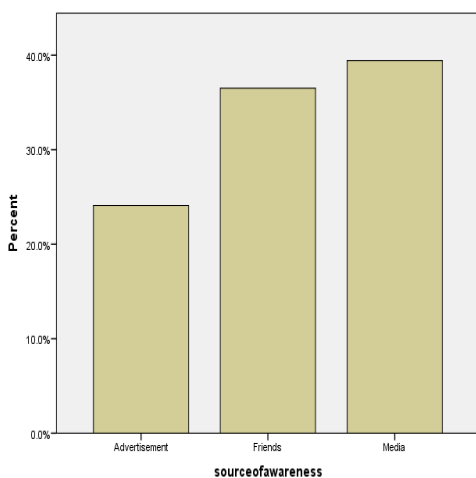
The above chart shows that around 80% most of the women are aware of safety products

10. The chart showing awareness regarding various safety products



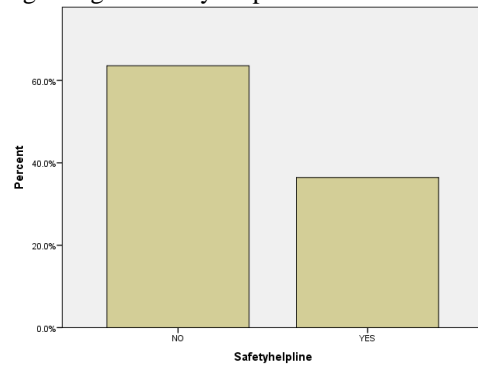
The above chart shows that awareness about Pepper spray is the most among women.

11. The chart showing the source from which the information about the safety products was received



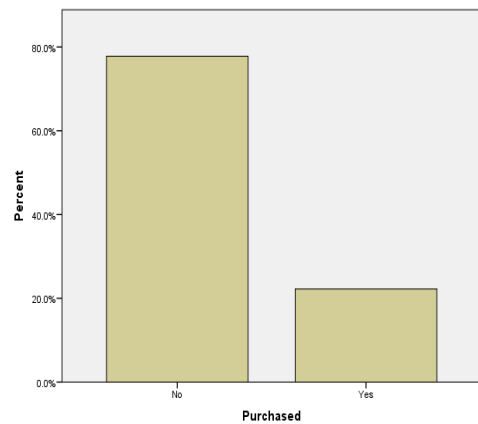
The above chart shows that women got most awareness from Media.

12. Chart showing the awareness level of women regarding the safety helpline number



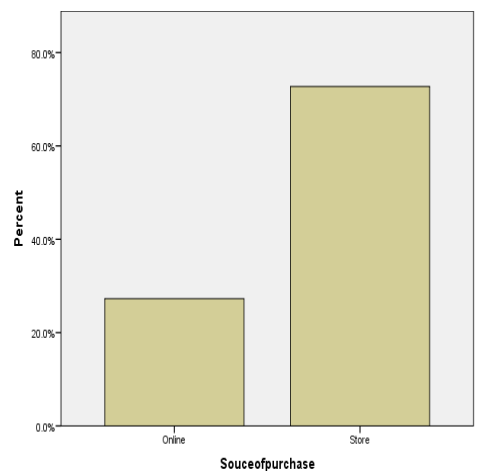
The above chart shows that 62% women are awareness regarding the women helpline numbers

13. Chart showing the purchase of women safety products.



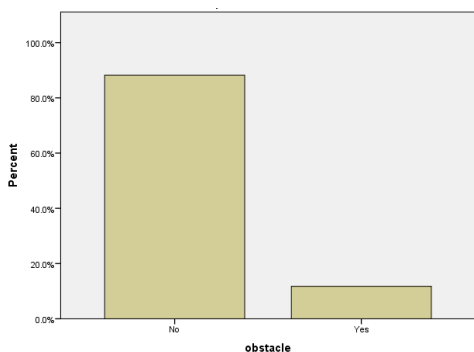
The chart above shows that 79% women in Ahmedabad have purchased the safety products.

14. Chart showing the source from which the safety products were purchased



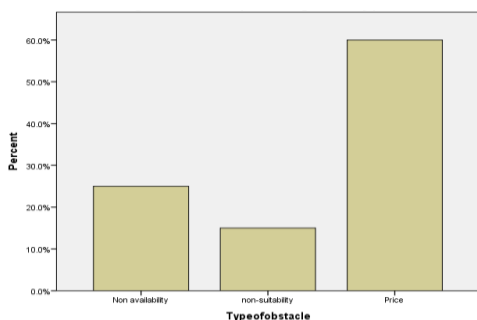
The above chart shows that 72% women purchased safety products from stores

15. The chart showing if obstacles were faced for purchase of safety products.



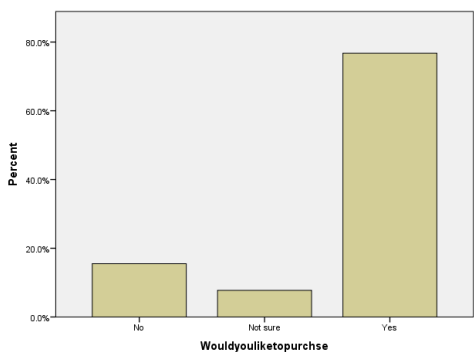
The above chart indicates 88% women did not face any obstacle at the time of purchase of the safety products

16. Chart showing the different obstacles for purchase of safety products



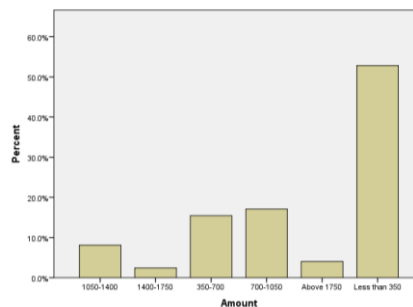
60% of the women found price to be obstacle in purchasing the women safety products

17. Chart showing the future intention of women to purchase the women safety product



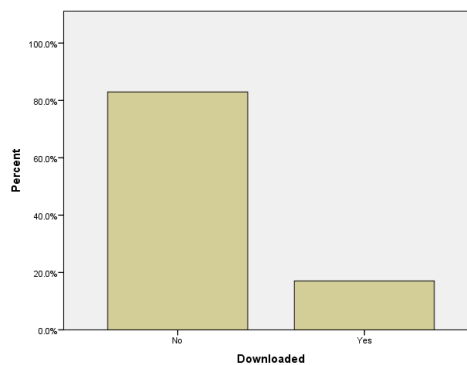
The above chart shows that 79% women in Ahmedabad would be willing to purchase the safety products in future.

18. Chart showing the cost at which women intends to purchase the safety products in future



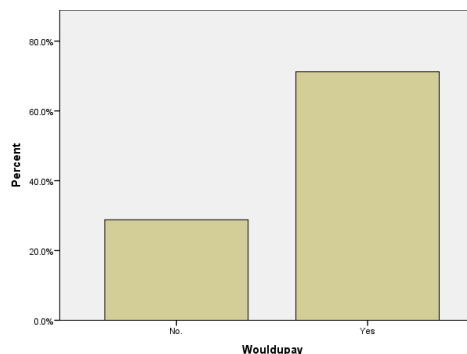
The above chart shows that 52% women are prepared to spend on the lower side i.e less than 350 for purchase of safety product in future

19. Chart showing the downloads of safety applications



The above chart shows that 82% women have never downloaded safety applications.

20. Chart showing the readiness of women to pay price for safety applications in future



70% women would be prepared to pay for downloading the women safety application in future

Correlations			
		Need for Safety	Would you like to purchase
needforsafety	Pearson Correlation	1	.292**
	Sig. (2-tailed)		.001
	N	129	129
Wouldyouliketopurchase	Pearson Correlation	.292**	1
	Sig. (2-tailed)	.001	
	N	129	129

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

A Pearson correlation coefficient was conducted to evaluate the null hypothesis that there is no relation between the perceived need for safety and intention to purchase the safety product. The analysis shows that there is enough evidence to reject the null hypothesis and conclude that there was weak positive correlation between them.

The result reveals that around 50% of the women in Ahmedabad spends 8-10 hours away from home. A majority of them (50%) use public transport for commutation, which is around 15-45 mins for around 77% women. 52% women of Ahmedabad women perceive the need for safety products. Thus, majority of women in Ahmedabad are in a situation wherein they perceive the need for the safety products.

64% women are aware about the safety application and With U is the most popular among all the women safety application while the awareness for the women safety products is higher (80%) and pepper spray is the most popular among the women safety products. The main source of awareness has been media (40%). 81% women are aware about the women safety helpline. This shows that majority women have basic information for their safety however the equipment's that can enhance the safety are still not as popular as women safety help lines. 62% of Ahmedabad women have purchased safety products and 78% out of them have purchased from store, which clearly states that online is not a very popular option to purchase safety products. 88% do not feel there is an obstacle to purchase a safety products have 12% who feel there is a obstacle consider price to be the biggest obstacle. Majority i.e79% women are ready to purchase the women safety product however they would prefer price to be on lower side.

82% women have never downloaded safety application but in future around 70% are prepared to even pay for the safety applications if required.

Thus, women in Ahmedabad are upbeat about safety products in future.

References

Ahuja, R. (1987). Crime against women. South Asia Books.
(n.d.). Retrieved from <http://unesdoc.unesco.org/images/0021/002146/214602e.pdf> pg 31
(n.d.). Retrieved from http://www.jagori.org/wp-content/uploads/2006/01/Strategic_Framework.pdf
(n.d.). Retrieved May 14, 2015, from www.safedelhi.in:
<http://www.safedelhi.in/sites/default/files/reports/Final%20Conference%20Background.pdf>

Business Standard. (2014, march 6). Retrieved April 10, 2015, from [Businessstandard.com: http://www.business-standard.com/article/current-affairs/ahmedabad-safest-city-in-india-for-women-travellers-114030600519_1.html](http://www.business-standard.com/article/current-affairs/ahmedabad-safest-city-in-india-for-women-travellers-114030600519_1.html)

Khan, Z. S. (2013, December 7). Firstpost.com. Retrieved April 15, 2015, from [firstpost.com: http://www.firstpost.com/india/why-ahmedabad-is-the-safest-place-for-women-today-1272593.html](http://www.firstpost.com/india/why-ahmedabad-is-the-safest-place-for-women-today-1272593.html)

Kuldeep, K. (2014). Awareness and Preparedness for Safety among Girl students. International Research Journal of Social Sciences ISSN 2319–3565.

Mandapati, S., Pamidi, S., & Ambati, S. A (2011), Mobile Based Women Safety Application (I Safe Apps).

Mathew, G. Bhai, L.T. Nair, L.V. Violence (2014) against women - a study in Kerala India.
Michael, V. B. (2014). Crime rates in India: Role of morality and moral reasoning. International Research Journal of Social Sciences.

Morrell, H. (1996). Women’s safety. Changing places: Women’s lives in the city. 100-110.

Mukherjee, C., Rustagi, P., & Krishnaji, N. (2001). Crimes against women in India: Analysis of official statistics. *Economic and Political Weekly*, 4070-4080.

ncrb.nic.in. (2014, June 16). Retrieved March 12, 2015, from <http://ncrb.nic.in/CD-CII2013/compendium%202013.pdf>

Omvedt, G. (1990). Violence against women: new movements and new theories in India

Rashid, O. (2015, January 10). Retrieved April 14, 2015, from Thehindu.com:

<http://www.thehindu.com/news/national/an-app-for-womens-safety/article6772894.ece>

Viswanath, K., & Basu, A. (2015). SafetiPin: an innovative mobile app to collect data on women's safety in Indian cities. *Gender & Development*, 23(1), 45-60.

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An Inquisitive Study on Preferences of Investment Avenues by Amdavadi Investors

Poonam Arora, Nilay Nayak

Abstract

Accomplishing a point of financial security is a process that requires lot of time, effort and planning. Financial security is as important as attaining the home of success in this competitive and ever changing economy. Some people believe in starting early and have a sound financial support by making them secure enough for the future dubieties and some believe in taking risks and invest as and when the need arises. Day by day, as new arenas of investments are opening up, the market is coming up with new revolutions, new financial gains, opportunities and also lot of risks. In order to reduce risk and take out maximum returns from investments, an individual has to smartly decide upon various options of financial avenues for investment.

This paper focuses on novel and emerging challenges which are uprising in investments and exploring the different boulevards, preferred by working individuals This Research study is done with the objective of discovering the factors and the variables which affects the investment decision of an individual and tries to answer some hidden questions like, the frequency of investments, weightage of the factors considered for the choice and effect of income of an individual on the frequency of investment.

Introduction

A proper financial plan depends on investing money rightly which depend on the contextual conditions, the risk permissiveness, patience and the targets. Investments are the best way to create wealth and become financially independent. When we talk about financial security, one of the important areas is investment in financial markets. Investment is considered to be a two facet coin which, if is a gain maker on one hand; on the other hand it involves lot of risks too. Investments depend the amount of money that is available as investing in small amount may have a snowball effect which can exponentially increase the money and thereby savings.

Retail investors in India can be said to be reasonably well informed when it comes to investments in financial markets, investments in equities, real estate or even assets like gold or silver though the Fixed Income asset class is not so well known. As a tool for diversification and as a safe avenue for volatile times understanding this class is very important. Even experts agree that greater retail participation in the fixed income market in India will make it more robust.

As per changing time and changing markets people have also modified there investment patterns. India is regarded as one of the world's most attractive investment destinations currently and with the opening up of foreign direct investment (FDI) in several sectors, the country is an eye-catching destination for overseas investors. The relaxation of norms by the government has also created a vast opportunity for foreign players, who are competing for a greater role in the Indian market. Sectors projected to do well in the coming years include automotive, technology, life sciences and consumer products. Also, India made its entry into the club of the top 15 ultra-high-net-worth households (more than US\$ 100 million in private financial wealth) in 2013 obtaining the 13th rank with 284 such households. Thus by this statistical proof we see great development in investment market of India and this shows that individuals are focusing equally in investment sector. We can also see great opportunities for companies which are providing financial services. Talking about cities in Gujarat, Ahmedabad is believed to be a city where people have wealth and money; they are risk takers and believe in investments.

People of Ahmedabad, in local language are called Amdavadis, because of their carefree nature and hence they are befitted for this study. Most of the 'Amdavadis' are self-employed and they are the individuals with entrepreneurship skills. In Ahmedabad individuals don't focus on share markets only but they are also interested in other avenues of investment. When it comes to working people in Ahmedabad they want to develop their portfolio with different options of investments other than shares such as physical commodities like gold and silvers, fix deposits, bonds, bills, real-estate etc. They want to gain from each area on investments but it doesn't end up here and there are certain factors that are considered by them before they invest their

money and this has created more interest and inquisitiveness to carry out research on the investment pattern of working individuals in Ahmedabad. The objective here is to disclose some factors behind their investment, which plays important role when they invest in particular avenue.

Investment Pattern

When we want to track how people invest and in which avenues they invest, it is necessary to study their investment pattern. This investment pattern will try to answer some questions like which type of avenues are preferred by individual for investment, which type of investor they are, what is their frequency of investment and also what are the reasons for which people invest. To know about investment pattern, the overall behaviour of an individual toward his investment decision should be studied.. There is no fix pattern in which people invest but getting themselves involved in this activity they develop some path, some design or some pattern in which they try to plan their investments and accordingly they work on it. Discussing about investment pattern, there are 4 different asset classes in market:

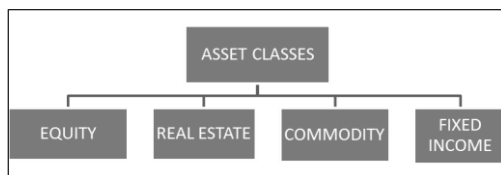


Chart 1: Types of asset classes

Fixed Income: As the name suggests, is an investment avenue wherein the investor gets predictable returns at set intervals of time. This investment class is relatively safe with low volatility and forms an ideal investment option for people looking at fixed returns with low default risk and is usually opted by middle class people and retired individuals. This includes avenues like Treasury bill, Government securities, Certificate of deposit, Commercial paper and Bonds. There some advantages of fixed income asset class such as low volatility than other asset class, stable returns, Predictable and stable returns offer hedge against the volatility and risk of equity investments, and thus allow an investor to create a diversified portfolio.

Equity: Investments in stocks or shares comprise the equity asset class. Investments in this class accrue higher yields with greater risks involved.

Real Estate: Investments in land or property fall into the real estate asset class and are long term inflexible investments. This is the least risky asset class but more attractive.

Commodity: Investments into physical assets such as precious metals like Gold,

silver, diamonds etc. While there are different asset classes in market there are different avenues of this asset classes which are used for investment by individuals. Namely Bank deposit, Mutual fund, Real estate, Debentures, also some commodities are preferred for investment such as Gold and Silver. There are certain factors which are associated with this different options of avenues like risk, return, growth, maturity period, past performance etc. this can be the factors which may affect individuals investment decision for a particular avenue or an basket of avenues.

Objectives of Research

This research has various objectives which are divided into primary and secondary ones. The primary objective is to know the investment avenues preferred by people. The other objectives are: to check the dependence of income and frequency of investment, to know various factors consider by people while investment, to know the degree of importance given by people to different factors and to find the dependence of individual's annual income and their investment volume. To achieve all the objectives, a comprehensive survey via questionnaire is been conducted.

Research Methodology

The study follows a systematic and scientific approach and uses a descriptive and exploratory methodology and focuses to find the important reasons behind investment decisions of an individual and hence is an insight into investment pattern of working individuals in different financial avenues. This study is aimed to gain further insight about investment pattern of individuals. Since the study is descriptive in nature and involves a survey, the data collection is primary data. For this a survey is conducted on sample size of 120 working individuals from different clusters of industry in Ahmedabad. It has questions on the following categories:

Bio-data: to gain an idea about the sample demographics like age group, education level and profession.

Different Factors considered while investment: annual income, annual investment, type of investor and frequency of investment.

Effect of factors: The perceived effect of different factors on investment decision of an individual.

A research always starts with a presumption which is based on some variables under study. Prior to the collection of data and while designing the

questionnaire, the following variables were identified in the study on the basis of which the hypothesis is framed and is tested to give conclusive proof about the relationship between the variables, if any. The variables are: frequency of investment, frequency of income, importance of risk, importance of return, frequency of annual income, frequency of annual investment, importance of future planning, and importance of build-up assets.

On the basis of these variables, the following hypotheses are framed:

Ho₁: The frequency of investment and annual income are independent of each other.

Ho₂: There is no significant difference between variances of risk and return.

Ho₃: income and investment are related to each other.

Ho₄: There is no significant difference between variances of future planning and building up of assets.

The idea here is to test the dependence of the different variables on the frequency of investment. To test all the above hypothesis, different tests like Chi square test, F test along with correlation is used.

Data Interpretation

While analyzing the data collected from the study many variables were identified. The first and the foremost is the frequency of investment. It is important to know how frequently individual invest. Do they belong to long-term investor's category or short-term investor's category? It is very important to know the factors on which individual's investment decision depend. The factors can be risk, returns, future growth, building up asset etc. It is also very important to know the factors which are given higher weightage by individuals while investing and the factors which are ignored. There are various investment options available and Amdavadis have lot of ideal and surplus income which they are ready to invest and experiment based on different ideas and return benefits.

When asked about the root cause of making investment, out of 120 respondents, around 74% of individuals said that the reason behind their investment is self-awareness. They don't depend on any advice being given but remain updated about the market news to take investment decision on their own. About 20% said that they are dependent on their financial advisors and invest only on their

advice. Only 6% said that they invest on advice of broker or on advice of their family or relatives.

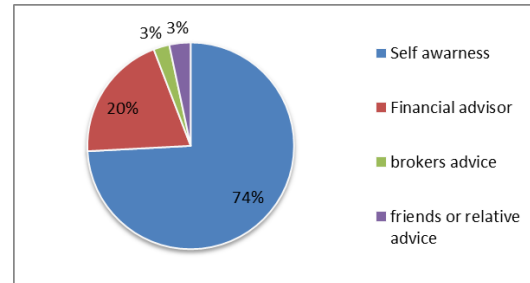


Fig: 1 Reason behind selecting investment options

It was found that most of them who are independent decision makers are long-term investors. These individuals have annual income between Rs 2, 00,000 – Rs 3, 00,000 and have annual investment around Rs 5, 0000- Rs 1, 00,000. Maximum of these respondents were of age between 30-40 years and are private sector employees. They said that the investment is usually made on quarterly or yearly basis. The remaining respondents are short term investors with annual income ranging between Rs 25,000 - 50,000.

The other important factor is which is that mostly chosen asset class where respondents like to invest. Be it short term or long term investment based on independent or dependent decision.

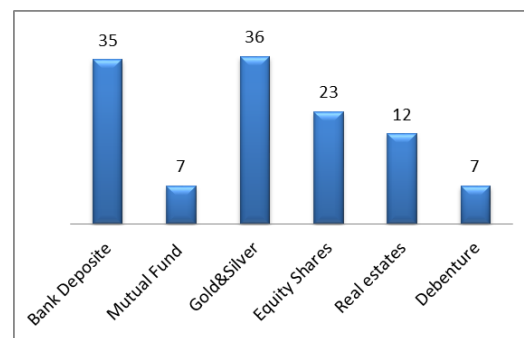


Fig: 2 Investment avenues selected by individuals

The result says 36 of 120 individuals preferred gold and silver for investment whereas 35 of them prefer bank deposits for investment. Only 7 of them choose to invest in mutual funds and debentures. This means that Gold & silver and Bank deposits are most preferable avenues by individuals and Mutual funds and debentures are least preferable avenues for investment. Rest of them classified themselves in the categories of equity share and real estate.

Investors are known to have two different classes of risk lovers and risk averse people. Some people invest for capital appreciation while some are more concerned about returns they would be getting from the investment period. The next important area is to find out different reasons on which individuals investment decision depend upon such as risk involved, returns that avenues give, future growth, tax benefits, capital appreciation etc which are necessary to study.

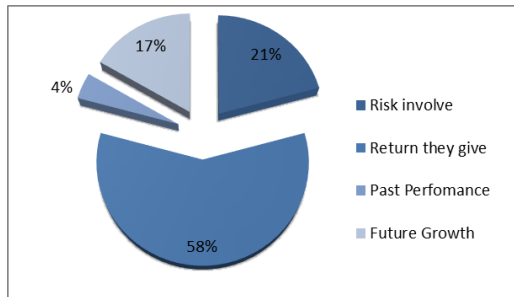


Fig: 3 Factors on which investment decision is dependent

From the survey, it was found that 58% of individual's investment decision is depended on returns that the avenues give while 21% individual's decision depend on risk involves. Only 4% individual's decision is concerned about the future growth. The survey result shows that people are more interested in the avenue which maximizes return. As is known, more risk, more return, there are some investors who opt risky options just in hope of getting more returns but this cluster is only 21% of the total respondents. This proves though past performance and future growth are very ignorable factors still the major population take decision dependent on returns that an avenue gives.

Data Analysis

There are few variables identified and hypothesis is tested using chi square test, f- test and using correlation The lifeblood of this study are the two factors i.e. investment frequency and annual income. We have read in theory of correlation that as income increases, expenditure increases. But looking at the smart population these days there is one more aspect of this study which says with the expenditure, investment too should increase. The first hypothesis relates to this theory only and tries to check whether the two variables depend on each other or they are independent of each other. The hypothesis is:

Ho1: Frequency of investment and annual income are independent to each other.

Ha1: Frequency of investment and annual income are dependent on each other.

Here, Chi square test is applied. Assuming the level of significance to be 5% the calculated value of χ^2 i.e. χ^2_{cal} , came out to be 0.00895. On comparison against p value, it is realized that the value of χ^2_{cal} is smaller than the p value which is the tolerance value hence, H_a is accepted i.e. the hypothesis, frequency of investment and annual income are dependent on each other. This clearly says that both the variables rest on each other and are related. This means that how frequently the investments are made totally depend on how much is the annual income.

The second hypothesis is:

Ho2: There is no significant difference between variances of risk & return.

Ha2: There is significant difference between variance of risk & return.

At times, it is necessary to ascertain whether the two independent populations or the two independent samples from a population have the same variability. For this purpose the respondents were divided into two categories based on the factors on which they invest i.e. the risk and return and F-test is applied to check the difference in variability between risk and return which are considered to be the two faces of a coin, F test is applied.

Again assuming the α value to be 5%, the F-calculated value came out to be 7.580. On comparing both the values the Fcal value is greater than the level of tolerance so null hypothesis is accepted. This says that there is no significant difference between variances of risk and return. So, the test result says that respondents are concerned about both the factors i.e. risk and return and there is not much difference in the choices as both of them are equally important factors while deciding to invest.

The third hypothesis is

Ho3: Income and investment are related to each other.

Ha3: Income and investment are not related to each other.

Chi square test, when applied to first hypothesis made it clear that the two variables income and investment are dependent on each other.

Now, next is we want to know what type of relationship they share? To know the type of relationship the variables share, correlation is applied.

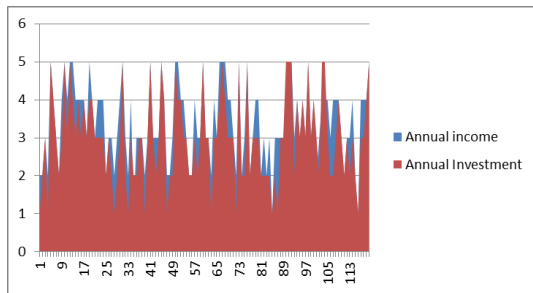


Fig:4 Positive correlation between Annual income and annual investment

The correlation coefficient between the two factors is 0.851.

This shows that the factors income and investment are very closely related to each other. The correlation is highly positive. The higher is the income the higher is the investment by the employees. We can say that as income increases investment also increases and vice versa. Hence the hypothesis is accepted.

The fourth hypothesis is:

Ho4: There is no significant difference between variances of future planning and building up of assets.

Ha4: There is significant difference between variances of future planning and building up of assets.

Again, to test the variances between the above two factors, F-test is applied. Assuming the α value to be 5%, the F-calculated value came out to be 0.1310. On comparing both the values the Fcal value is greater than the level of tolerance so null hypothesis is accepted. This says that there is no significant difference between variances of future planning and building up of assets. The survey result says that risk and return are the two most important factors which are considered while investing and the above two factors i.e. building assets and future planning are the less concerned areas. The above test is applied to check whether there is still any difference or variations in samples in choosing one of them as more important. The test is again applied on two samples and the result concludes that there is no significant difference between both the factors.

Findings and Conclusion

The above survey clearly infers that maximum individuals preferred to invest in bank deposits and gold & silver and these investors are long term investors. There are many reasons behind choosing

available investment options that Amdavadis select. The survey says that most of the people who invest regularly don't depend on family or financial planner's advice but they invest due to self awareness. They are self dependent and take their decisions on their own. It was also found that maximum individuals choose to invest yearly or quarterly. About 58% of respondents take investment decision which is dependent on return that the avenues are capable of giving back. One more important result that came out regarding the many factors which Amdavadis consider while investing reveals that 83% of them believes in security and returns. Only 44% of them consider risk as an important factor to earn money. The factors such as to building up of assets, future planning and business development are least important factors for investments.

Finally, we conclude that in today's era if on one hand it is difficult to understand the troughs and crusts of the financial markets, on the other hand it's a challenge to understand the investment mindsets of people. For businessman who have to utilize their surplus funds, it's a challenge to decide where they should invest, similarly its difficult for financial marketers to know how market will behave the next day or next week. The field of Investments, the return achieved, the risks involved is a big challenge to know and understand. From the result of analysis it is clear and concluded that there are two most preferred avenues for investment which are bank deposits and gold & silver. It was found that most of people choose to invest yearly or quarterly that affects their investment pattern of investment. For most of the individual's there investment decisions are dependent on certain factors and security, risk and returns are the factors which are most important to investors. Besides this there are certain factors which are neglected by individuals while investment which are future planning, building up assets and personal benefits. Different factors hold different importance for different class of people. The result that says income and investments are positively related and are independent of each other, help in understanding investors and clear some mist from the mirror.

Different individual prefer different avenues as per their choice and the choices can be studied and analysed. The study proves that the challenges can be achieved by carefully studying the market trend and the way investors behave.

References

Press Information Bureau (PIB), Media Reports, Department of Industrial Policy and Promotion (DIPP), Securities and Exchange Board of India (SEBI)

2011 iFAST Financial India Private Limited

Morgan Stanley & Co. Research as of July 15, 2014

Bloomberg as of July 23, 2014

IRACST- International Journal of Research in Management & Technology (IJRMT), ISSN: 2249-9563 Vol. 4, December 2014.

Jorgenson, Dale, 1963, 'Capital Theory and Investment Behavior," American Economic Review, May, pp. 247-59.

Journal of international academic research for multidisciplinary. Impact Factor 1.393, ISSN: 2320-5083, Volume 2, Issue 5, June 2014.

Private Investment in India, 1900-1939 - Amiya Kumar Bagchi - Google Books_files.

Trends and Patterns of Private Investment in India, the Institute for Social and Economic Change.

Journal of Theoretical and Applied Information Technology 2005.

<http://www.financialwisdom.com/pflsresourcecenter/HowardUniversity>

Individual investment behaviour: A brief review of research, Sharon Collard, Personal Finance Research Centre, University of Bristol, January 2009.

Study of Investment Advice to Retirement Plan Partakers in India, Geetika Batra, Blue Ocean Research Journal, vol 2, No 8 (2013)

Time to build, option value, and investment decisions, S Majd, RS Pindyck, Journal of financial Economics 18 (1), 7-27.

Uncertainty, investment, and industry evolution, RJ Caballero, RS Pindyck, National Bureau of Economic Research

System and method for generating and displaying risk and return in an investment portfolio M Edesess - US Patent 5,884,287, 1999.

Investment risk: The experts' perspective, RA Olsen - Financial Analysts Journal, 1997 - CFA Institute

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An Analytical Study of Employees' Satisfaction from Statutory Welfare Facilities

Ashish Goradiya, Manish Raval

Abstract

Labor welfare facilities include all those facilities that are essential for the existence of the workers and that are necessary for the improvement in the spiritual and emotional quotient of the workers. The welfare facilities that can be provided to the work force can be categorized into two, viz. Statutory Welfare Facilities and Non-statutory Welfare Facilities. The present research is focused on the Diesel Engine Factory Sector. There are around 150 factories in Rajkot District. Out of that the researchers have selected five factories. The sample size for this study is 150 employees working in diesel engine factories of Rajkot. It is observed that gender, experience and education of the employees do not make significant difference in the level of satisfaction from the welfare facilities. The age of the employees make significant difference in the level of satisfaction from the statutory welfare facilities.

Introduction

The employees working in an organization can be more productive if they are satisfied from their workplace. Workplace satisfaction can be increased if the employees are provided with the welfare facilities. Labor welfare facilities include all those facilities that are essential for the existence of the workers and that are necessary for the improvement in the spiritual and emotional quotient of the workers. The welfare facilities that can be provided to the work force can be categorized into two, viz. Statutory Welfare Facilities and Non-statutory Welfare Facilities.

Statutory Welfare Facilities are those facilities that are made compulsory by the legal system of the country. It is compulsory for every employer to provide such welfare facilities.

On the other hand, Non-statutory welfare facilities are those facilities that the employers provide voluntarily to the employees.

Both the kinds of welfare facilities are aimed at increasing the satisfaction of the employees. But in this study, we have focused only on the statutory welfare facilities.

Meaning of Welfare Facilities

The term 'Labour Welfare' refers to various facilities provided to workers in and outside the factory premises. Such facilities include the benefits such as canteens, rest and recreation facilities, housing and all other services that play a role to the wellbeing of workers.

(1) Labor welfare is "A state of faring or doing well. Freedom from calamity, enjoyment of health and prosperity"

- Chambers Dictionary

(2) The term Labor welfare includes "such services, facilities and amenities as adequate canteens, rest and recreation facilities, sanitary and medical facilities, arrangements for travel to and from work and for the accommodation of workers employed at a distance from their homes and such other services, amenities and facilities including social security measures as contribute to improve the conditions under which worker are employer."

- The Report of the Committee on Labour welfare (1969)

Literature Review

Bascia, N., (1995), expresses that labor welfare is required for several reasons. In this study they have described several reasons why labor welfare is required. It is said that laborers are the assets of the organization. It is said that they should be fully satisfied by the employers. Then only, they are motivated to work.

Bhogoliwal, T., N, (1973), argues that employee welfare is those facilities which help motivate and retain the employees. The welfare facilities are meant to increase the satisfaction of employees. Besides increasing the level of satisfaction, the welfare facilities create loyalty of the employees for the organization. He says that the welfare facilities minimize the social evils. The Committee on Labour Welfare, (1969), Labour welfare is a scheme of maintenance of personnel in a way that it

is directed towards the efforts of preservation of health and hygiene of the employees. It contributes to the employees' morale. The welfare facilities provided by the employers improve the living and working conditions of the employees. The welfare schemes consider not only the employees but also their families because the satisfaction of an employee is not possible without the satisfaction of families.

Joseph B., & Joseph I., & Varghese R., (2009), studied in the article that the structure of welfare depends upon social security set up. Government, employers and other organizations have done a lot for the provision of welfare facilities to the organizations.

Research Methodology

In order to carry out the research work properly and systematically, it is necessary to prepare a research methodology first. In the present research paper, following research methodology is used.

• Title of the Study:

The title of this study is as under:

“An Analytical Study of Employees' Satisfaction from Statutory Welfare Facilities (Considering the Diesel Engine Factories of Rajkot)”

• Scope of the Study:

The present research is focused on the Diesel Engine Factory Sector. Rajkot district is the hub of the Diesel Engine Manufacturing Factories. There are around 150 factories in Rajkot District. Out of the total population of 150 Diesel Engine Manufacturing Factories in the Rajkot District, the researcher has selected a convenient sample of 05 factories.

• Sample Size:

The study is under taken on the employees working in conveniently selected 05 factories. There are around 200 employees working in these factories. At the time of collecting the data, these employees were present in the factories. So, these employees were selected as sample for this study. So, the method of sampling is convenient sampling. A questionnaire was designed to record the responses of the employees. The questionnaires were distributed to all of them. The researchers received back only 167 questionnaires. Out of 167 questionnaires, only 150 properly and completely filled in questionnaires were received back. So, the sample size for this study is 150 employees working in diesel engine factories of Rajkot.

Methods of Data Collection:

There are mainly two sources for data collection. i.e. Primary sources and Secondary sources. The present

study is mainly dependent on primary data. The primary data is collected using questionnaire. The questionnaire was prepared using 5 point Likert scale. From the sample selected for the study, some respondents were semi-literate. The researcher personally interacted with them to get the responses and the researcher himself filled in the questionnaire and this is known as scheduling.

Objectives of the Study

Present study is undertaken with the following objective:

- (1) To study the level of satisfaction of employees in terms of statutory welfare facilities provided to them.
- (2) To study the level of dissatisfaction of employees in terms of statutory welfare facilities provided to them.
- (3) To study the difference among the level of satisfaction due to various social and demographic factors.
- (4) To find out the solution of dissatisfaction of employees in terms of welfare facilities provided to them.
- (5) To suggest the ways to improve the work life of employees working in such factories.

Tools and Techniques

In order to measure the level of satisfaction from the statutory welfare measures, the researchers have used ANOVA.

Limitations of the Study

The present study involves following limitations:

- 1) The study will be based on 05 selected factories in Rajkot district; the findings from the study of these factories cannot be generalized for all the factories.
- 2) This study is based on primary data collected through responses of the employees to the questionnaire, so there are chances of human bias, prejudices and human errors.
- 3) This study is dependent on the Diesel Engine Industry of Rajkot. So, it cannot be applied to the other industries.

Statistical Analysis

The satisfaction of the employees is tested based on various social and demographical variables using ANOVA.

(1) Analysis of Satisfaction from Statutory Facilities Based on Gender:

Null Hypothesis (H₀): There is no significant difference in the level of satisfaction due to gender from statutory facilities among the selected sample of employees.

Alternative Hypothesis (H₁): There is significant difference in the level of satisfaction due to gender

from statutory facilities among the selected sample of employees.

Table – 1
A Table Showing Analysis of Variance

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6.454	1	6.454	251.617	
Within Groups	3799.920	148	25.675		
Total	3806.373	149			

(2) Analysis of Satisfaction from Statutory Facilities Based on Experience:

Null Hypothesis (H₀): There is no significant difference in the level of satisfaction due to experience from statutory facilities among the selected sample of employees.

Alternative Hypothesis (H₁): There is significant difference in the level of satisfaction due to experience from statutory facilities among the selected sample of employees.

Table – 2
A Table Showing Analysis of Variance

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	179.069	3	59.690	2.403	0.070
Within Groups	3627.305	146	24.845		
Total	3806.373	149			

(3) Analysis of Satisfaction from Statutory Facilities Based on Age:

Null Hypothesis (H₀): There is no significant difference in the level of satisfaction due to age from

statutory facilities among the selected sample of employees.

Alternative Hypothesis (H₁): There is significant difference in the level of satisfaction due to age from statutory facilities among the selected sample of employees.

Table – 3
A Table Showing Analysis of Variance

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	701.520	5	140.304	6.507	0.000
Within Groups	3104.854	144	21.561		
Total	3806.373	149			

(4) Analysis of Satisfaction from Statutory Facilities Based on Education:

Null Hypothesis (H₀): There is no significant difference in the level of satisfaction due to education from statutory facilities among the selected sample of employees.

Alternative Hypothesis (H₁): There is significant difference in the level of satisfaction due to education from statutory facilities among the selected sample of employees.

Table – 4
A Table Showing Analysis of Variance

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	89.352	3	29.784	1.170	0.323
Within Groups	3717.021	146	25.459		
Total	3806.373	149			

Table – 5
A Table Showing Interpretation of Testing of Hypothesis

No.	Social/Demographic Variable	F-Cal	Significant Value	Interpretation
01	Analysis of Satisfaction from Statutory Facilities Based on Gender.	0.251	0.617	Null Hypothesis (H ₀) is accepted. So, the researcher finds no significant difference in the satisfaction from statutory facilities based on gender.
02	Analysis of Satisfaction from Statutory Facilities Based on Experience.	2.403	0.070	Null Hypothesis (H ₀) is accepted. So, the researcher finds that there is no significant difference in the satisfaction from the statutory facilities based on experience.
03	Analysis of Satisfaction from Statutory Facilities Based on Age.	6.507	0.000	Alternative Hypothesis (H ₁) is accepted. So, the researcher finds significant difference in the satisfaction from the statutory facilities based on age of the employees covered under the sample.
04	Analysis of Satisfaction from Statutory Facilities Based on Education.	1.170	0.323	Null Hypothesis (H ₀) is accepted. So, the researcher finds that the level of education does not make difference in the satisfaction from statutory facilities.

Findings

- (1) The gender of the employees does not make any difference in the level of satisfaction from the statutory welfare facilities.
- (2) The experience of the employees i.e. number of years worked in the organization does not make any difference in the level of satisfaction from the statutory welfare facilities.
- (3) Age of the employees make significant difference in the level of satisfaction of the employees from the statutory welfare facilities.
- (4) The level of education of the employees does not make any difference in the level of satisfaction from the statutory welfare facilities.

Suggestions

From the above given analysis following suggestions can be given to the employers of these factories, so that the satisfaction of the employees can be increased.

- (1) There is a need to give more welfare facilities to the employees of older age, because they expect more facilities from the employers.
- (2) The employers need to provide more facilities to those who are more educated.
- (3) The employers should take care of those employees who have been associated with the firm for more years.

Conclusion

Statutory welfare facilities are those which are made compulsory by the government by passing the statutes. According to the law, the employers are required to compulsorily provide such facilities to the employees. From the above analysis, it can be concluded that gender, experience and education of the employees do not make significant difference in the level of satisfaction from the welfare facilities. The age of the employees make significant difference in the level of satisfaction from the statutory welfare facilities.

References

- Bascia, N., 1995, "Social Security and Labour Welfare in India", Ashish Publishers, New Delhi
- Bhattacharya, D., K., 2009, Research Methodology, Excel Books, PP., 160-169
- Bhogoliwal, T., N, 1973, "Economics of Labour and Social Welfare", Sahithya Bhavan, Agra
- The Committee on Labour Welfare, 1969, Constituted by the Government of India vide their resolution No. Lwl (1) 30 (3) 165 of August 5, 1966 issued by the Ministry of Labour, Employment and Rehabilitation (Department of Labour and Employment), P., 5
- Joseph, B, & Joseph, I, & Varghese, R, 2009, Labour Welfare in India, Journal of Workplace Behavioral Health, Volume 24 Issue 1 & 2, PP., 221 – 242
- Kingsley, M., 1953, "Socialism and the welfare state", Fabian Tract No.291; Fabian Publications, London
- Mamuria and Doshi, 1966, "Labour Problems and Social Welfare in India, Kitab Mahal Pvt. Ltd., Allahabad, P., 339
- Moorti, M., B., "Principles of Labor Welfare, Gupta Brothers" Vishakhapattanam
- Sharma, A., M., 1997, "Aspects of Labour Welfare and Social security", Himalaya Publication, Bombay

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Paradigm Shift of Postal Services through Measurement of Internal Customers' Satisfaction in the Selected Postal Services in Vadodara City of Gujarat State - Highlights of an Empirical Study on Vital Dimensions of Postal Services

Kalpesh Purohit

Abstract

Learning on marketing has changed and benchmarks for success have gone to its lifetime heights. Conventional literature viewed "Customers' Satisfaction" as an ultimate goal of marketing function which has in the present day context becomes an entry pass irrespective of product, sector or organizations. The protected sectors have started finding their processes facing pain of major change or transformation to be viewed as "Paradigm shift. The fundamental purpose of this descriptive research study was to measure Authorised Postal Agents (APAs) satisfaction as internal customers who have been associated with the postal services and rendering their services to the end users and can be instrumental to suggest change in the postal services for better customer satisfaction. The primary data were collected using structured-non disguised questionnaire from the selected APAs to offer results, findings and implications using descriptive statistics as well as market performance analysis and structural equation model was developed to better modify and formulate marketing strategies.

Introduction

Marketing of services is largely based on relationship and value because the consumers buying are intangible and his or her purchase decisions are based on the reputation of a single person; it's more difficult to compare the quality of similar services and the consumers cannot return the service. Service can be described as an act of helpful activity; to help; or an aid to offer someone a service or the serving of a sovereign, State, or Government in some official capacity or the duty or work of a public servant (<http://dictionary.reference.com/browse/service>, retrieved on 10/12/2010). Marketing of services is different from marketing of goods because of the unique characteristics of services, viz., intangibility; heterogeneity; perishability, and inseparability. These characteristics also require the marketing mix of services to be extended, to include Process, People and Physical evidence, in addition to the four traditional Ps of the marketing mix strategy. The contribution of service sector in the Indian economy has shown tremendous growth. Service industries in India like Information Technology (IT); Insurance; Telecommunication, and Retailing, have witnessed sizable growth in the recent past. The Service Sector of Indian Economy contributes to around 55 per cent of India's GDP during the year 2009-2010. It plays a leading role and contributed 68.6 per cent of the overall average growth in GDP in the year 2002-2003 and 2006-2007. It has been at the forefront of the rapid growth and contributed 63 per cent of the GDP in the year 2011-2012. It has come to play an increasingly dominant role by accounting for 59.6 per cent of the overall average growth in GDP between 2000-2001 to 2011-2012. The sector is also set to witness an increase in investments, with the Government approving 513 special economic zones (SEZs) till August 2008, of which majority of it are for IT and Information Technology Enabled Services (ITeS) sectors (<http://www.ibef.org>). India Post IT project is major transformational project which will IT enable, network and connect post offices, rolling out an integrated, scalable technology solution.

Indian Postal System /Service: An Overview:

The researcher has made an attempt to highlight crucial aspects relating to Indian Postal System as follows:

India Post has been committed to meeting the challenges of Indian economy, and the need to ensure connectivity, communication, and financial services to each citizen. It emphasizes the need to expand and strengthen its coverage of rural areas where 60 per cent of the people reside and maintain their livelihoods.

It believes that the new economy and modern markets require it to become more financially autonomous and commercially flexible in order to deliver its core functions and other services efficiently of high standards. It appears that a new legislative framework for regulating the

sector is highly essential part of modernizing the Postal Sector of India and ensuring its orderly growth and disciplined functioning in near future (www.indiapost.gov.in).

Indian post is one of the largest Network in the world. It has been meeting the personal, business communication needs as well as door to door delivery, and other services such as banking, insurance, transfer of money and goods for the past several decades. At present, mobile phones, e-mail, SMS have become popular means for personal communication. There are many operators for customers to choose from for sending documents and goods within India and abroad. Technology has made it possible to offer modern and affordable Postal services to its customers like instant money transfer, and collection of bills. It has also become possible to offer postal services to the rural sector through the vast Postal Network.

The Department of Post is required to meet its expenses from the revenues it earns as it operates on commercial lines. It faces a daunting task ahead as Post Offices have been opened in rural and remote areas on partial recovery of costs. Further, it is also facing stiff competition in some of its businesses. To take this challenge, it is in the process of transforming itself. It has reduced the percentage of deficit. It has begun to offer Innovative products and services through its network to urban and particularly rural customers. Use of technology and business orientation are the keys for improvement of quality of services (ibid).

It is a socially committed, technology driven, professionally managed and forward looking organization. In order to ensure that vision comes true, it has formulated its vision and strive very hard to achieve it. It is concerned with providing high quality mail, parcel and related services in India and throughout the world to be recognized as an efficient and excellent organization exceeding the expectations of the customers, employees and the society (<http://www.indiapost.gov.in>). The Indian Post Offices have been in the service of India more than past 150 years.

Customer and Customer Satisfaction

Customer has been defined as someone who regularly purchases from a particular store or company (David L. Loudon and Albert J. Della Bitta, 2002). The goods or services received and consumed by a person as well as able to make a choice from different supplies and products is known as consumer.

(<http://www.businessdictionary.com/definition/Customer.html#ixzz1rH2JERua>, retrieved on 28/10/2009).

It has been positioned as the nerve centre of communication in community life. At present it faces tough competition from newer modes of technology that has redefined connectivity. Even in the face of tough competition, the focus towards fulfilling social commitment of Indian Post continues unabated.

India Post brings to the mind a universe of intricate network of post offices in the length and breadth of India. It forms the largest Postal System in the World with an array of about 1.55 lakh post offices. It dwarfs all other postal systems in sheer numbers. To illustrate, there are 5,468 Panchayat Sanchar Sewa Kendras that provide basic postal services in the rural areas. In addition, it has been more than a means of communications. It has helped in nation building and connecting the diverse regions and populace of India. It touches the lives of millions of Indians in number of ways. It has indeed come a long way from merely transmitting messages, to providing a wide range of services for the socio-economic betterment of the people. The four major areas of services offered by India Post are as follows. Postal services includes carrying letter correspondence, provision for transfer of money, deposit of money accepted by the post offices, etc., availed by the society and known as postal services. (www.nios.ac.in). The postal service sector of India can be broadly classified into two distinct constituents viz, the postal services and the courier services. The postal services include varying services such as viz., picking up letters, parcels & packages, and its prompt and timely delivery at the destined destination within and outside India (<http://eaindustry.nic.in>). The postal services were traditionally provided at manually operated counters.

But, now with use of IT has further extended the scope of the postal services to be provided, making it more responsive and error-free (<http://www.indiapost.gov.in>, retrieved on 26/10/2009). India Post is brand name revealing recognition with The Department of Posts which is operated as postal system by Government of India and described as the post office within in India. (www.indiapost.gov.in, retrieved on 26/10/2010).

The term consumer described as personal consumers and organizational consumers. The personal consumers are those who buy goods and services for their own consumption or for household use and organizational consumers are those who buy equipment and services in order to run their organization (Leon G. Schiffman and Leslie Lazar Kanuk, 2002). Satisfaction is a person's feelings of pleasure or disappointment resulting from comparing a product's perceived performance or outcome in relation to his or her expectations (Philip Kotler and Kevin Lane Keller, 2006). Customer Satisfaction from product of a firm can be judge by

number of customers who make repeat purchases based on their satisfaction delivered to buyers who consumed goods or services of firm (www.businessdictionary.com, retrieved on 22/10/09).

It is a business term which can be considered as key indicator for measuring performance of business considering whether customer expectation are met or surpassed by products and services supplied by a company (<http://en.wikipedia.org>, retrieved on 22/10/2009).

The changes in the business related environment concerning the public utilities or services including postal services require altogether a new kind of attitude and outlook as well as formulation of business and service strategy from the organizations' perspective considering the new challenges being faced by them in order to provide services to everyone without discrimination by remaining within the policy framework as formulated by the Government of India especially in case of postal services. More than reasonable variance in service quality of postal services needless to state directly affects customers' satisfaction.

Review of Literature

An attempt has been made by the researcher to collect various kinds of information about postal services and customer satisfaction and review the same as follows.

A brief outline of literature on customers' satisfaction from postal services has been given as follows:

William S. Broomfield (1992) had viewed the customer Satisfaction Index (CSI) as an effective toll to measure customer satisfaction considering quality of service provided by the Post offices. The findings reported by the researcher highlighted the fact that the survey respondents had generally rated the Postal Service's overall performance higher than the publicly released CSI results on how satisfied household customers were with specific service dimensions (William S. Broomfield, 1992).

USPS Delivery Performance Information (1995) USPS was required to provide efficient postal services promptly and in a reliable manner to all communities and to customers in all areas and postal services to rural areas, communities, and small towns where post offices are not self-sustaining. In determining all policies for postal services, USPS is give the highest consideration to, transportation, and delivery of vital mail letters with continuing to focus on the end-to-end service performance of all mail (USPS Delivery Performance Information, 1995).

Michael R. Carrell, Norbert F. Elbert (1974) had conducted research study with the objective of identifying some of the personal and organizational variables that determined the job satisfaction of postal clerks. Such studies are new to the postal system, which previously had closed its doors to research by outsiders.

The Post officials had stressed that one of the primary objectives of the "new" Postal Corporation is to increase the job satisfaction of its employees without regard to improved performance or reduced turnover. The postal reorganization together with the new wage structure is giving postal officials increased flexibility in the recruitment and placement process. This study delineated the direction a mid-western postal installation should follow in structuring new recruitment and placement procedures. The study had focused on postal clerks' turnover, absenteeism, and dissatisfaction was found as highest with the clerks.

Specifically, it would be difficult to make any generalizations about the significant main effects of location, job category, education, and home environment when it had shown that interaction among these variables does exist (Michael R. Carrell, Norbert F. Elbert, 1974).

Anand.M.B , Dr Srinivas D L And Dr.H H Ramesh (2013) highlighted the fact that that the performance and growth of Indian post over the years is not so remarkable and focus on the need to meet the challenge of reaching target of large volumes of money orders, bank accounts with low-cost to citizen of India to the financially barred population with the help of building partnership strategically with financial institutions, mutual fund and insurance companies and so on (Anand.M.B, Dr Srinivas D L and Dr. H. H. Ramesh, 2013).

A brief outline of literature on customers' satisfaction has been given as follows.

Richard L. Oliver (1980) provided a more substantial and simultaneous test of the relationships among expectation, disconfirmation, satisfaction, and the traditional criteria of attitude and purchase intention that has been performed to date.

It suggested that person makes comparison and relative judgment based on frame work of reference created by his or her expectations and the when outcomes were less than expectations the judgment is said to be negative disconfirmation fall below this reference point and said to be positive disconfirmation when outcomes were above expectations. Attitude change, purchase intention was believed to be outcome of satisfaction which is sum total of psychological state resulting from

emotions surrounding disconfirmation or confirmation of the consumers' expectations (Richard L. Oliver, 1980).

Gilbert A. Churchill, Jr., Carol Surprenant, (1982) investigated whether to consider disconfirmation as an variable affecting satisfaction which is a common argument generally made or as commonly argued, or whether the effect of disconfirmation was reflected on expectation and perceived performance. Because most of the research on consumer satisfaction had used non-durables, this finding had important implications for future research (Gilbert A. Churchill, Jr., Carol Surprenant, 1982).

Claes Fornell (1992) examined how the market share and customer satisfaction are related considering that in industries where homogeneous supply and heterogeneous demand was observed the outcome is lower satisfaction and where demand and supply were matched he outcome is higher satisfaction (Claes Fornell, 1992).

Customer satisfaction is based on the degree to which customer expectations, needs or desires are fulfilled by firm and satisfaction of customers should be adopted a goal by manager who believe that it is the path to make profits for firm.

When benefits acquired by customer exceed costs incurred provides higher value to customer he or she is likely to be more satisfied by a larger margin. Since consumer satisfaction is the objective of marketer, marketing's effectiveness must be measured by how well it satisfies consumers (William D. Perreault, 2002).

Customer expectations of service play an important role in the purchase decision. The marketing plan must cover the four main components or areas of customer service are customer education; employee education; costumer complaint administration, and cost levels of providing services (Bernard Katz, 2004).

Kang Duk Su and Maryam M. Khan (2003) investigated that tourists visiting Cheju Island in South West Korea expect courteous behavior and more information providing attitude form services provides a feeling of trust and confidence (Kang Duk Su and Maryam M. Khan, 2003).

Jantawan Noiwan et. al. (2005) evaluated computer attitude and computer self-efficacy of 151 Thailand undergraduate students.

They found that students' possess moderately positive attitudes on computer technology and neutral confidence in using computer applications which reflected their consistent satisfaction for

computer technology (Jantawan Noiwan et. al., 2005).

Research Methodology

The major objectives of this descriptive research study were to identify and evaluate crucial dimensions that were considered by users of postal services and to measure selected Authorised Postal Agents (APAs)'overall satisfaction /dissatisfaction as experienced and reported by selected APAs on the various kinds of selected Indian postal services as offered by the various post-offices located in the Vadodara city in the State of Gujarat. The sample was conveniently chosen based on convenience non-probability sampling methods from Vadodara city of the Gujarat State.

Reliability and Validity of the Structured Non-Disguised Questionnaire:

Reliability tests were run to determine how strongly the attitudes were related to each other and to the composite score. All dimensions of the questionnaire related with measuring customers' satisfaction were tested and the Cranach's alpha ranged from 0.627 to 0.884 which really shows internal reliability of the scale. The reliability of a scale as measured by coefficient alpha reflects the degree of cohesiveness among the scale items (Naresh K. Malhotra, 2007; Jum C. Nunnally, 1981, and Puay Cheng Lim & Nelson K. H. Tang, 2000) [Please Refer Table Number-01].

Table Number: 01
Summary of Indicators and Reliability Alpha Score

Sr. No.	Selected Criteria	Cronbach's Alpha Coefficient
01	Ambiance of the Post office	0.627
02	Services given by the Service Counters of the post office	0.725
03	Availability of the Information at the post office	0.844
04	Behavior of the staff of Post office	0.771
05	Complaint solving by the Post Office	0.698
06	Motivation to APAs	0.737
	Overall Reliability Score of 55 Items Covered by 6Criteria	0.743

Source: Fieldwork.

Validity of the Structured Questionnaire:

In this empirical research study while undertaking the pilot study, the structured questionnaire was given to Authorized Postal Agents (APAs) for their

valuable feedback and opinion on design of structured questionnaire to be used for collection of primary data on measurement of selected APAs satisfaction.

The researcher had also measured convergent validity by comparing mean scores of scale with other measures of the same construct. It becomes clear from the above given table that the means of same construct were measured and less variation was observed in the given question categories and average satisfaction score was found to be as similar. Majority of the APAs were found as placed between

Highly Dissatisfied to Highly Satisfied category respectively.

Data Analysis & Interpretation

The primary data were collected using structured non-disguised have been analyzed by applying SPSS 15.0. It mainly revealed following.

Profile of Selected APAs:

The researcher has provided profile of ‘Authorized Postal Agents’ (APAs) who have been rendering Postal services to customers while independently

Table Number: 02

Table Showing Comparison of Mean Scores of Extent of Selected APAs’ Opinion about Services Provided by Post Offices Located in Vadodara City

Selected APAs’ Opinion on Selected Criteria		Selected APAs’ Opinion on Selected Criteria		Difference in Mean Count (Column 2 – Column 4)
Rating Scale 1 (Highly Dissatisfied) to 5 (Highly Satisfied)				
(Q-6 - 1 to Q-6-64)	Mean Score (Rank)	(Q-7 -1 to Q-7-7)	Mean Score (Rank)	
1	2	3	4	5
Ambience of the Post Offices	3.98	Ambience of the Post Offices	3.44	0.54
Services given by the various Counters of the post offices	2.46	Services given by the various Counters of the post offices	2.74	-0.28
Access / Availability of the Information at the post offices	3.47	Access / Availability of the Information at the post offices	3.65	-.018
Behaviour of the staff of Post offices	2.67	Behaviour of the staff of Post offices	2.49	0.18
Complaint solving by the staff of post offices	3.62	Complaint solving by the staff of post offices	2.87	0.75
Motivation to APAs	2.44	Motivation to APAs	2.30	0.14
Overall Average	3.106	Overall Average	2.915	0.191

working with various post offices located in the Vadodara City of Gujarat State. The researcher offered APAs’ demographic profile considering selected background variables viz., Age, Gender, Educational Qualifications, and Marital Status.

amongst total number of 40 post offices and his or her residential accommodation and their offices to finally consider total number of 300 responses that were gathered using structured questionnaire supported with personal interviewing.

The researcher has personally visited each of the APAs for the collection of the primary data from

The profile of the selected APAs has been offered as follows.

Table Number: 03 Profile of Selected APAs

Sr. No.	Selected Demographic Variables of Selected APAs		Number and Percentages of Selected APAs
01	Gender	Males	138 (46)
		Females	162 (54)
02	Age	Below 25	63 (21)
		25 to 45 years	149 (49.66)
		46 to 60 years	47 (15.66)
		Above 60 years	41 (13.66)

Sr. No.	Selected Demographic Variables of Selected APAs	Number and Percentages of Selected APAs	
03	Educational Qualifications	Less than Graduate	98 (32.66)
		Graduate	138 (46)
		Post-Graduate	48 (16)
		Professional Quali. /Diploma	16(5.33)
04	Annual Family Income (In Rupees)	Up to Rs. 100000	21 (07)
		Rs. 300000 to 600000	149 (49.66)
		Rs. 600000 to1000000	72 (24)
		More than 1000000	58 (19.34)
05	Number of Family Earning Members	Single	40 (13.33)
		Two	125 (41.66)
		Three	73 (24.33)
		More than Three	62 (20.66)
06	Number of Dependents	Up to 3	67 (22.33)
		4 to5	152 (50.66)
		6to7	61 (20.33)
		More than 7	20 (06)
07	Marital Status of Selected APAs	Unmarried	40 (13.33)
		Married	260 (86.66)

As given in the table number 01 it was found that 46 per cent of selected APAs were male and 54 percent were females and 49 per cent of them were between age group of 25 to 45 years. Considering occupation and educational qualification around 46 per cent

were graduate and 32 percent have educational qualification less than graduation and 62 per cent of the selected postal service users were found to be two or more earning family members and 49 per cent of them have annual income between 3 to 6 lakhs.

Table Number: 04

Frequency of Visit to the Post Office in One Month by Selected APAs

Sr. No.	Frequency of Visit To Post office In One Month	Type of Agency			Mean	S.D.	Total
		Standardize Agency System (SAS)	MPKBY Agency	Both SAS and MPKBY Agency			
01.	Less than 5 times	84 (60.44)	11 (14.45)	04 (6.15)	1.19	0.488	99 (33.0)
02.	5 to 10 times	24 (17.26)	50 (52.08)	15 (23.07)	1.90	0.658	89 (29.67)
03	10 to 15 times	20 (14.38)	32 (33.33)	14 (21.54)	1.91	0.717	66 (22.0)
04.	15 to 20 times	08 (5.76)	0 (0.0)	23 (35.38)	2.48	0.890	31 (10.33)
05.	More Than 20times	03 (2.16)	03 (3.16)	09 (13.85)	2.40	0.825	15 (5.0)
Total		139 (100.0)	96 (100.0)	65 (100.0)	1.75	0.788	300 (100.0)

Selected APAs' frequency of visit to the post office in One month had revealed that 33 percent visited less than 5 times, 29.7 percent visited 5 to 10 times, 22 percent visited 10 to 15 times, 10.3 percentage 'frequency of visit to the Post offices' as a rational parameter to learn expectations, aspirations of APAs and it can be used it as a yardstick to measure satisfaction of the visitors. Opinion, views, ideas and frequently carries significant implication in bringing

improvement in operations and processes of the Postal system. It has significant concern and implication in terms of purposes for visit and rate of usage of Postal services offered by the Post offices. Infrequent visit leads to lower expectations, lake of psychological and emotional engagement and loyalty as well as lower utilization of the Postal services that leads to adverse marketing implications.

Table Number: 05

Selected APAs Overall Satisfaction/Dissatisfaction (Experience) With Regard to selected

Sr. No.	Selected Items	Experience	
		Dissatisfied	Satisfied
01	Location and Timings of the Post office	101(33.6)	199(66.4)
02	Ambiance of the Post office	117 (39.0)	183 (61.0)
03	Services rendered by the Service Counters of the post office	224 (74.7)	76 (25.3)
04	Availability of the Information at the post office	242 (80.7)	58 (19.3)
05	Behavior of the staff of Post office	252 (84.0)	48 (16.0)
06	Complaint solving by the Post office	169 (56.3)	131 (43.7)
07	Motivation to APAs	279 (93.0)	21 (7.)

Overall Satisfaction /Dissatisfaction of Selected APAs

The overall experience of the selected APAs revealed that most of them had expressed dissatisfaction with regard to the selected criteria like viz., Services rendered by the Service Counters of the post office; Availability of the Information at the post office; Behaviour of the staff of Post office; Complaint solving by the Post Office and Motivation to APAs in each of the selected post offices in the Vadodara City of Gujarat State. However, from amongst the selected criteria, with regard to Location and Timings of the Post office and Ambiance of the Post office (66.4 percent). Overall, 61 percent APAs had expressed their satisfaction. From amongst the selected criteria, overall 93 percent of the selected APAs had expressed their dissatisfaction with regard to Motivation to APAs which is extreme as compare to other selected criteria. India post should consider dissatisfaction of APAs with regard to motivation (93 percent) and behaviour of the staff (84 percent) as a red signal for maintaining involvement of APAs in the smooth functioning of the retail outlets of the postal system, if not properly taken care of it may cause serious damage to the system in general and retail outlets in particular in near future.

Market Performance Analysis on Selected Criteria for Selected Postal Services Provided to APAs

Based on users of the postal services expectations and experiences for Vadodara city, the researcher has computed 'Mean Importance Ratings' (Im) and 'Mean Performance Ratings' (Pm) for each of the selected features of the services provided by Post offices to evaluate whether the users of the postal services were delighted; satisfied; dissatisfied. These criteria were defined as: (1) users of the postal services were delighted if $Im/Pm > 0.98$; (2)

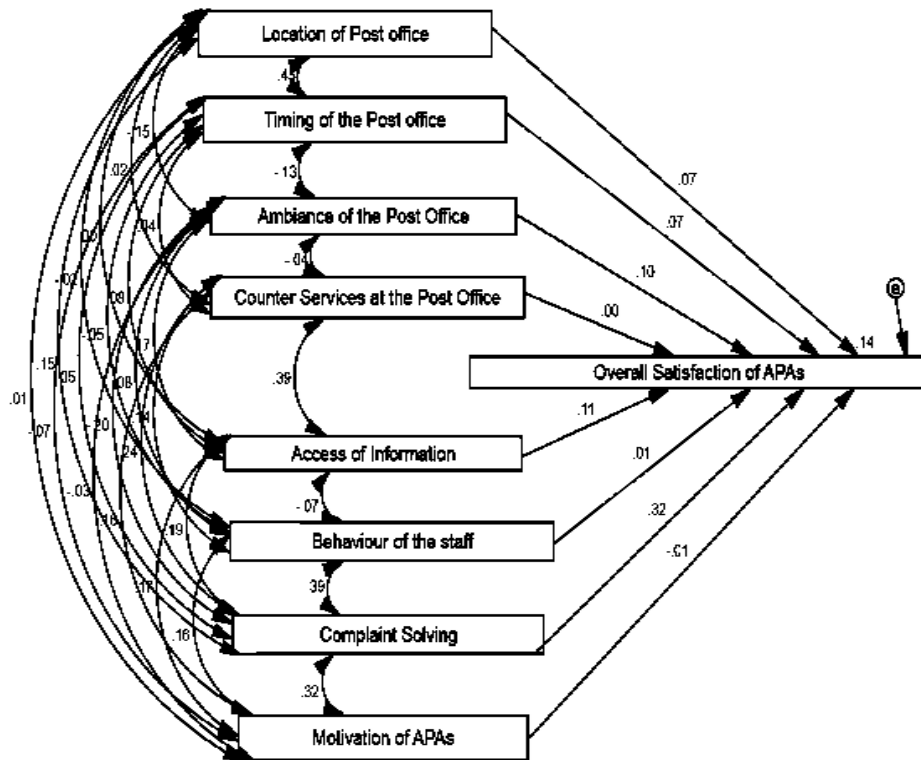
users of the postal services were satisfied if $0.98 < Im/Pm < 0.92$; (3) users of the postal services were dissatisfied if $Im/Pm < 0.92$

The overall Market performance analysis considering all 55 criteria and resultant satisfaction score of it was revealed that APAs dissatisfaction on majority of the service features except nine criteria viz., Location of Post Office at Convenient Place, Post office starts functioning at notified time, Convenience for Recess timings, Facility for wash room, Availability of equipment like computer, printer, scanner, photocopying machine etc. Delivery of Pass book, certificate etc. in due time, Post Master guides APAs, Post master controls APAs, and Regularity of Payment of commission which revealed that APAs were highly satisfied (delighted). Similarly three criteria viz., Convenience for working hours; Simple to make Transaction and Providing Receipt for Transaction which revealed that APAs were satisfied. These overall ratings are separately provided in Graph No. 5.II.4.01 to 5.II.4.08 for all the selected eight criteria in the Performance-Importance Matrix. The X-axis denotes mean performance ratings (Pm), and Y-axis means Importance Ratings (Im). These figures have been divided into four quadrants. The Quadrant A, shows APAs important service features, which were not being performed at the desired levels, and the postal services providers are expected to concentrate on improving service performance on it. The Quadrant B indicates the APAs important service features that postal services providers performed well and need to maintain the high performance. The Quadrant C reveals fair performance of postal services providers on minor service features that may need less attention, because of its lesser importance perceived by the users of postal services. The Quadrant D shows minor service features that were being performed excellent by the postal services providers but these features too are perceived as relatively unimportant by the users of postal services.

Structural Equation Model of Relationship between Overall Evaluations of Selected Criteria Related To Services Provided By Post Office

Figure No.: 01

SEM Model of Relationship between Overall Evaluations of Selected Criteria Related to Services Provided by Post Office and its Overall Satisfaction to Agents (APAs)



In the above figure, a simple regression model is presented in which one observed variable, the overall satisfaction of APAs, is predicted as a linear combination of the other eight observed variables, viz., Location of Post office; Timing of the Post office; Ambiance of the Post Office; Counter Services at the Post Office; Access of Information; Behaviour of the staff, Complaint Solving and Motivation of APAs. As with nearly all empirical data, the prediction will not be perfect. There are some other variables (other than selected seven variables) that also assumed to have an effect on overall ratings of services provided by post office for which the model assumes '1' as standardized regression weights which specifies that other variables must have a weight of 1 in the prediction of overall ratings of services provided by post office. Each two sided arrow represents a regression weight and the value shown against two sided arrows (0.44, 0.13, 0.4, 0.39, 0.07, 0.32, 0.16, 0.17, 0.19, 0.16, 0.03, 0.24, 0.14, 0.20, 0.07, 0.08, 0.06, 0.01, 0.15, 0.17, 0.05, 0.08, 0.04, 0.02, and 0.15 is the correlation between seven observed variables.

The values shown with single sided arrow (0.38, 0.31, 0.24, 0.16, 0.16, 0.16, and 0.07) are

standardized regression weights. The value 0.14 is the squared multiple correlation of overall satisfaction of APAs and eight variables that affect overall satisfaction of APAs. It means the overall satisfaction of APAs considering eight variables is influenced mainly by complain solving (0.32) followed by access of information (0.11); ambiance of post office (0.10); location and timings of the post office (0.07).

The SEM Model implies and suggests that complaint solving by the post office makes APAs satisfied because the ultimate customers get right kind of response for their complaints through APAs. Post office finds it difficult to attract the APAs with poor access of information and poor ambiance of the post office. The access to information related to postal services to APAs help in strengthening the intension of revisit to post office and providing better services for acquiring postal services to their customers. The nearer location of post office and timings are also important determinants of quality of services provided by post office.

Limitations of the Research Study

- As this study involves collection of primary data through informal discussion and use of structured-non-disguised questionnaire based on an empirical field survey, all efforts were made to check, reduce and minimize ambiguous responses as provided by the selected respondents that may lead to distorted and incorrect data information, analysis and findings.
- As this empirical field study was mainly undertaken based on collection of primary data and information mainly from urban population, it would be inappropriate to generalize it as fit and good for the whole population.

- The study was mainly carried out in the City of Vadodara in the State of Gujarat hence this research work does not aimed to cover the total picture of customers residing in other parts of India.
- The quantitative method was put to use for establishing relationships between variables, but it could be considered weak in identifying the reasons for those relationships as the case may be.
- The findings of the research study are suffering limitations of sampling design as followed by us.
- Errors due to misinterpretation or misunderstanding or customers' or APAs inattention might have systematically affected results of this research study.

Table no. : 06

Overall Market Performance Analysis and Customers' Satisfaction Score for Selected Postal Services Provided to APAs of Postal Services

Selected Service Features	Label	Pm	Im	C.S.S.= Im/ Pm	Sat. level	Selected Service Features	Lable	Pm	Im	C.S.S.= Im/Pm	Sat. level
Location: Location of Post Office at Convenient Place	AL1	3.87	3.87	1.00	DE	Access and Availability of Information: Post office put information on Sign Boards	AI3	3.46	3.12	0.90	DS
Timing: Convenience for working hours	AT1	4.05	3.92	0.97	S	Access and Availability of Information: Accuracy of Information	AI4	3.77	3.12	0.83	DS
Timing: Post office starts functioning at notified time	AT2	3.68	3.68	1.00	DE	Access and Availability of Information: Post office updates changes on Sign Boards	AI5	3.50	2.23	0.64	DS
Timing: Convenience for Recess timings	AT3	3.55	3.76	1.06	DE	Staff Behaviour: Reply to Quarries	SB1	4.07	3.14	0.77	DS
Ambiance: Post office is spacious	AM1	3.90	2.40	0.61	DS	Staff Behaviour: Promptness in reply to Quarries	SB2	4.01	2.05	0.51	DS
Ambiance: Proper Ventilation	AM2	3.98	3.12	0.78	DS	Staff Behaviour: Staff of the Post office has skill to Perform job	SB3	3.61	2.47	0.68	DS
Ambiance: Proper Illumination	AM3	4.06	2.70	0.67	DS	Staff Behaviour: Staff of the Post office Is Trained	SB4	4.05	2.38	0.59	DS
Ambiance: Cleanness	AM4	3.75	2.52	0.67	DS	Staff Behaviour: Staff of the Post Office is Polite	SB5	3.96	2.27	0.57	DS
Ambiance: Provision for Drinking Water	AM5	3.76	2.48	0.66	DS	Staff Behaviour: Staff of the Post office is Helpful	SB6	3.72	2.68	0.72	DS
Ambiance: Sitting Arrangement for APAs	AM6	3.52	2.34	0.67	DS	Staff Behaviour: Honesty	SB7	4.02	2.38	0.59	DS
Ambiance:Facility for wash room	AM7	3.47	3.44	0.99	DE	Staff Behaviour: Providing guidance for procedural compliances	SB8	3.62	2.75	0.76	DS

Selected Service Features	Label	Pm	Im	C.S.S.= Im/ Pm	Sat. level	Selected Service Features	Lable	Pm	Im	C.S.S.= Im/Pm	Sat. level
Ambiance: Availability for writing desk for APAs	AM8	3.60	2.12	0.59	DS	Staff Behaviour: Compliance of Rules and Regulations	SB9	4.07	3.25	0.80	DS
Ambiance: Provision for security guard at Post office	AM9	3.75	1.84	0.49	DS	Staff Behaviour: Post Master guides APAs	SB10	3.48	3.79	1.09	DE
Ambiance: Parking Facility for APAs	AM10	3.68	2.88	0.78	DS	Staff Behaviour: Post master controls APAs	SB11	3.39	3.53	1.04	DE
Counter Services: Sufficient Numbers of Service Counters	CS1	3.82	2.82	0.74	DS	Staff Behaviour: Post office tries to Understand Problems	SB12	4.04	2.46	0.61	DS
Counter Services: Separate counter for APAs	CS2	3.27	2.06	0.63	DS	Complaint Solving: Post office listen to complaints	AC1	4.07	3.10	0.76	DS
Counter Services: Availability of stapler, pins, gum, pen, calculator etc	CS3	3.33	2.44	0.73	DS	Complaint Solving: Promptness in Respond to Complaints	AC2	4.00	2.68	0.67	DS
Counter Services: Availability of transaction related stationary	CS4	4.32	1.88	0.43	DS	Complaint Solving: Availability of Complaint Book	AC3	3.91	3.13	0.80	DS
Counter Services: Availability of equipment like computer, printer, scanner, photocopying machine etc	CS5	2.85	3.52	1.24	DE	Complaint Solving: Information for Registration of complaint is displayed	AC4	3.53	2.98	0.84	DS
Counter Services: Post office makes changes in functioning as per requirement	CS6	3.74	3.13	0.84	DS	Complaint Solving: Procedure for Registration of complaint is simple	AC5	3.88	3.22	0.83	DS
Counter Services: Promptness of services	CS7	4.09	2.10	0.51	DS	Complaint Solving: Post office solves complaints	AC6	4.11	2.99	0.73	DS
Counter Services: Accuracy of services	CS8	4.17	3.23	0.78	DS	Motivation To APAs:Commission paid is fair and Adequate to APAs	M1	4.10	2.57	0.63	DS
Counter Services: Trustworthiness of services	CS9	4.11	3.55	0.87	DS	Motivation To APAs:Regularity of Payment of commission	M2	4.15	4.18	1.01	DE
Counter Services: Simple to make Transaction	CS10	3.62	3.38	0.93	S	Motivation To APAs:Post office Provides Training /Counselling to APAs	M3	3.89	2.00	0.51	DS
Counter Services: Providing Receipt for Transaction	CS11	4.10	3.91	0.95	S	Motivation To APAs:Motivation to APAs for Promoting Business	M4	4.02	2.07	0.52	DS
Counter Services: Delivery of Pass book, certificate etc in due time	CS12	4.14	4.11	0.99	DE	Motivation To APAs:Post office communicate changes to APAs	M5	3.96	2.49	0.63	DS
Access and Availability of Information: Promptness in availability of information	AI1	3.61	2.34	0.65	DS	Motivation To APAs:Extra Monetary incentives to APAs for performance	M6	4.14	1.79	0.43	DS
Access and Availability of Information: Easy availability of information	AI2	3.72	2.80	0.75	DS						

Note: DE= Delighted; S= Satisfied and DS= Dissatisfied

Implications and Concluding Remarks

- It is found that APAs, irrespective of the type of agency they hold, have less frequency of visit to the post offices situated in the city of Vadodara. Almost 62 percent have either for Less than 5 times or 5 To 10 times average visit in a month to the post office.
- It is also observed that reasonably large numbers of APAs, irrespective of the type of the agency they hold, are having experience between 10 to 15 years, with less frequency of visit to the post office, for rendering services in the post offices located in the city of Vadodara.
- APAs expectations found highly satisfied with regards to 'location' and 'timing' of the post office as notified for functioning and recess for the staff.
- With regards to ambiance of the post office, APAs found satisfied for the criteria that proper ventilation and illumination are available at the post office, parking facility and wash room facility is made available to them.
- However, APAs found dissatisfied in relation to the criteria viz., post offices are kept clean, provision for drinking water, Post Offices are spacious, adequate sitting arrangement for (APAs) in the Post Office, availability of writing desk for APAs, Security Guard is deployed at the post Office.
- With regards to 'counter services' at the post office, APAs found satisfied in relation to the matter that the Post Office/s are having sufficient number of service counters and are adequately manned also, availability of the staplers, pins, gum, pen, calculator, etc., at the service counters of the post office/s, the Post office has equipment like, computer, printer, scanner, photocopying machines, etc., the Post Office gives accurate and trustworthy services to APAs. However, they found dissatisfied with regards to non-availability of separate counter for APAs, non-availability of transaction related stationery, such as, vouchers, slips, forms, etc., Non-availability of prompt services at the post office.
- The APAs found satisfied with the matter that it is simple to make transactions at the post office, obtaining receipts for transactions and obtaining Pass Book, Savings Certificates, etc. in due time from the Post Office.
- The APAs found less satisfied due to insufficient provisions made for sign boards at the post office, their regular updating with latest information, and access and availability of prompt and accurate information with convenience to them and other visitors at the post office.
- It is observed from the collected responses from the APAs that the staff of post office/s has insufficient skill to perform job, not properly

trained, less polite and honest and not adequately helpful, ill-mannered to them as well as the customers. However APAs are found satisfied with regards to the matter that the staff of post office/s follows rules and regulations, the Post Master of the post office/s guides the staff of the Post Office and exercise control over the staff, and the staff of post office/s provides guidance to them for the procedural compliances related with the transaction.

- With regards to 'complaint handling', APAs found satisfied since they have experience that post offices listen their complaints and it simple to register complaints at the post office, complaint book is made available at the post office, sufficient information is displayed for registration of complaints at the post office and it puts efforts to solve the complaint in a reasonable time limit.
- An average opinion, with regards to commission paid to APAs, reveals satisfied experience. With regards to timely payment of commission, irrespective of type of agency holding by APAs, they found satisfied. However, inference of statistic revealing different experience related with the commission paid to APAs holding different type of agency. APAs holding SAS agency (applicable to the investment in MIS, KVP, TD and NSC) found dissatisfied for the reason that their commission is reduced. APAs holding MPKBY agency (applicable to Recurring Deposit only) found satisfied.
- Extremely poor experience APAs share with regards to the matter that Post Office provides training/counselling and motivate them, against very high degree of expectation for the said item. APAs found highly de motivated and dissatisfied since no extra monetary incentives paid by the post offices for their above average performance, and have shown high expectations in this regard.
- Those who visit more frequently, irrespective of the type of the agency they hold, as compare to others as APAs have dissatisfied experience with regards to the matter that India post is not adopting changing scenario and India Post is not adopting changes as per customer expectations.
- APAs, irrespective of the type of agency they hold and their length of service as APAs, have revealed opinion, for major changes for better customer satisfaction through selected criteria, that in order to meet with customers' expectations, India post should carry out technological advancement and to a limited extent carrying out service updating and service enrichment also through increasing reliability of services. They have also agree that the post offices can improve customer satisfaction by improving control over internal operations, through increase in the monetary reward of APAs, through behavioural changes of the staff

and through extending more autonomy to the retail counters.

- APAs have high degree of disagreement for the criteria viz., 'Extending postal network' and 'Discarding some of the existing services' as necessary step for better customer satisfaction.

References

Anand. M. B, Dr. Srinivas D L and Dr. H. H. Ramesh (2013). Performances of Indian Postal Services. *Innovare Journal of Business management*, 1 (2), 5-10.

Annual Report, Department of Post, India. (2011-2012). Retrieved from www.indiapost.gov.in, on 12/03/2013.

Annual Report, Department of Post, India. (2013-2014). Retrieved from http://www.indiapost.gov.in/Report/Annual_Report_2013-2014.pdf, on 03/12/2014.

Bernard Katz (2004). How to turn customer service into customer sales (1st Edition). Jaico Publishing House, Mumbai, PP. 8, 16, 18,31,32,79.

Claes Fornell (1992). A National Customer Satisfaction Barometer: The Swedish Experience. *Journal of Marketing*, 56(January 1992), 6-21.

David L. Loudon and Albert J. Della Bitta (2002).

Consumer Behaviour (4th Edition). Tata McGraw Hill.

Gilbert A. Churchill, Jr. and Carol Surprenant (1982). An Investigation into the Determinants of Customer Satisfaction. *Journal of Marketing*

Research, XIX (November 1982), 491-504.

<http://dictionary.reference.com/browse/service>, retrieved on 10/12/2010.

<http://eaindustry.nic.in>, retrieved on 26/10/2009.

<http://en.wikipedia.org>, retrieved on 22/10/2009.

<http://indiabudget.nic.in/es2013-14/echap-10.pdf>, retrieved on 03/12/2014.

<http://www.businessdictionary.com/definition/customer.html#ixzz1rH2JERua>, retrieved on 28/10/2009.

<http://www.indiapost.gov.in>, retrieved on 26/10/2009.

Jantawan Noiwan, Thawatchai Piyawat, and Anthony F. Norcio (2005). Computer Attitude and Computer Self-Efficacy: A Case Study of Thai Undergraduate Students. *HCI International*, 11th International Conference on Human-Computer Interaction, 2005.

Jum C. Nunnally (1981). *Psychometric Theory*. Tata McGraw-Hill Publishing Ltd. New Delhi.

Kang Duk Su and Maryam M. Khan (2003).

Service Quality Expectations of Travellers Visiting Cheju Island in Korea. *Journal of Ecotourism*, 2 (2), PP. 114 to 125.

Leon G. Schiffman and Leslie Lazar Kanuk (2002). *Consumer Behaviour* (Seventh Edition). Prentice-Hall of India Pvt., Ltd. New Delhi.

Michael R. Carrell and Norbert F. Elbert (1974). Some Personal and Organizational Determinants of

Job Satisfaction of Postal Clerks. *Academy of Management Journal*, 17 (2). 368-375.

Naresh K. Malhotra (2007). *Marketing Research an Applied Orientation* (Fifth Edition). Pearson Prentice Hall.

Philip Kotler and Kevin Lane Keller (2006). *Marketing Management* (12th Edition). Prentice Hall of India Private limited, New Delhi.

Richard L. Oliver (1980). A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions. *Journal of Marketing Research*, XVII (November 1980), 460-469.

USPS Delivery Performance Information (1995).

U.S. POSTAL SERVICE Delivery Performance Standards, Measurement, and Reporting Need Improvement. GAO Dec.1995 PP. 06-733.

William D. Perreault, E. and Jerome McCarthy (2002). *Basic Marketing, A Global - Managerial Approach* (14 Edition). Tata McGraw - Hill Publishing Company Ltd., New Delhi, PP. 5, 37 to 40, 638, 639.

William S. Broomfield (1992). Tracking Customer Satisfaction in a competitive Environment. United States General Accounting Office, General Government Division Washington, November 12, 1992, PP. 1-22.

www.businessdictionary.com, retrieved on 22/10/2009.

www.indiapost.gov.in, retrieved on 26/10/2010.

www.nios.ac.in, retrieved on 12/10/2009.

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A Study on Consumer Behaviour towards Ayurvedic Medicines and Treatments

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Abstract

The present empirical study is an attempt of understanding consumer (is used interchangeably with patients) awareness, identifying factors affecting buying behaviour and consumption pattern towards ayurvedic medicines and treatments. Information for the present study was obtained from 110 citizens of Ahmedabad, using non probability convenience sampling method. The study resulted that number of first time users of ayurvedic medicines and treatment are more as compared to regular consumers and type of disease has no impact on selection of ayurvedic treatment. There was no association between type of users and form of medicine preferred by them. Familiarity, reliability and faith in practitioner are important aspects for consumers, rather than type of disease and ailment they are passing through. The study pointed out a robust relationship between opinion of consumers regarding ayurveda and ailment & its treatment, cost & promotional aspects regarding Ayurvedic medicines, awareness & faith in practitioners.

Introduction

Total size of global herbal market is 62.0 billion dollars (WHO, 2002) and global industry analysts expect the global traditional medicine market to reach US\$114 Billion by 2015. (Jose, 2012) Due to contribution of several noteworthy aspects such as free from side effects, contains natural ingredients, preference for natural therapies, long term relief etc., the market of ayurvedic medicines has grown at an extensive rate worldwide.

According to one report by World Health Organization, ayurvedic medicines represent a market value of about US\$ 43 billion a year. (Sharma et al., 2008). Unfortunately, India's contribution in this is just one billion dollars. This shows that in global market, India is not at all figuring anywhere. According to Samrath Bedi, there is a great need to showcase the effectiveness of ayurveda to represent India as a great heritage of traditional medicine. (KPMG-ASSOCHAM India, 2014).

There are positive signals in the global market for the country as well, as India possesses 16 agro-climatic zones, 10 vegetative zones, 25 biotic provinces, 426 biomes, 45000 different plant species and 15000 medicinal plants including 7000 ayurveda, 700 in Unani, 600 Siddha medicines and 30 modern medicines. (Jawla et al., 2009). Despite of having only 2.4% total land area, accounting for nearly 7-8% of the recorded species of the world, this makes India one of the 12 mega bio-diverse countries of the world. (Goyal and Arora, 2009).

According to ASSOCHAM, the growth of Indian herbal industry is likely to double from Rs.7500 to Rs.15000 crore by 2015. (India Infoline News Service, 2010).

In reality, India, with its biodiversity has a tremendous potential and advantage in this emerging area and the Indian Government has started showing motherly attitude towards ayurveda by providing budgetary allowance near to 2% of the total health budget. (Aneesh et al., 2009)

Recently, new government has announced number of measures to prop up and boost Ayurveda and Ayurvedic medicines as a part of its national defensive health care policy by allocating Rs.5000 crore to the AYUSH Department, up compared to Rs. 1200 crore by the previous government. (Manawaria, 2014).

Review of Literature

We ground our work in four flows of research related to impact of education on consumer awareness, demand and preference of consumers in order to select type of medical treatment, related behaviour of consumers and role of promotional activities in indulging more consumers.

Actually, consumer awareness, knowledge and behaviour are correlated. There is a significant impact of awareness and knowledge on consumer behaviour. As awareness differs from location to location significantly, always questions have been raised regarding creating awareness among people of different locality. Therefore, knowing the perception of consumers is necessary especially, at the time when the system is already prevailing since a long time before. (SuraiyaIshak and Zabil, 2012; Eachern and Warnaby, 2008).

There exist two types of view of researchers regarding relationship between education and awareness. One view states that awareness has no concern with education of people and another view states that education has a positive impact on awareness.

The following studies states the first view that awareness has no concern with education.

A research at Chennai city defined that in spite of Chennai's big pool of educated people, up to now there has not been any systematic study of awareness on ayurvedic medicine. There exist very low presence of ayurvedic practitioners and clinics in various locality of Chennai. This inhibits the respondents in taking up as an alternative health care system of healing. (Subrahmanian and Venkatesan, 2011). Only a deep study could change the concept of ayurveda among all the social groups. Furthermore, literacy rate and distance are not the factors that determine the usage of traditional medicine. Probably other influencing factors such as immortal faith, belief might contribute to increase growth of ayurvedic medicine usage among people. (Lyngdoh et al., 2014).

In contrast, following studies states that education has a positive impact on awareness.

The prerequisite of public education is the prime form of education. To encourage appropriate use of ayurvedic medicines, proper education to consumers is needed. (Chaudhary et al., 2013; Kelner and Wellman, 1997; Singh et al. 2005). High level of education is an important factor that encourages and molds people for the usage of ayurvedic medicines. Moreover, educated believes that it is spiritually an important factor in their lives.

Prior research shows majority of people prefer allopathy medicines for instant relief, effect, convenience, ready-made preparations and because they are accustomed with western medicine. (Goyal et al., 2011). Reasons behind giving second priority to ayurvedic medicines may be the taste of ayurvedic medicine (to some extent bitter and

undesirable), form of medicine (less available in tablet form), instructed restrictions to be followed (such as type and timing of consuming specific diet, eating habits, sleeping schedule etc., cost (similar or higher compare to allopathy medicines), lack of free ayurvedic treatment available in nearby area.

According to one all India survey by National Council of Applied Economic Research, 80% of the Indian households in urban areas prefer allopathic medicines while only 4% households used ayurvedic medicines to cure their ailments. Scenario in India's rural areas is not much different, 75% people take allopathy and only 8% select ayurvedic medicine. (Srinivasan, 1995). This indicates that popularity of ayurveda is not up to the mark. Besides that, after using home remedy, mostly people turn towards allopathy first, and ayurveda is being tried out afterwards. (Chatterjee et al., 2012).

Consumers today are like butterflies that have emerged from cocoon. They are turning away from the obvious materialism that was characteristic of the cocooning trend. Modernization brought newer concepts and thoughts. Consequently, consumers left behind traditional medicine. In today's modernistic era, people take ayurveda either as an alternative and preventive therapy or as a substitute of western medicine rather than as a natural rejuvenating and preventive step for their health. In today's modern and speedy life patients require instant effect and relief from illness. Patients usually move towards ayurveda as a secondary way out or last resort after exhausting from modern (allopathy) or other medicines (Chaturvedi, 2005). This indicates the behaviour of people, interest and their reliance in Ayurveda.

Apart from starting with consumption of ayurvedic medicine, active participation of patients during the treatment is also an important factor to concentrate upon. Moreover, patients' openness in sharing information, being livelier with doctors can add to generate healthy ambiance. (Singh et al., 2004). Likewise, communication between health professionals and patients is the key to overcome many issues related to use of medicines, facts related to ailment and sometimes adverse effects of drugs. If patients are conservative, doctors need to be more conversational in terms of giving satisfactory feedbacks for the complaints of patient, communicate more about patients' quarries linked with their ailments and should be easily approachable in order to develop frank and vigorous milieu in clinic. (Vickers et al., 2006).

A good coordination between patients and physician can increase the consumption of ayurvedic medicines. Moreover, sharing the

information with each other is also effective in order to develop healthy relationship among doctor and patients. (Frank and Stollberg, 2002).

The scenario in urban and rural areas among men and women is quite different. Women seemed to be more conscious about time consumed in travelling to reach at the health service and the cost associated with (such as transportation and time costs) rather than the direct costs of service. It was surprising that women's occupation and sanitation facilities were not important forecasters of use of service. (Vissandjee et al., 1997). This specifies that apart from age and income of consumer, there exist many other unrecognized factors which influences purchase decisions of consumers. (Blais et al., 1997)

Today almost every company spends a lot of money to keep markets interested in their products. And to do so, they use shelter of various promotional activities which includes such as direct marketing, advertising, sales promotion, public relation etc tools. All these together create a large collision in the minds of consumers. Advertisement and promotional activities as well as good marketing and laboratory practices (Aneesh, 2009), have positive impact on the minds of consumers. It assists the companies to attract, create and divert more consumers easily. And due to watching frequent advertisements, consumers stick to particular brand. (Arya et al., 2012). Neglecting the role promotional activities can turn to negative side effects.

Department of AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy) faced the reality in terms of turn down the patient visits. Due to lack of proper marketing strategies of AYUSH ayurvedic hospital in Andhra Pradesh, the popularity of ayurveda among people was lost and it led to close down of two branches namely Jubilee Hills & A.S. Rao Nagar as sales of ayurvedic medicines dropped at such level. Improper marketing tactics was the reason for the failure of the hospital to bring more patients for ayurvedic medicines and treatments. (Ainary and Thotakura, 2012).

Advertising plays an important role in changing the consumer's perception towards traditional therapy. (Kewlani and Singh, 2012). There is an optimistic and noteworthy impact of advertisement on the minds of consumers and because of such reason they stick to a particular brand or company.

Adding to that, size and style of packaging of the product also plays an essential role in changing the behavior of consumers towards traditional medicine. (Dasture, 2002). Sirois (2008) and

Lalbahadur (2013) suggested that apart from advertising and promotional aspects, recommendation of others is also an additional reason for adopting ayurvedic medicines.

The Present Study

Till today many research have been done in areas such as accessing the needs and knowing the preferences of consumers. Therefore, needs and preferences can be extracted by specific consumer survey in further research. (Reis, 2007). Hence, to gain better perspective of those consumers' who have actually experienced and are experiencing ayurveda by consuming ayurvedic medicines and pursuing treatments, we concentrate on following research objectives:

- To study the consumer awareness and consumption pattern towards ayurvedic medicines in modern era.
- To recognize the factors affecting consumer's buying behaviour for ayurvedic medicines.

Research Methodology

Research design

Convenience sampling method under non probability sampling technique was adopted to carry out the research. The research was undertaken from an interpretive perspective as the study aimed to determine live experiences of patients and an understanding of the individual's consumption behaviour. Also, this approach recognizes the subjective and personal experiences of the participants, particularly as these tend to differ for each individual. Consequently, an interpretive approach is therefore consistent with the objectives of this study, where the viewpoint of the individual respondent is essential.

Data collection

Exclusively those patients who were taking ayurvedic medicines and treatment at Government hospital of Ahmedabad were incorporated as sample. The final sample symbolized a varied group of patients in terms of their age, gender, marital status, education, occupation and income. In the present empirical study we find the support of (N =110) respondents for primary data collection; among them 60 respondents were first time users and 50 respondents were regular consumers of ayurvedic medicines and treatment.

Questionnaire

The present study is mainly based on the primary data. In order to collect the data from the respondents, structured close ended questionnaires were distributed. Questions in the questionnaire

were concise and measured with a 5 point Likert agreement scale. Secondary data was collected through relevant books, journals, reports, websites etc.

Results and Discussion

Demographics

The data obtained were analyzed by statistical tools such as Pearson’s Chi Square test, Regression analysis through statistical software (SPSS 17.0 software). The demographic attributes (Table 1) included gender, marital status, age, education, occupation and monthly income. Among the total respondents, (46.4%) were male and (53.6%) were female, married (70%) and unmarried (30%).

Participants in the age group of 21-30 years (37.3%), 31-40 years (34.5%), 41-50 years (22.7%), 51-60 years (2.7%) and (2.7%) were either 60 years or above. Majority of respondents (38.2%) were graduates followed by H.S.C. qualified (22.7%), S.S.C. qualified (20%), post graduates (15.5%) and number of illiterates and doctors were same (1.8%). From the total respondents, majority were servicemen (43.6), followed by housewives (30%), businessman (14.5%), farmers (7.3%), unemployed (3.6%), students (0.9%). Moreover, (44.59%) were in the monthly income group of (< 20000 Rs.), (24.32%) were in (20001-30000 Rs.), (13.51%) were in (30001-50000 Rs.), (16.21%) were in (50001 -100000Rs.), (1.35%) were in the income group of (>100001Rs.).

Table 1: Demographic Profile

Demographic variables		Frequency	Percentage
Gender	Male	51	46.4
	Female	59	53.6
Marital Status	Married	77	70.0
	Unmarried	33	30.0
Age	21-30 Years	41	37.3
	31-40 Years	38	34.5
	41-50 Years	25	22.7
	51-60 Years	3	2.7
	60 years and above	3	2.7
Education	S.S.C.	22	20.0
	H.S.C.	25	22.7
	Graduate	42	38.2
	Post Graduate	17	15.5
	Illiterate	2	1.8
	Doctor	2	1.8
Occupation	Farmer	8	7.3
	Business	16	14.5
	Service	48	43.6
	Unemployed	4	3.6
	Housewife	33	30.0
	Student	1	0.9
Monthly Income	Less than Rs. 20000	33	44.59
	Rs. 20001-30000	18	24.32
	Rs. 30001-50000	10	13.51
	Rs. 50001 -100000	12	16.21
	Above Rs. 100001	1	1.35

Consumption Pattern

Table 2 depicts the information regarding consumption pattern of respondents. (66.4%) respondents were taking the decision by themselves regarding the method of treatment, (14.5%) rely on the decision by spouse, while (19.1%) were taking decision of treatment jointly. Adding to that, (54.5%) respondents were first time users of ayurvedic medicine while, (45.5%) were the

regular consumers. As far as form of medicine is concerned, tablet form was the most preferred (57.3%), followed by powder form (32.7%) and liquid form (10%).

As far as number of visits of hospital for the doctor consultations was concerned, majority of respondents (38%) follow the doctor’s instruction. In addition, (52%) respondents were agreed to spend up to Rs. 500 while, only (6%) were ready to

spend more than 2000 Rs. Furthermore, the study indicates that (60%) respondents followed specific brand or company while purchasing ayurvedic medicines from the ayurvedic drug retailers while (40%) respondents did not follow any brand or company. Method of consuming ayurvedic medicines is an important aspect for the followers of Ayurveda. Previously, researchers have

indicated that the recommendations of family and friends (external influencers) were reasons for trying CAM. (Sirois, 2008; Frank and Stollberg, 2002) In the present study, (16.36%) respondents agreed that they were following the suggestions of others such as family members, friends, relatives etc. while, (70%) agreed to follow the instructions of ayurvedic doctors.

Table 2: Consumption Pattern

Consumption pattern		Frequency	Percentage
Decision maker	Self	73	66.4
	Spouse	16	14.5
	Joint	21	19.1
	Others	0	0.0
Type of users	First Time users	60	54.5
	Regular users	50	45.5
Form of medicine	Tablet	63	57.3
	Powder	36	32.7
	Liquid	11	10.0
Stipulated time for Visits	Once in a week	18	36
	Every 15 days	7	14
	Once in a month	6	12
	As per doctor's instruction	19	38
Monthly spending	Up to Rs. 500	26	52
	Rs. 501 to Rs. 1000	18	36
	Rs.1001 to Rs. 2000	3	6
	More than Rs. 2000	3	6
Brand followers	Yes	30	60
	No	20	40
Method of consuming medicines	As per own knowledge	11	10
	As per the suggestions of doctor	77	70
	As per the suggestions of retailer	4	3.63
	As per the suggestions of others	18	16.36

Table 3 shows relationship between type of user and form of medicine preferred by users. The result of cross tabulation illustrates that both type of consumers prefer tablet form of ayurvedic medicines most.

Table 3: Type of users and preferred form of medicine

Type of users	Form of medicine preferred by users			Total
	Tablet	Powder	Liquid	
First time users	32	22	6	60
Regular users	31	14	5	50
Total	63	36	11	110

When respondents were asked about the health problem or type of disease (Table 4) for which they were taking ayurvedic medicines and treatment, (31.85%) respondents replied that they were suffering from the problem of Gastric disorder.

Gastric disorder involves diseases such as Indigestion, Abdominal Pain, Gas, Dysentery, Diarrhea etc.

(13.27%) respondents were suffering from Joint Pain. Joint pain involves Knee, shoulder and ankle injuries, Arthritis, Osteoarthritis, Rheumatoid etc.

Table 4: Type of disease for which patients are taking treatment

Type of Diseases	Frequency	Per cent
Gastric Disorder	36	31.85
Fever	3	2.65
Cough	9	7.96
Kidney Stone	6	5.30
Health Supplements	7	6.19
Joint Pain	15	13.27
Headache	2	1.76
Skin Problem	8	7.07
Feminine Problem	3	2.65
Primary Infertility (Male)	1	0.88
Hypertension	1	0.88
Diabetes	5	4.42
Blood Pressure	3	2.65
Hair Problem	7	6.19
Dental problem	2	1.76
Piles	1	0.88
Heart Problem	1	0.88
Asthama	1	0.88
Thyroid	1	0.88
Urine Infection	1	0.88
Total	113	100

Hypotheses

The following five hypotheses were formulated to answer the research objectives:

H1: There is an association between consumption pattern and form of medicine preferred by users.

H2: There is a relation between opinion of consumers and awareness and faith in ayurveda.

H3: There is a relation between opinion of consumers and ailment and its treatment in ayurveda.

H4: There is a relation between opinion of consumers and awareness and faith in practitioners.

H5: There is a relation between opinion of consumers and cost and promotional aspects regarding ayurvedic medicine.

Chi-square is a statistical test to assess the goodness of fit between a set of observed values and those expected theoretically.

The Chi-square test (Table 5) is applied to check the association between type of users and form of medicine preferred by respondents.

The p value is more than 0.05 it means that null hypothesis cannot be rejected. Hence, it can be said that there is no association between type of users and form of medicine preferred by users.

Table 5: Chi-Square Test

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	0.984 ^a	2	0.612
Likelihood Ratio	0.989	2	0.610
Linear-by-Linear Association	0.452	1	0.501
N of Valid Cases	110		

^a 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.00

Descriptive statistics are presented (Table 6) to describe the basic features of the data in the study to provide summaries about the sample and measures.

The descriptive statistics presents opinion of consumers regarding ayurveda and factors considered by patients before deciding upon consumption of ayurvedic medicine or treatment.

The opinion of consumers regarding Ayurveda (M=3.47, SD=0.64); awareness and faith in practitioners (M=3.46, SD=0.71). This indicates that consumers believe that familiarity, reliability and faith in practitioner is an important aspect.

Patients are less concerned about cost and various promotional aspects of ayurvedic medicine (M=3.27, SD=0.69) such as advertising by any brand or company.

Table 6: Descriptive Statistics for opinion of consumers regarding ayurveda and factors considered by patients before deciding upon consumption of ayurvedic medicine or treatment

Measurement items	Mean (SD) ^a
Opinion of consumers regarding ayurveda	3.47 (0.64)
Awareness and faith in ayurveda	3.37 (0.80)
Ailment and its treatment in ayurveda	3.33 (0.78)
Awareness and faith in practitioners	3.46 (0.71)
Cost and Promotional aspects regarding ayurvedic medicines	3.27 (0.69)

^a These items were measured on a 5-point Likert-type scale whereby 1=strongly disagree, 3=neutral, and 5 = strongly agree.

Impact of predictors on opinion of consumers

Regression analysis is a statistical process for estimating the relationships among variables. Here, (in Table 7) Opinion of consumers regarding ayurveda is a dependent (criterion) variable and Cost and Promotional aspects regarding ayurvedic medicines, Ailment and its treatment, Awareness and faith in practitioners, Awareness and faith in Ayurveda are independent variables (or 'predictors').

Table 7: ANOVA^b

Model		Sum of Squares	df	Mean Square	F value	Significance
1	Regression	24338.089	4	6084.522	87.833	0.000 ^a
	Residual	42118.586	608	69.274		
	Total	66456.675	612			

^a Predictors: (Constant), Cost and promotional aspects regarding ayurvedic medicines, Ailment and its treatment, Awareness and faith in practitioners, Awareness and faith in ayurveda

^b Dependent Variable: Opinion of consumers regarding ayurveda

Table 8: Model Summary for predictors and opinions for Ayurveda

Model	R	R ²	Adjusted R Square	Std. Error of the Estimate
1	0.605 ^a	0.366	0.362	8.32310

^a Predictors: (Constant), Cost and promotional aspects regarding ayurvedic medicines, Ailment and its treatment, Awareness and faith in practitioners, Awareness and faith in Ayurveda

Table 9: Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	27.166	2.207		12.307	0.000
Awareness and faith in ayurveda	1.266	0.669	0.086	1.892	0.059
Ailment and its treatment	5.645	0.610	0.397	9.255	0.000
Awareness and faith in practitioners	1.482	0.639	0.100	2.318	0.021
Cost and promotional aspects regarding ayurvedic medicines	2.223	0.596	0.147	3.733	0.000

^a Dependent Variable: Opinion of consumers regarding ayurveda

Based on the results of model summary (Table 8) and coefficients (Table 9) for predictors and opinions for ayurveda, following inferences are drawn:

The second hypothesis is “There is a relation between opinion of consumers and awareness and

faith in ayurveda” ($\beta = 0.086, p > 0.05$). The null hypothesis is, therefore, accepted.

Hence, it can be said that there is no relationship between opinion of consumers regarding ayurveda and their awareness and faith in Ayurveda.

The third hypothesis is “There is a relation between opinion of consumers and ailment and its treatment in ayurveda” ($\beta = 0.397$, $p < 0.05$) is confirmed and accepted. Therefore, it can be inferred that opinion of consumers regarding ailment and its treatment in Ayurveda are in line.

The fourth hypothesis is “There is a relation between opinion of consumers and awareness and faith in practitioners” ($\beta = 0.100$, $p < 0.05$). The null hypothesis is, therefore, rejected. As a result, it can be interpreted that there is a relation between opinion of consumers regarding Ayurveda and aspects concerned to practitioners such as familiarity and reliability with them, consultation with practitioners etc.

The fifth hypothesis is “There is a relation between opinion of consumers and cost and promotional aspects regarding ayurvedic medicines” ($\beta = 0.147$, $p < 0.05$). The hypothesis is, therefore, confirmed and accepted that there is a relation between opinion of consumers and information regarding ayurvedic medicines.

Conclusion

Generally, a majority of consumers support the idea of consuming ayurvedic medicines. However, this is often not translated into actual behaviour. The study not only resulted in getting a clear picture regarding awareness for ayurvedic medicine, but also benefited in understanding how this particular system of medicine - Ayurveda is perceived by respondents and for what health problems they prefer to seek the advice of the Ayurvedic physicians. The results indicate that familiarity, reliability and faith in practitioner are important aspects for consumers, while going for ayurvedic treatment. There were more first time users of ayurvedic medicines and treatment as compared to regular consumers. Hence, it can be said that people are ready to try out this therapy but due to varied reasons may not be continuing the same. In addition, there was no difference found in preference of consumers towards ayurvedic treatment for normal or chronic ailments as majority of the patients suffering from gastric disorders followed by joint pain taking ayurvedic treatment. Hence, type of disease has no impact on selection of ayurvedic treatment. Moreover, the current study suggests that patients follow the instructions of doctor as far as consumption pattern and repeat visits of hospital are concerned. The results point out that there is no association between consumption pattern of users and form of medicine preferred by users. Result of regression analysis depicts that there exists a strong relation between opinion of consumers regarding ayurveda and ailment and its treatment in ayurveda (0.000). In addition, cost and promotional aspects regarding ayurvedic medicines also have a strong

relation with opinion of consumers (0.000), followed by awareness and faith in practitioners (0.021). As far as expanding awareness and usage of ayurveda is concerned, bringing wider availability and rising trust and confidence in the results of treatment could lead the society towards the better tomorrow and greater future.

Limitations of Present Study and Further Scope of Research

The limitations of current research lay the ground for promising future research and identify several directions for possible extensions. Self-reported questionnaires by the respondents are subject to a limitation; because in that, respondents likely answer positively about their own (Mulyanegara et al., 2009; Pervin and John, 1997). Or else, there is a probability that the respondents scored themselves either agree or strongly agree for the positive behaviour. In order to overcome this limitation, forthcoming researches can provide work for triangulation by filling the details of questionnaire through another individual to describe about an individual's trait and behaviour (Mulyanegara et al., 2009). The present study was restricted to opinions of one metro city of India therefore; future research should examine the potential for cultural differences between more cities and states of India. As the study was done with a constraint sample size, an in depth study covering more respondents from rural areas as well can give lucid picture of the existing situation of Ayurveda. Moreover, the respondents were both type of patients – first time users and regular consumers of ayurvedic medicines. Thus, a future research should seek to extend the understanding exclusively either of first time users or regular users of ayurvedic medicines with more detailed investigation. Moreover, addition of the views of those respondents who are taking ayurvedic medicines from the private ayurvedic clinics could extend the findings.

References

- Aneesh, T.P., Hisham, M., Sekhar, M.S., Madhu, M., and Deepa, T.V. (2009). International market scenario of traditional Indian herbal drugs - India declining, *International Journal of Green Pharmacy*, Vol. 3, No. 3, pp. 184-190.
- Arya, V., Thakur, R., and Kumar, S. (2012). Consumer buying behaviour towards ayurvedic medicines/products in Joginder Nagar-A Survey, *International Journal of Ayurveda and Allied Sciences*, Vol. 1, No. 3, pp. 60-64.
- Blais, R., Maiga, A., and Aboubacar, A. (1997). How different are users and non-users of alternative medicine?, *Canadian Journal of Public Health*, Vol. 38, No. 3, pp. 159-162.

- Chatterjee, B., Biswas, P.C., and Pancholi, J. (2012). Survey Study: Health awareness and popularity of alternative medicines among people of Jamnagar town: A cross - sectional study, *An International Quarterly Journal of Research in Ayurveda*, Vol. 33, No. 1, pp. 33-37.
- Chaturvedi, S. (2005). *Ayurveda Chronic Diseases (all You Wanted To Know About)*, Sterling Publishers.
- Chaudhary, A., Singh, N., and Katoch, D.C. (2013). Development of consumer guidelines for appropriate use of ayurvedic medicines: Need of hour, *International Journal of Research in Ayurveda and Pharmacy*, Vol. 4, No. 4, pp. 618-622.
- Dasture, A.V. (2002). Global market potentials of Ayurveda drugs-some facts, *Ancient Science of Life*, Vol. 21, No. 4, pp. 281-286.
- Frank, R., and Stollberg, G. (2002). Ayurvedic patients in Germany, *Anthropology & Medicine*, Vol. 9, No. 3, pp. 223-244.
- Goyal, A.K., and Arora, S. (2009). India's Forth National Report. http://www.moef.nic.in/sites/default/files/India_Fourth_National_Report-FINAL_2.pdf Accessed 17 April 2014.
- Goyal, P., Midha, T., Sharma, R. P., Martolia, D. S., and Gupta, A. (2011). Utilization of Indian systems of medicine and homeopathy (ISM&H): a cross-sectional study among school students of Kanpur city, *Indian Journal of Preventive and Social Medicine*, Vol. 42, No. 3, pp. 326-328.
- India Infoline News Service (2010). Herbal industry likely to reach Rs150bn by 2015: ASSOCHAM. http://www.indiainfoline.com/article/print/news-top-story/herbal-industry-likely-to-reach-rs150bn-by-2015-assochem-113100900678_1.html Accessed 17 April 2014.
- Ishak, S., and Zabil, N.M. (2012). Impact of consumer awareness and knowledge to consumer effective behavior, *Asian Social Science*, Vol. 8, No. 13, pp. 108-114.
- Jawla, S., Gupta, A. K., Singla, R., and Gupta, V. (2009). General awareness and relative popularity of allopathic, ayurvedic and homeopathic systems, *Journal of Chemical and Pharmaceutical Research*, Vol. 1, No. 1, pp. 105-112.
- Jose, S. (2012). Global Industry Analysts Inc., http://www.prweb.com/releases/alternative_medicine/homeopathy_chinese/prweb9087888.html Accessed 13 August 2015.
- Kelner, M., and Wellman, B. (1997). Health care and consumer choice: Medical and alternative therapies, *Social Science & Medicine*, Vol. 45, No. 2, pp. 203-212.
- Kewlani, S., and Singh, S. (2012). Prospects of traditional therapy: consumer's perception - an empirical study of rural market with special reference to Indore district, *International Journal of Research in Computer Application & Management*, Vol. 2, No. 8, pp. 108-111.
- KPMG-ASSOCHAM India (2014). India Luxury Summit. <https://www.kpmg.com/IN/en/IssuesAndInsights/ArticlesPublications/Documents/KPMG-ASSOCHAM-India-Luxury-Summit-2014.pdf> Accessed 17 March 2015.
- Ainary, A. and Thotakura, s. (2012). The assessment of marketing strategies in Ayush Ayurvedic hospitals with reference to Andhra Pradesh, *International Journal of Research in Management*, Vol. 2, No. 6, pp. 29-55.
- Lalbahadur, Y. (2013). Influences on people's choice of ayurvedic healing, Ph. D. Thesis, University of the Witwatersrand. http://wiredspace.wits.ac.za/bitstream/handle/10539/12942/FINAL_REPORT.pdf?sequence=2 Accessed 18 December 2014.
- Lyngdoh, J. P., Syiem, D., and Mao, A. A. (2014). Pattern of traditional medicine usage in east khasi hills of Meghalaya, *Indian Journal of Traditional Knowledge*, Vol. 13, No. 1, pp. 164-170.
- Manawaria, S. (2014). The Dollar Business. <https://www.thedollarbusiness.com/ayurveda-gets-a-boost-in-india-but-export-hurdles-remain/> Accessed 23 June 2014.
- McEachern, M. G., and Warnaby, G. (2008). Exploring the relationship between consumer knowledge and purchase behaviour of value-based labels, *International Journal of Consumer Studies*, Vol. 32, No. 5, pp. 414-426.
- Mulyanegara, R.C., Tsarenko, Y. and Anderson, A. (2009). The Big Five and brand personality: investigating the impact of consumer personality on preferences towards particular brand personality, *Journal of Brand Management*, Vol. 1, No. 4, pp. 234-247.
- Pervin, L.A. and John, O.P. (1997). *Personality: Theory and Research*, Wiley and Sons.
- Reis, L. (2007). A retrospective on access to health care, *International Journal of Health Care Quality Assurance*, Vol. 20, No. 6, pp. 494-505.
- Sharma, A., Shanker, C., Tyagi, L., Singh, M., and Rao, V. (2008). Herbal medicine for market

potential in India: An overview, *Academic Journal of Plant Science*, Vol. 1, No. 2, pp. 26-36.

Singh, P., Yadav, R. J., and Pandey, A. (2005). Utilization of indigenous systems of medicine & homoeopathy in India, *Indian Journal of Medical Research*. Vol. 122, No. 2, pp. 137-142.

Singh, V., Raidoo, D.M., and Harries, C.S. (2004). The prevalence, patterns of usage and people's attitude towards complementary and alternative medicine (CAM) among the Indian community in Chatsworth, South Africa, *BMC Complementary and Alternative Medicine*, Vol. 4, No. 3, pp. 1-7.

Sirois, F.M. (2008). Consumer decision factors for initial and long-term use of complementary and alternative medicine, *Complementary Health Practice Review*, Vol. 20, No. 10, pp. 3-19.

Srinivasan, P. (1995). National Health policy for traditional medicine in India, *World Health Forum*, Vol. 16, No. 2, pp. 190-193.

Subrahmanian, M., and Venkatesan, R.P. (2011). Awareness on ayurvedic system of medicine in Chennai city, *Zenith International Journal of Multidisciplinary Research*, Vol. 1, No. 2, pp. 37-45.

Vickers, K.A., Jolly, K.B., & Greenfield, S.M. (2006). Herbal medicine: women's views, knowledge and interaction with doctors: a qualitative study, *BMC Complementary and Alternative Medicine*, Vol. 6, No. 40, pp. 1-8.

Vissandjee, B., Barlow, R., and Fraser, D.W. (1997). Utilization of health services among rural women in Gujarat, India, *Public Health*, Vol. 111, No. 3, pp. 135-48.

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A Study of Human Resources Accounting In Infosys Technologies Ltd.

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Abstract

In the organization, employee is one of the most important assets. For achieving organizational objectives, there is arise need of proper information about the cost, value and performance of their human resources. This information is the basis of effective management of human elements in any organization. With a view to provide significant information about effective human resource management, a new and specialized branch of accounting has been developed and it is known as human resource accounting (HRA). HRA is an accounting of identifying, measuring, classifying, summarizing and reporting the data about human resources to the investors for effective decision-making regarding the human resources of an organization. An attempt has been made in this paper to evaluate the HRA practices of Infosys technology limited (ITL).

Introduction

At present Human resources is the most important asset of an organisation. Human resources are playing key role in an organisation for process of production. An organisation having physical and financial resources .Each and every organisation having human resources in this case every organisation must know the total cost incurred towards that human resources and also further information like impact of human resources on income, net profit, revenue etc. For this purpose there is need arise to maintain proper records of human rescores and fair information regarding to human resources. Because of all this records organisation can know about the use of their human resources and in case of lake of proper records organisation may not effective use of human resources and it may be unable to achieve objective. Financial statements are the main source of information about the performance and position of the resources held by an organisation. Traditional accounting system provides this information about the physical and financial resources only and not about the human resources of an organisation, which may resulted into the unfair presentation of financial statements. This serious limitation of traditional accounting system was noticed in the 1950 by behavioural scientists, economists and various scholars in the area of accountancy. And efforts of these scholars has introduce new branch of accounting known as Human resource accounting (HRA). Human Resource Accounting (HRA) has been defined by the Committee on Human Resource Accounting of the American Accounting Association as “the process of identifying and measuring data about human resources and communicating this information to interested parties” In the words of Eric G. Flamholtz, “Human Resource Accounting involves measuring the cost incurred by business firms and other organizations to recruit, select, hire, train and develop human assets. It also involves measuring the economic value of people to organizations.

One of the first attempts to estimate the money value of human beings was made around 1691 by Sir William Petty considered labour the “father of wealth” and thus felt that labour must be included in any estimate of national wealth. Accordingly, this first attempt at human asset valuation estimated the value of the stock of human capital by capitalizing the wage bill in perpetuity at the market interest rate; the wage bill being determined by deducting property income from national income.

Theodore Schultz, who received Nobel Prize for his work, published a paper “Investment in Human capital” in 1961. He stated that “From a Macro Economic view point, the services which are provided by people can potentially constitute a form of capital. In the year 1962, William Paton opined that “In a business enterprise well-organized and loyal personnel may be a much more important asset than a stock of merchandise. However, origin of human resource accounting is found in the work of Resins Likert who was the first person to use the term ‘human asset’ in the late 1950s. This term was replaced by the term human resources by the scholars.

The suitable work was started to determine the cost and value of human beings by behavioral scientists from 1960 onwards.

The experts in this field were Shultz (1960), William Pyle (1967), Lev and Schwartz (1971) Flamholtz (1973), Kenneth Sinclair (1978) and Dr. Rao (1983), etc. who contributed appropriate methodology and correct methods for finding out the value of the employee to the organization.

HRA – Objectives

The more specific objectives of human resources accounting are as follows:

- 1) To know whether the human resources have been properly utilised and allocated.
- 2) To evaluate the return on investment on human capital.
- 3) To measure the costs incurred on human capital by organisation.
- 4) To provide qualitative information on human resources.
- 5) To provide basis to future investors in making better decision about investment in human resources.
- 6) To facilitate effective and efficient management within the organisation for human resources.

Measurements of HRA

It is known facts that measurement is the process of representing the qualities of objects in numerical terms. Here how we can calculate human resources cost? This question arise, this is one biggest challenge in HRA is that of assigning monetary values to different dimensions of HR costs, investments and the worth of employees. The two main approaches usually employed for this are:

1) Cost Approach

It involves methods based on the costs incurred by the company, with regard to an employee. Cost is a sacrifice incurred to obtain some anticipated benefit or service. The various methods of measurements of costs and valuation of human resources are Historical cost method, Replacement cost method, and Standard cost method, Present value of future earnings method, Expected realisable value method and Economic value method.

2) Economic Value Approach

It includes methods based on the economic value of the human resources and their contribution to the company's gains. This approach looks at human resources as assets and tries to identify the stream of benefits flowing from the asset. The value of an object, in economic terms is the present value of the services that it is expected to render in future. The methods for calculating the economic value of individuals are Lev and Schwartz (1971) model, Eric Flamholtz (1974) model, Jaggi-Lau's model. Of these Lev and Schwartz model become popular. According to this model, the value of human capital represented by a person of age is the present value

of his remaining future earnings from his employment. They have given the following formula for calculating the value of an individual. According to this model, the value of human capital embodied in a person who is 'Y' years old, is the present value of his/her future earnings from employment and can be calculated by using the following formula-

For the computation of the value of human resource of an organization branch Lev and Aba Schwartz suggested the following formula:

$$v_t = \sum_{t=T}^{T-I(t)} \frac{I(t)}{(1+r)^{t-T}}$$

Where

VT = human capital value of a person T years old

I (t) = person's annual earnings up to retirement

r = discount rate specific to person

T = retirement age

As per this formula we can find the value of human resources only after his retirement. It ignores possibilities of death, and occurring prior to retirement age.

So another formula given by lev and **Schwartz**

$$E(V_t) = \sum_{t=T}^T P_t(t+1) \sum_{i=T}^t \frac{I_i}{(1+r)^{t-T}}$$

Where

E (VT) is the expected value of a person human capital and

PT (t) is the probability of a person's dying at age t and

Ii = value of a person's each possible service state or future annual earnings.

Before the use of this formula, all the employees of an organization are divided in accordance with the age group into equal groups of employees such as skilled, semi-skilled, and unskilled etc. This study based on this assumption that employees will not make role changes during their service in the organisation.

The merit of this model is its objectivity in valuing HR value because it depends upon the present value of future earning capacity of an employee. The main limitations of this model are its unrealistic assumption that employees will not change their role. Besides, it does not consider the fact that the value of an employee is not only based on his skills and ability but also on the role of the organization to which he belong. Moreover, it also ignores the possibility that employees may leave the organization for reasons other than retirement and death.

Objective of the Study

In this paper an attempt has been made to evaluate and analysis human resources accounting practices adopted by Infosys technologies limited (ITL). To study human resources accounting data provided by ITL for evaluate its usefulness in HR decisions.

Research Methodology

With a view to achieve the objectives the scope of the present study is restricted to the analysis of the HRA practices of ITL for the last ten years under four heads namely method of valuation, disclosure of HRA, form of presentation and usefulness in human resource decision. Computation of the value of human resources in ITL has not been enquired into. This study is based on the secondary data collected from the annual reports and websites of ITL for the accounting year 2004-05 to 2013-14. The findings of the analysis have been abstracted with the help of various mathematical and statistical tools like correlation and ratio analysis. The present study will be helpful to develop the insight of HRA in various interest groups as well as to improve the HRA practices of ITL. The major limitation of this study is the lack of adequate corporate disclosure practices in India.

Infosys Technologies Limited

Infosys was established in 1981 by seven people with US \$ 250. In the journey of over 25 years, it has catalyzed some of the major changes that have led to India's emergence as the global destination for software service talent. It pioneered the Global Delivery Model and became the first IT Company from India to be listed on NASDAQ (National Association of Securities Dealers Automated Quotation). Its employee stock options program created some of India's first salaried millionaires.

Infosys is a US \$ 4 billion company with a market capitalization of over US \$ 27 billion.

Infosys service offering span business and technology consulting, application services, system integration, product engineering, custom software development, maintenance, re-engineering, independent testing and evaluation services, IT infrastructure services and business process outsourcing. Infosys has a global footprint with offices in 23 countries and development centres in India, China, Australia, the U.K., Canada and Japan.¹⁶ It has employed 91,187 highly educated and skilled employees that is why, the HRA has the importance in ITL.

Findings of the Study

With a view to evaluate the HRA practices of ITL the data collected from the website and annual reports for the last six years have been analysed under four major heads namely method of valuation, disclosure of HRA, form of presentation and usefulness in human resource decision-making. A summary of the findings of each head is as under:

(a) Method of valuation:

ITL has adopted Lev and Schwartz Present Value of Future Earnings Model for valuing its human resources on the following assumption:

(a) Employee compensation includes all direct and indirect benefit earned in India and abroad.

(b) the incremental earning based on group/age have been considered (c) future earnings have been discounted at the cost of in various accounting year.

The Lev and Schwartz model adopted by ITL has the merit of objectivity in the valuation of human resources. However, the limitations of this model adversely affect the correct valuation of HR in ITL. Moreover, the rate of discounting future earnings of employees is changing year to year. It is a mathematically proved fact that high rate of discount tends to decrease the value of HR while low discount rate presents the increased valuation of HR. This change in discount rate in each year makes the HR data incompatible and presents misleading valuation of HR in ITL.

(b) Disclosure of HRA:

It was found that the valuation of HR has been disclosed by ITL for all the six years continuously without gap. ITL has disclosed HR valuation in its annual report in the form of supplementary statement as well as a part of 'balance sheet including intangible assets'. However, ITL has not got HRA data audited from the auditors.

(c) Presentation:

It was found that Infosys technologies Ltd has presented HRA information along with comparative figures of previous year. Further, the number and value of human resources have been shown category wise only and not age wise. Some useful HR ratio has also been shown but the depreciation or appreciation in the HR value has not been reported.

(d) Usefulness in HR decisions:

The HRA data provided by ITL include the information regarding the number, constant value of human resources. Besides, some HR ratios have also been provided. An analysis of the information is as under:

Table 1: Analysis of HRA practices in ITL

As on March 31	2011-12	2010-11	2009-10	2008-09	2007-08	2006-07	2005-06	2004-05
Employees (No)								
Software Professional	1,41,788	1,23,811	1,06,864	97,349	85,013	68,156	49,495	34,417
Support	8,206	7,009	6,932	7,501	6,174	4,085	3,220	2,333
Total	1,49,994	1,30,820	1,13,796	1,04,850	91,187	72,241	52,715	36,750
Value of human resources								
Software Professional	1,15,900	1,22,539	1,06,173	95,600	92,331	53,592	43,336	26,550
Support	9,817	12,566	7,114	6,533	6,490	3,860	3,301	1,784
Total	1,25,717	1,35,105	1,13,287	102,133	98,821	52,452	46,637	28,334
Total income	33,734	27,501	22,742	21,693	16,692	13,893	9,521	7,130
Total employee cost	18549	14,856	12,093	11,405	8,878	7,112	4,801	3,539
value added	30980	25,031	20,935	19,073	14,820	11,879	8,027	6,053
Net Profit excluding exceptional items	8,316	6,823	6,219	5,988	4,659	3,861	2,479	1,846
Human Resources Ratio								
Value of HR per employee	0.83	1.03	1.00	0.97	1.08	0.73	0.88	0.77
Employee cost/HR value (%)	14.75%	11.0%	10.7%	0.21%	9.0%	13.55%	10.29%	12.49%
Total income/HR value (ratio)	0.27	0.20	0.20	11.2	0.17	0.26	0.20	0.25
Value added/HR value(ratio)	0.25	0.19	0.18	0.19	0.15	0.22	0.17	0.21

1) Here it was found that in the year 2004-2005 the total number of employees was 36,750 which increased to 1, 49,994 in the year of 2011-12 i.e. 308.15% during the last eight years. The number of software professional and support staff has increased by 311.98% and 251.73% respectively. And this is indicating that the number of human resources in Infosys is continuously increasing.

2) Total employee cost has increased from Rs. 3,539 crore in 2004-05 to 18,549 crore in 2011-12 while the cost per employee as found Rs.0.096, Rs. 0.091, Rs. 0.098, Rs. 0.097, Rs. 0.109, Rs. 0.106, Rs. 0.114, Rs. 0.124 (all amounts are in crore) in the accounting year 2004-05,2005-06,2006-07,2007-08,2008-09,2010-11,2011-12 respectively. It is obvious that though total employee cost has increased by 424.13% during the last seven years, cost per employee has decreasing trend. There is a decrease of about 22% in cost per employee in the period of study.

3) As far as total human resources value is concerned, it has increased from Rs. 28,334 crore to Rs. 1, 25,717 crore during the year 2004-05 to 2011-12 i.e. an increase of 343.69%. Similarly the value of software professional and support staff has increased by 336.53% and 450.28% respectively.

The value of human resources in each category shows continuous increase. However, this increase in HR value, to a large extent, due to decrease in discount rate used for valuation of HR under Lev and Schwartz model.

4) Some human resource ratios have also been disclosed by ITL. In the analysis of these ratios, it was found that the value of human resources per employee has increased and decreased like Rs.0.77, Rs. 0.88, Rs. 0.73, Rs. 1.08, Rs. 0.97, Rs. 1.00, Rs. 1.03, Rs. 0.83(all amounts are in crores) in the accounting period of 2004-05,2005-06,2006-07,2007-08,2008-09,2009-10,2010-11,2011-12.

Here we can see that human resources per employee has increased in the year 2004-05,2005-06,2006-07,and than in the year of 2008-09 it is decreased and again in the year of 2009-10,2010-11, and again in the year of 2011-12 it is decreased. Same in case of percentage of employee cost to human resource value is decreased from the year 2011-2012 to 2007-08.These two ratios indicate that the efficiency of human resources of ITL has improved because of producing higher value at lower cost.Total income to human resource value ratio has decreased from 0.25 to 0.20 during the year 2004-05-03 to 2010-11 and it is increased in the year of 2011-12 i.e.

0.27. While value added to human resource value ratio has decreased from 0.21 to 0.19 during the same period and increased by 0.25 in the year of 2011-12.

5) There is a positive high correlation of .999 between total income and total employee cost of ITL. It indicates that the performance of human resources in ITL is very good.

Table: 2 Correlation between Cost of Employee and Total Income

Year	Cost of Employee	Total Income
2005	33734	18549
2006	27501	14856
2007	22742	12093
2008	21693	11405
2009	16692	8878
2010	13893	7112
2011	9521	4801
2012	7130	3539

In short ITL provides some useful HRA data regarding the number and cost of its human resources but the change in discount rate in each year makes HR value and HR ratio data incompatible and misleading which affect the HR decision adversely.

6) Here Infosys has not disclose value of human resources in the year of 2012-13 and 2013-14. I found only number of employee increase in this year Which is shown below:

AS AT MARCH 31	2013-14	2012-13
Employees(No)		
software	151059	147008
professional	9346	9680
support		
TOTAL	160405	156688

Suggestions

Some useful suggestions to improve the disclosure of HRA practices of ITL and its usefulness in HR decision are as under:

1. ITL has not disclosed the elements of employees cost such as training and development cost, induction cost etc. The elements of employee cost should be disclosed separately in various tables.
2. The number and valuation of human resources in various age-groups should also be disclosed by ITL.

3. It seen that ITL has discounting practices in valuing and disclosing HRA.

Here Infosys technologies Ltd has not follow amortization of human resources. So it is demanded that Infosys technologies Ltd must follow amortization method of human resources, idle time, lock outs, loyalty of employees etc.

4. Proper accounting and auditing practices with developed accounting principles for the valuation, accounting and the disclosure of human assets is the requirement of the date and future development of the area. ITL should get HRA information audited so that the trustworthiness of HR data can be ensured.

HRA valuation and disclosure practices are accommodated by different industries in annual reports time to time in last five-six decades. Number of companies have started HR assets valuation and discloser practices and with emergence of IT and service sector in last two decades,

Academic work and social scientist were having hopes for further development in this field. But discontinuation of accommodation of human resources accounting disclosure in annual reports by Infosys technologies LTD has once again created a big question mark again HRA practices. Infosys technologies Ltd, one of the leading IT based company, which initiated HRA discloser in ninetens' and discountiation of the same has once again proved that human resources accounting-valuation and discloser practices has ornamental value at the annual repot without practical usefulness to the industries as well as investors.

References

<http://www.infosys.com/about/who-we-are/history.asp> 16.

<http://www.infosys.com/about/what-we-do/default.asp>

<http://www.accountingin.com/accounting/humanresource-accounting-an-historical-perspective>

Infosys annual financial statement from 2004-05 to 2013-14

International Journal of Social Science & Interdisciplinary Research ISSN 2277 3630 IJSSIR, Vol. 2 (4), APRIL (2013) (indianresearchjournals.com)

H.K.Singh, vivek Singh (200): "Human Recourses practices in Infosys Technologies Ltd- an Evaluation" journal of management Insight Vol.5 No-1, June 2009, PP.67-73

American Accounting Association, "Report of the Committee on Human Resource Accounting", the Accounting Review, Supplement to Vol. XLVIII (1973), P. 169.

Flamholtz, Eric G., Human Resource Accounting, Jossey Boss Publishers, San Francisco, London, 1986, P. 10-11.

Schultz, Theodore W., "Investment in Human capital", American Economic Review, American Economic Association, USA, March 1961, PP. 1-17.

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Monetary Policy sans International Co-Ordination

Surendra Sundararajan

Abstract

The paper focuses on a topical issue, namely, the question of co-ordination of monetary policies among different countries. The issue gained prominence after the volatility, triggered internationally, in May 2013 by overt indications from the U.S., about likely tapering of the bond buying programme by its Federal Reserve. The consequent sharp fall in the Rupee's exchange rate vis-à-vis the U.S., Dollar brought forth a speedy response from the Reserve Bank of India which, among other measures, included a hike in interest rates.

Under the premise that international co-ordination will not be knitted together for reasons covered in the paper, alternative monetary policy choices for emerging market economies to cope with the spillover effects are formulated, with an analysis of the pros and cons of each option. A possible solution, which involves a mix of two alternatives, is also presented. Pertinently and importantly, it is acknowledged that, more than monetary policy, the best defence against detrimental capital flows would be to ensure a sound macro-economic state.

Introduction

With increasing global economic integration and freer capital flows, it is no longer possible for countries to isolate themselves from the repercussions of economic policy measures implemented elsewhere. As an example, a tightening of monetary policy in an economically dominant country (EDC), alternatively referred to as the source country, could trigger capital outflows from Emerging Markets (EMs) based on the changed interest rate differentials. Therefore, the countries likely to be affected by actions in the source country, not just in terms of capital flows, but also attendant economic phenomena which could be deeply inimical, will need to ready themselves for such challenges, which will keep occurring sporadically.

Research Objectives

To tide over challenges of the kind referred to in the preceding section, the critical policy tool that EMs will need to refashion, will be monetary policy, to be administered in a world presumably devoid of monetary policy co-ordination among nations. Accordingly, the objectives of this paper are:

1. To illustrate with the help of statistical results, the repercussions of anticipated or actual economic policy measures in a source country.
2. To assess the prospects of international monetary co-ordination being forged between major economies.
3. To present suitable alternative monetary policy choices for the affected countries, to attenuate the adverse consequences on their economies.

Methodology

To ascertain the volatility triggered by the announcement in May 2013, of a possible tapering of the easy money policy in the U.S., a move which would, most likely, have exerted upward pressure on interest rates and thus induced international capital flows, the weekly and fortnightly standard deviations of the Rupee-U.S. Dollar exchange rate were computed using the last seven observations of the months surrounding the aforesaid announcement. The data were obtained from the website of the Reserve Bank of India.

The assessment of the prospects of international monetary co-ordination was done by surveying the current state of major economies and taking into account the practical impediments to monetary co-ordination, as evident from internationally divergent considerations and views.

For the third objective of this paper, viz., presenting alternative monetary policy choices, two options were formulated and analyzed conceptually, especially in terms of their macroeconomic consequences, culminating in a proposed policy choice, which couples the two alternatives.

Findings

Monetary Policy and spillovers

With increasing economic and financial integration across the globe, a legitimate worry that has arisen in EMs is the impact of capital flows on

macro-financial stability and trade competitiveness. To elaborate, easy money policy or an instance of what is also referred to as Unconventional Monetary Policy, namely Quantitative Easing (QE), to revive macroeconomic activity in the U.S. has been viewed elsewhere with concern, perhaps even suspicion, on account of its potential to weaken the U.S. Dollar and discourage imports from EMs. On the other hand, a rollback of QE with the attendant rise in U.S. interest rates makes EMs anxious about financial market volatility, India being no exception (Economic Survey 2014-15). More specifically, the global financial spillovers triggered by the announcement in May 2013 of a possible tapering by the United States Federal Reserve (Fed) set off volatility in financial markets across the globe, including the U.S., where stocks fell (Menza). The Economic Survey 2013-14 refers to the sharp depreciation of the Rupee due to the sudden surge in capital outflows in May 2013, following signals of probable tapering of the Fed's QE programme; it also goes on to enumerate the consequent actions of the Reserve Bank of India (RBI), including, notably, hiking short-term interest rates to restore stability in the foreign exchange market. Citing computed volatility estimates in most of the EMs, RBI's Annual Report corroborates the spillover effect to currency, bond and equity markets (Reserve Bank of India Annual Report 2013-14). As is apparent from Table 1 in the appendix, the exchange rate of the Rupee vis-à-vis the U.S. Dollar slumped in about 90 days from 54.3345 to 59.6995, between the start of April 2013 and the end of June 2013. It is also illustrative to note the sudden and concurrent jump in the weekly volatility of the exchange rate, computed and presented in Exhibit 1, from the data in Table 1.

Exhibit1. Weekly volatility of the Rupee-U.S. Dollar exchange rate

	March 2013	April 2013	May 2013	June 2013
Standard deviation of the last seven observations of the month	0.0976	0.0961	0.3352	0.3785

Fortnightly volatilities computed for the same months as in Exhibit 1 also showed a similar pattern. For instance, the volatility for the second fortnight of May 2013 shot up to 0.6033 as contrasted with 0.2552 for the comparable period of April 2013. Besides such volatility, the US and some EMs experienced a sharp rise in the term premium in 10-year instruments by about 100 basis points (International Monetary Fund).

The Prospects of Co-ordination

Concern about such spillover effects of monetary policy expectedly triggered calls for monetary co-ordination, notably from the Governor of the Reserve Bank of India (Rajan). It was reiterated alongside reports that the Fed was unwinding QE by reducing its bond purchases by \$10 billion every month and that the programme was expected to be phased out by October 2014 (The Economic Times, August 15th, 2014). But it remains to be seen if such calls will be heeded by dominant economies. Viewing the issue dispassionately, one would recognize that there are certain barriers which militate against monetary co-ordination. The most important obstacle is that there is a lack of coincidence in the macroeconomic cycles of different countries. A cursory check of some leading economies helps to clarify this point: While the U.S. economy seems to be recovering, parts of Europe are still languishing; in Asia, China has slumped whereas India is exhibiting buoyancy. Further, the predominant objective of monetary policy at a given time could differ; for instance, if the concern in one country is about arresting overheating in a resurgent economy, the concern in another may be to nudge growth upwards. Therefore, monetary policy actions are bound to be asynchronous between countries. Further, there are differences on how spillover effects ought to be dealt with, as the Fed Governor seems to favour macroprudential measures over monetary policy (Bhusnurmath). Pertinently, research findings seemingly present a mixed picture: For instance, one view is that uncoordinated responses by Central Banks to spillovers may amplify the situation, which could be resolved by some form of policy co-ordination (Taylor); but, another suggests that from the perspective of stabilizing macroeconomic fluctuations the gains from international monetary policy co-ordination are small, implying that the rationale for such co-ordination is questionable (Evers).

A premise herein is that dominant economies will place their economic interests above that of others and are, therefore, unlikely to heed calls for co-ordination of monetary policies. This is quite unlike in the past when monetary policy co-ordination was adopted to limit exchange rate fluctuations: instances are the periods surrounding the Euro's creation and more recently, the maintenance of liquidity for certain financial assets, following the Subprime Crisis (Burton and Brown). In the latter case, the Fed negotiated currency and swap agreements with a number of leading Central Banks, such as the Bank of England, the Bank of Japan and the Reserve Bank of Australia.

The premise stated previously that a dominant economy would not postpone or attenuate a hike in interest rates if its economy has returned to the path of recovery and its Central Bank has determined that a rise in interest rates is imperative to weaken incipient inflationary trends, is bolstered by the recent hike by the U.S., Fed on December 16th, 2015. On occasions, a rise may also be deemed necessary, but for a different reason --- to prick a budding asset bubble. These aspects would hold true when seen from the perspective of EMs as well. An emerging economy may not be ready to make the sacrifice of postponing a monetary policy (MP) action, which it considers as urgently necessary or desirable, given its macroeconomic condition. So, co-ordination is a two-way street. If EMs want the benefits of international co-ordination, then they need to be willing to recognize and accept the price that will come along with it. The corollary is that EMs are best advised to be prepared to act independently.

The Formulation of Alternative Monetary Policy Choices

In view of the foregoing, namely, that EMs ought to be prepared to conduct their monetary policies independently, some critical questions that need to be dealt with are as follows:

1. Would EMs be best served by a pre-emptive MP or by a reactive one? To elaborate, a pre-emptive MP will predict MP actions in an EDC, that is, the source country, and take pre-emptive action to forestall possible adverse consequences, as for instance a triggering of volatility. However, it is clear that the pre-emptive actions are taken in a state of information void. In contrast, a reactive MP will generate actions subsequent to the event of MP actions in the source country; so, clearly the response is ex post, but the risk here is that detrimental events may already have been set in motion which cannot be quickly stemmed by the lagged reaction in an emerging economy, as exemplified by the free fall and volatility exhibited by the Rupee in the second quarter of 2013. Exhibit 2 brings out the differences between a pre-emptive MP and a reactive MP.
2. Going further, is a pre-emptive MP action generally preferable when an interest rate hike in the source country is expected, say, on account of a rollback of QE, whereas a reactive MP may be better in response to interest rate reductions?
3. Is it necessary or desirable to offer a positive yield differential at all times by an interest rate policy or is a robust economy the best insurance against volatility that might be set off by monetary policies elsewhere?

Exhibit 2. Pre-emptive and reactive monetary policies

Monetary policy action in the source country	Expected response by an Emerging Economy (ceteris paribus)	
	Pre-emptive MP	Reactive MP
Interest rate is hiked	Rate hiked ex ante	Rate hiked ex post
Interest rate is cut	Rate reduced ex ante	Rate reduced ex post

Pre-emptive Monetary Policy

A pre-emptive MP has the merit of being preventive rather than curative. For instance, if an EM raises interest rates in advance of a similar action in an EDC, then it may virtually nullify, beforehand, any subsequent incentive for capital to flow out. There are two dimensions in this case: One is to decide on the magnitude of the hike in the interest rate and the second is the timing. A substantial hike may provide a greater sense of reassurance and protection against future capital outflows; however, it will also inflict a heavier burden on the domestic economy, that is, both the private and the Government sectors and may hurt the stock market. Further, it may draw in large amounts of speculative short-term capital, with consequences on the exchange rate in both the spot and forward markets. Moreover, if the much awaited rate increase in the EDC, for which the pre-emptive action was undertaken, does not happen or happens after a considerable length of time, then the costs of the decision to raise the interest rate get aggravated.

Reactive Monetary Policy

A reactive MP, though remedial, has the advantage of greater information and hence has no speculative dimension. Interest rates are raised only as a sequel and thus the policy avoids the imposition of a burden on the domestic economy, before the bitter pill is actually warranted. The danger, however, is the probability of capital flight in response to the prior hike in the interest rate in the EDC, with possibly adverse consequences in the stock market and on exchange rates. The lagged response of a countervailing interest rate increase may only amount to securing the stable after the horses have bolted and could take a long time to reverse the damage caused by capital outflow. The turmoil in the Rupee's exchange rate and the time needed

following RBI's actions to restore stability, as discussed previously, only emphasize the point. In view of the preceding discussion, a possible solution to accomplish the twin aims of reducing the burdens of a pre-emptive MP, while erecting a barrier against future capital outflow, could be to effect a moderate pre-emptive hike while reserving the option to hike the rate later, after seeing the action in the EDC. What is "moderate" is left to the judgment of the Central Bank which will need to take stock of the circumstances prevailing at the time the decision has to be made.

Rate Hikes and Rate Declines

Generally, interest rates are reduced as recessionary conditions set in and remain low, until a macroeconomic revival gets under way. Thereafter, they are hiked to moderate the resurgent economy and to puncture inflationary tendencies. So, interest rates lag a macroeconomic recession and begin to be raised when the economy becomes buoyant. A recession may be prolonged and during that time, rates may be reduced on more than one occasion. Similarly, rates may be hiked progressively during the phase of recovery.

The case for a pre-emptive MP when a rate hike is expected in the source country and a reactive MP when a rate reduction is effected, rests on a distinction between the seriousness of the effects of capital outflows versus inflows. Capital outflows could rapidly snowball into a capital flight with cataclysmic effects; in contrast, capital inflows typically are a pronouncement of confidence by international investors and in the short run may cause only a sudden rise in the domestic currency with increases in money supply, both of which could be deftly handled, albeit to a limited extent. However, what is critical is the magnitude of the rate cut effected by the dominant economy: if it is fairly sharp, then the inflows into EMs could be substantial and may precipitate sudden spikes in the domestic currency and also trigger volatility.

The Best Safeguard

More than monetary policy actions, the best insurance against inimical capital outflows is to ensure a sound macroeconomic environment. In a relevant comment on the rate hike by the Fed in December 2015, India's Chief Economic Adviser asserted that India is "well-cushioned" and that the impact on India would be minimal as inflation was waning and both the fiscal and external situation were benign (The Economic Times, December 17th, 2015). The key elements of a robust economy would be low inflation, fiscal rectitude, predictability in

government policies especially in taxation and environmental laws and minimum red tape. If some public expenditure programmes of questionable value are pruned or altogether withdrawn, then the consequent lowering of the fiscal deficit will ease pressure on the financial markets, which will help the private and public sectors to better withstand adverse monetary policy changes. The government in India is already seized of these challenges and will, hopefully, usher in the right climate.

Concluding Note

The foregoing discussion highlights the importance of being ready to go it alone, that is, for EMs to conduct monetary policy without international co-ordination, for the reasons given, particularly the lack of coincidence of macroeconomic cycles between different countries. It also presents alternative policies to cope with spillovers, including a combination of the two. An important implication of an independent monetary policy, and this would have been true even with co-ordination, is that the RBI will continue to have to juggle with multiple goals, including that of combating capital flows. The 2014 Spillover Report acknowledges that an important policy lesson emerging from the crisis is that there may be tensions between Central Banks' mandates and financial stability objectives (International Monetary Fund). Clearly, therefore, any rigid, narrow focus, as for example Inflation Targeting (IF), is simply not viable. In any case, there are widely known complexities involving IF, such as setting the inflation objective and granting the necessary policy autonomy to the Central Bank (Crockett). There is also the hazard that an adverse supply shock could result in "imported" inflation triggering a hike in interest rates which could slow down an economy further and impose hardship on workers (Stiglitz).

References

- Bhusnurmath, Mythili (2014). Raghuram's Third Eye. Ahmedabad: The Economic Times, August 4th, p. 6.
- Burton, Maureen and Bruce Brown (2009). The Financial System and The Economy: Principles of Money and Banking (p. 647). 5th ed., New Delhi: PHI Learning.
- Crockett, Andrew (2002). Central Banking in the New Millennium. In Montek S. Ahluwalia, Y.V. Reddy & S.S. Tarapore (Eds.). Macroeconomics and Monetary Policy, (pp. 138-39). New Delhi: Oxford University Press.

Economic Survey 2014-15, Vol. I, (p.16). New Delhi: Oxford University Press

Economic Survey 2013-14, (p.80). New Delhi: Oxford University Press.

Evers, Michael, P. (2013). Strategic monetary policy in interdependent economies: Gains from coordination reconsidered. *Journal of International Money & Finance*, 32, 360-376.

International Monetary Fund. (2014). IMF Multilateral Policy Issues Report: 2014 Spillover Report, July 29th, 2014 (p. 29). Retrieved from <http://www.imf.org/external/np/pp/eng/2014/062514.pdf>.

Menza, Justin. Stocks Tumble on Fears of Fed Tapering; NASDAQ down Over 1%. Retrieved from <http://www.cnbc.com/id/100757486#>.

Rajan, Raghuram G. (2014). Competitive Monetary Easing: Is it yesterday once more? Remarks at the Brookings Institution, Washington D.C., April 10th, 2014. Retrieved from http://rbi.org.in/Scripts/BS_ViewBulletin.aspx?Id=14898.

Reserve Bank of India Annual Report 2013-14 (p. 34). Retrieved from <http://www.rbi.org.in/scripts/AnnualReportPublications.aspx?year=2014>.

Stiglitz, Joseph E. (2013). A Revolution in Monetary Policy: Lessons in the Wake of the Global Financial Crisis. 15th C.D. Deshmukh Memorial Lecture, Mumbai, January 3rd, 2013 retrieved from www.rbi.org.in/scripts/Speeches.

Taylor, John B. (2013). International Monetary Coordination and the Great Deviation. *Journal of Policy Modeling*, 35, 463-472.

The Economic Times, Ahmedabad (2014), August 15th, p.10. "Rajan again pitches for EM Role in Global Policy Setting".

The Economic Times, (2015), December 17th. "Impact of Federal Reserve rate hike on India should be minimal: Arvind Subramanian". Retrieved from <http://economictimes.indiatimes.com/news/economy/indicators/impact-of-federal-reserve-rate-hike-on-india-should-be-minimal-arvind-subramanian/articleshow/50213657.cms>.

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Analysis of Financial Literacy: An Inevitable Aspect of Financial Inclusion

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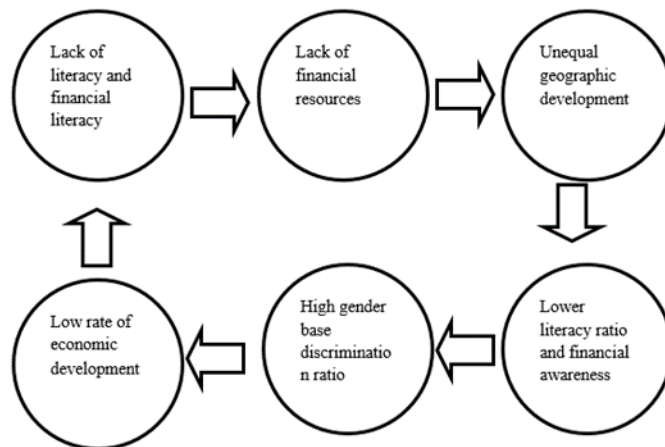
Abstract

Economic empowerment depends on trade and industrial growth of any country. To grow trade and industry economy needs financial resources through organized sector. In developing nation major problem is availability of financial resources. As financial literacy among rural segment is so inferior that major financial resources driven by unorganized sector. In a competitive economic epoch to empower economy need to spread knowledge about financial literacy. To spread financial literacy and driven financial resources to economy BCS provide a platform where financial resources drives to organized sector from the clutch of unorganized sector. After financial inclusion it would seen that financial resources magnified from unorganized sector and help in eradicate vicious circle of unequal development of geographic, gender base discrimination and also economic growth of trade in a limited edition. Association of PMJDY with BCS opens doors of opportunity to empowering growth and eliminates social challenges in competitive environment.

Introduction

Developing nation has to break vicious circle which becomes hurdle for economic growth. Various researches suggested that when a common man alert own need and give his small contribution to the economy, ultimately economy will achieved growth. Researcher represented here the vicious circle of developing nation in the following chart.

Vicious circle in any developing economy



Section : I Need of financial literacy

It is assumed fact for normal people that all citizens would aware of financial services and aware about all sorts of updates in to banking and insurance sector. Such financial literacy is main cause of low economic growth rate. When any rural people who live in outskirts of region where basic amenities or infrastructure facilities not available to them how it would possible for them to access banking services.

Financial Literacy

Financial literacy can broadly be defined by Dr. Y.V.Reddy governor of RBI as “providing familiarity with and understanding of financial market products, especially rewards and risks in order to make informed choices. Viewed from this standpoint, financial education primarily relates to personal finance to enable individuals to take effective action to improve overall well-being and avoid distress in matters that are financial”

As per Organization for Economic Co-operation and Development (OECD) has defined financial education as 'the process by which financial consumers/ investors improve their understanding of financial products, concepts and risks, and through information, instruction and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being.

Literature Review

Lusardi A. and Mitchell O. (2015) represented their thoughts in paper: "Financial Literacy and Economic Outcomes: Evidence and Policy Implications. Their continuous research on this field set a statement that financial literacy and its relationship to financial decision-making around the world.. Moreover, financial illiteracy is particularly acute for some demographic groups, especially women and the less-educated.

Silgoner M., Greimel-Fuhrmann B., Weber R. (2015) represented their thoughts on "Financial literacy gaps of the Austrian population". Researcher's focus on lack financial knowledge and have trouble dealing competently with their financial affairs, as evidenced by recent empirical research on financial literacy in various countries.

Grohman A. and Menkhoff L. (2015) shared three views on financial literacy in the paper "School, parents, and financial literacy shape future financial behavior". The level of financial literacy plays an important role: Quality schooling that also deals with financial issues likewise leads to better financial decisions.

Development of BCS

Traditional mind set regards to banking services is only walk in business but after 1991 LPG. In the year 2001 financial inclusion adopted in to the Indian economy which change banking scenario and

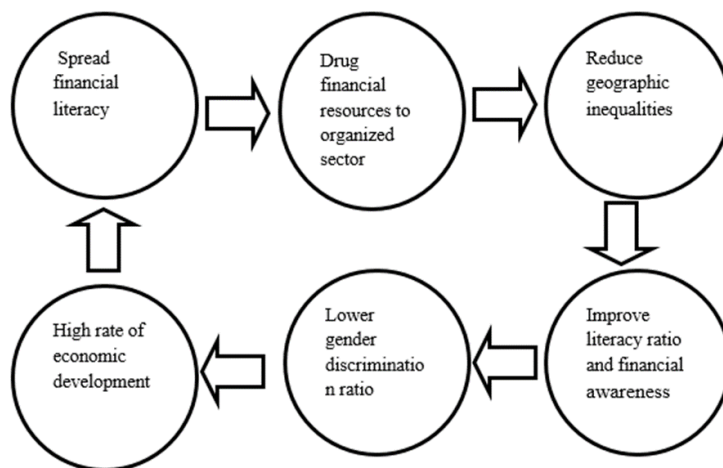
its business pattern. From 2006 it applied to banking official level where in each region adoption of BC. After financial inclusion banking door opens for rural segment and tribal areas. Development of banking correspondent services give ignition to financial literacy and aware tribal people and rural sector people about financial services and provided them financial literacy.

With adoption of BCS, financial literacy spread among villagers and their saving will diverted towards organized sector.

No	Traditional Aspect	Modern Aspect
1	Walk in business	Marketing of banking services
2	Unorganized sector clutch on tribal area and rural area people	Development of BCS which diverted financial resources to the organized sector.
3	No financial awareness taken into consideration	Not only financial awareness but financial literacy also taken in to consideration.

When financial literacy spread among villagers unorganized sector gradually collapsed and develop new market which drag financial resources to the economy and also utilized it in to the economic development.

Development link after financial literacy |



To know fact file after adoption of BC to economic growth researcher adopt RBI data. Financial resources which invest by all citizens give boost support to economy. While ample financial resources available trade and entrepreneur will get boost up support for the same.

Indicators of Economic Growth after Adoption of Financial Literacy

Following table indicate financial growth to the banking sector which lead to trade and entrepreneur benefit to the economy.

TABLE NO.1 – PROGRESS OF COMMERCIAL BANKING AT A GLANCE

IMPORTANT INDICATORS	June	March	March	March	March	March	March	March	March	March
	1969	2006	2007	2008	2009	2010	2011	2012	2013	2014
	1	2	3	4	5	6	7	8	9	10
No. of Commercial Banks	89	222	183	175	170	169	169	173	155	151
Number of Offices of Scheduled Commercial Banks in India ^	8262	69471	71839	76050	80547	85393	90263	98330	105437	117280
(a) Rural	1833	30579	30551	31076	31667	32624	33683	36356	39195	45177
(b) Semi-Urban	3342	15556	16361	17675	18969	20740	22843	25797	28165	31442
(c) Urban	1584	12032	12970	14391	15733	17003	17490	18781	19902	21448
(d) Metropolitan	1503	11304	11957	12908	14178	15026	16247	17396	18175	19213
Population per office (in thousands)	64.0	16.0	15.0	15.0	14.5	13.8	13.4	12.3	11.9	10.8
Per Capita Credit of Scheduled Commercial Banks (^)	68	13774	17355	20928	24230	27489	32574	38033	43123	48294

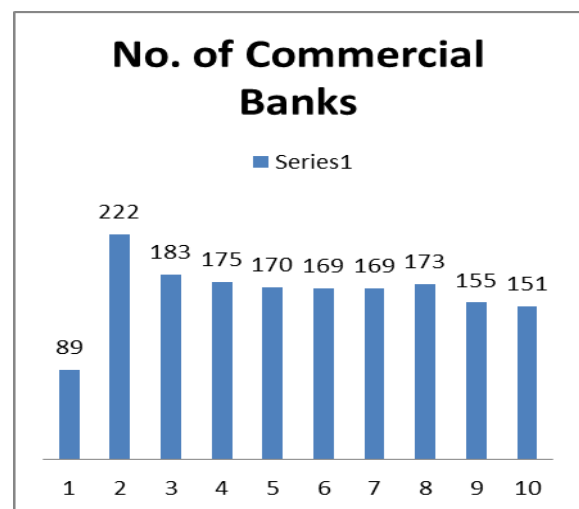
Above table indicate that with adoption of BCS in to the banking. Researcher explains major five indicators which indicate financial literacy impact

on banking sector as well as to the economy in detail.

I. Classification based on increase no. of commercial banks.

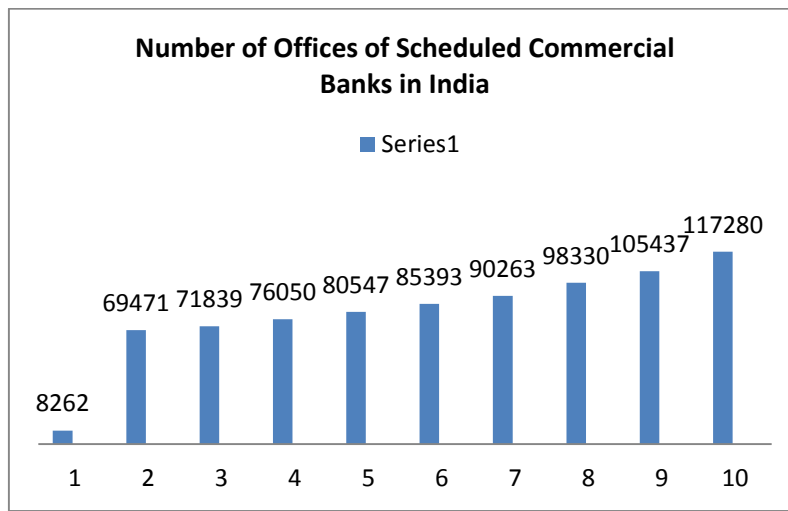
IMPORTANT INDICATORS	June	March	March	March	March	March	March	March	March	March
	1969	2006	2007	2008	2009	2010	2011	2012	2013	2014
	1	2	3	4	5	6	7	8	9	10
No. of Commercial Banks	89	222	183	175	170	169	169	173	155	151

The classification based on no. of commercial bank represented by above table and chart. This data suggest that after adoption of BCS tremendous growth in banking sector noticed in the year 2006. After words continuous progress depicted in above chart. In 2006 14 percent raised in commercial banks while in the year 2010 growth rate was 10 percent, Which reached till 9 percent in the year 2014. For any progressive economy to raise no. of commercial bank with respect to population is major indicator for pull financial resources and along with that it would spread financial literacy among villagers.



II. Classification based on Number of Offices of Scheduled Commercial Banks in India

IMPORTANT INDICATORS	June	March	March	March	March	March	March	March	March	March
	1969	2006	2007	2008	2009	2010	2011	2012	2013	2014
	1	2	3	4	5	6	7	8	9	10
Number of Offices of Scheduled Commercial Banks in India	8262	69471	71839	76050	80547	85393	90263	98330	105437	117280

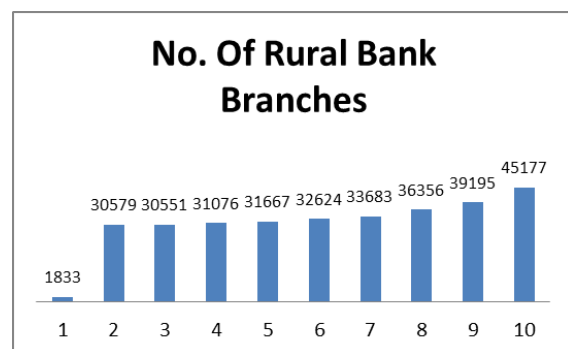


The classification based on no. of offices represented by above table and chart. This data suggest that after adoption of BCS remarkable growth achieved in the year 2006. After words continuous efforts raised no of offices to the rural and tribal sector for economic up gradation. In the year 2006 9 percent raised in no. of offices. In the year 2010 it would reach till 11 percent while the year 2014 it would reach till 15 percent.

III. Classification based on no. of rural bank branches.

IMPORTANT INDICATORS	June	March	March	March	March	March	March	March	March	March
	1969	2006	2007	2008	2009	2010	2011	2012	2013	2014
	1	2	3	4	5	6	7	8	9	10
(a) Rural	1833	30579	30551	31076	31667	32624	33683	36356	39195	45177

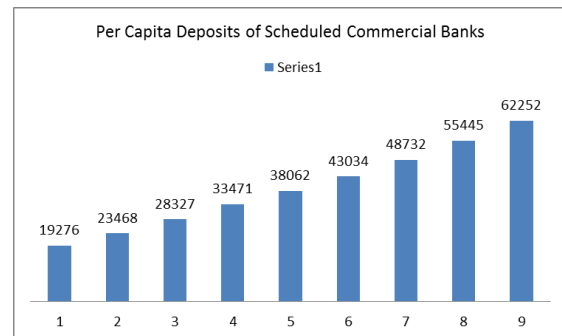
The analysis based on no. of rural branches represented by above table and chart given here. This data suggest that after adoption of BCS remarkable growth achieved in the year 2006 worth 10 percent.. In the year 2011 it would reach till 11 percent while the year 2014 it would reach till 14 percent.



IV. Classification based on Per Capita Deposits of Scheduled Commercial Banks

Year	2006	2007	2008	2009	2010	2011	2012	2013	2014
Per Capita Deposits of Scheduled Commercial Banks (₹)	19276	23468	28327	33471	38062	43034	48732	55445	62252

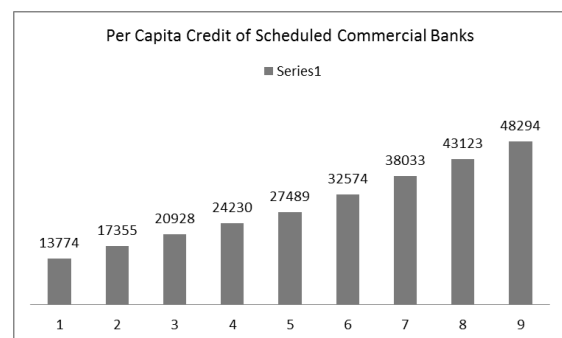
The above chart indicates that with adoption of financial inclusion high financial flow noticed to the banking sector. From 2006 to 2009 5 percent to 8 percent growth in deposit ratio. While it reaches to 16 percent in the year 2013 and 18 percent in the year 2014.



V. Classification based on Per Capita Credit of Scheduled Commercial Banks:

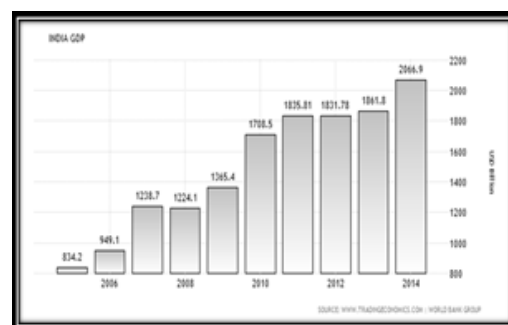
Year	2006	2007	2008	2009	2010	2011	2012	2013	2014
Per Capita Credit of Scheduled Commercial Banks	13774	17355	20928	24230	27489	32574	38033	43123	48294

The above table and graph shown here show continuous growth in per capita credit of commercial banks. In the year 2006 to 2009 this growth reaches form 5 to 8 percent. In the year 2013 it touches to 16 percent and in the year 2014 it touched the surface of 18 percent growth.



Classification based on Indian GDP Data

The following figure indicates there is tremendous growth in to the Indian economy GDP which is published by World Bank. This growth is indicated by financial resources which give continuous boost up support to developing nations.



PMJDY

Our current PM shri Narendra modi declared a policy for mass of the people PMJDY – Pradhan Mantra Jan Dhan Yojana On 15th Aug. PMJDY was announced by our PM and within 15 month it achieve following milestone.

With indication of all indicator effect and with PMJDY provide an accelerating pitch to Indian development towards economic growth. The

following table suggests growth in to the banking sector after adoption of PMJDY scheme.

19.02 Crore Accounts opened so far
 ₹ 25,913.56 Crore deposits
 1.26 lac Bank Mitras
 9.10 Crore Suraksha Bima Policies
 2.85 Crore Jeevan Jyoti Bima Policies

Pradhan Mantri Jan - Dhan Yojana
 (Accounts Opened as on 28.10.2015)
 (All Figures in Crores)

Bank Name	RURAL	URBAN	TOTAL	NO OF RUPAY CARDS	BALANCE IN ACCOUNTS	% OF ZERO-BALANCE-ACCOUNTS
Public Sector Banks	8.22	6.67	14.89	13.29	20347.85	37.39
Regional Rural Banks	2.92	0.49	3.41	2.44	4455.33	37.17
Private Banks	0.43	0.29	0.72	0.64	1110.38	41.58
Total	11.58	7.45	19.02	16.38	25913.56	37.51

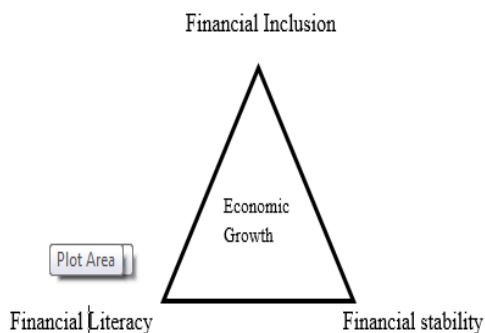
Financial literacy change scenario of Indian economy. All indicator and PMJDY association give a surface for economy to achieve growth. Adoption of financial literacy change in to Indian economic growth would be possible along with that financial resources give enough push effects to the economy.

With financial literacy it would possible to ignite growth to all state and able to reach opportunities to all the state. Financial literacy gives continuous fuel to economy for upward progress which is inevitable. Sector tremendous growth observed.

Above table indicates after linking BCS to the banking sector which leads to the following result.

Conclusion

Indicators give glimpse of the development through financial inclusion and financial literacy. Here all discussion can be represented in the following Tropicana way.



Economic growth attainment depends on equitable distribution of growth opportunities and benefits.

References

Atkinson, Adele, and Flore-Anne Messy. (2011). "Assessing Financial Literacy in 12 Countries: An OECD/ INFE International Pilot Exercise." Journal of Pension Economics and Finance 10 (4): 657–65.

Klapper, Leora F., Lusardi A. and Georgios A. Panos. (2012) "Financial Literacy and the Financial Crisis." National Bureau of Economic Research Working Paper 17930.

Lusardi A. Mitchell. S., and Curto V. (2010) "Financial Literacy among the Young." Journal

Lusardi A. and Mitchell O. (2014) "The Economic Importance of Financial Literacy: Theory and Evidence" "Journal of Economic Literature 52(1), page 5–44

Reddy Y. (2015) "The Role of Financial Education: The Indian Case"

<https://www.rbi.org.in/scripts/PublicationDraftReports.aspx?ID=526>

Silgoner M. , Fuhrmann B., Weber R. (2015) "Financial literacy gaps of the Austrian Population" Monetary Policy & The Economy Oesterreichische National Bank

https://www.rbi.org.in/scripts/BS_SpeechesView.aspx?Id=862rences

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<http://rbidocs.rbi.org.in/rdocs/Publications/DOCs/101T8FFE13CF1EF64832A1FB86BD8B16556D.XLS>

<http://www.tradingeconomics.com/india/gdp>

Changeover to Ind AS: Key Practical Insights

Jayesh Pandya

Abstract

International trade, cross border investments, international bond & equity offering registered a notable growth in the last 15 years in India. With an increasing globalization, it is indispensable that the reporting of the financial data should be in one single widespread accounting language – IFRS. In line with the global trends, in India, the Ministry of Corporate Affairs has pronounced Ind- AS, in consultation with ICAI which can be termed as a convergence approach towards IFRS. The Union Finance Minister, in his budget speech, highlighted the need and urgency for India to move to Ind AS. This paper is an attempt to give a lucid analysis and insight into the issues related to the applicability and the differences between the Indian GAAP and Ind AS in some of crucial areas that would have a transformational impact on financial reporting.

Introduction

International trade, cross border investments, international bond & equity offering registered a notable growth in the last 15 years in India. With an increasing globalization, it is indispensable that the reporting of the financial data should be in one single widespread accounting language – IFRS. In line with the global trends, in India, the Ministry of Corporate Affairs has pronounced Ind- AS, in consultation with ICAI which can be termed as a convergence approach towards IFRS. The Union Finance Minister, in his budget speech, highlighted the need and urgency for India to move to Ind AS. He announced that adoption of the Indian Accounting Standards (Ind ASs) will be voluntary from 2015-16 and mandatory from 2016-17. To meet this objective, the National Advisory Committee on Accounting Standards (NACAS) has already been reconstituted by the Ministry of Corporate Affairs (MCA) of the Government of India; vide its notification dated 18th September, 2014. On 2nd January 2015, the MCA announced the final road map for implementation of Ind AS in India, paving the way for reforms in the accounting regime. The MCA has also issued a notification dated 16 February 2015 announcing the Companies (Indian Accounting Standards) Rules, 2015 for applicability of Ind AS. The implementation of these standards will increase investors' confidence in the Indian regulatory environment and increase the flow of foreign capital into India. In this regards, it becomes essential to have a practical insight with regards to the applicability of Ind AS and also key differences between the present accounting standards and newly upcoming IFRS based IND AS Thus in this article an attempt is made to give a lucid analysis and insight into the issues related to the applicability and the differences between the Indian GAAP and Ind AS in some of crucial areas that would have a transformational impact on financial reporting.

Roadmap

The Ministry of Corporate affairs has laid the road map for the applicability of Ind AS The transition road map is not applicable to Banking companies, insurance companies and non-banking financing companies. The roadmap specifies the following:

- a) The company may undergo for early adoption of the standards for preparation of its financial statements for the accounting period starting from 1.4.2015 in which case, it has to provide comparative data for the periods ending on 31st March 3015.
- b) The companies covered by the criteria as shown in table 1, shall prepare its financial statement in compliance with Ind AS mandatorily for the accounting period beginning from 1.4.2016 and shall also provide the comparative figures for the periods ending on 31st March 2016 and thereafter.

Table No. 1

1	Companies whose Debt and equity securities are listed on unlisted or are in process of being listed on any of the recognized stock exchange in India or outside India and having Networth > = Rs. 500 crores
2	Holding Companies, Subsidiary Companies, Joint Ventures of Associates companies covered in (1) above

Table No. 2

1	Companies whose Debt and equity securities are listed or are in process of being listed on any of the recognized stock exchange in India or outside India and having Networth < (less than) Rs. 500 crores
2	Unlisted companies having Networth < (less than) Rs. 250 crores
3	Holding Companies, Subsidiary Companies, Joint Ventures of Associates companies covered in (1) and (2) above

- c) The companies mentioned in Table No.2 shall prepare its financial statement in compliance with Ind AS mandatorily for the accounting period beginning from 1.4.2017 with comparatives for the period ending on 31st March 2017 or thereafter.
- d) The company once adopts the Ind AS whether voluntarily or mandatorily cannot revoke meaning thereby that it has to prepare financial statements thereafter in compliance of the Ind AS consistently.
- e) The Subsidiary companies, Associates, Joint Ventures of an Indian company or any other similar entity or entities operating overseas i.e. outside

India, shall prepare its stand-alone financial statements in accordance with the accounting standards applicable in the jurisdiction in which they operate. However, they shall report to its Indian parent company under Ind AS so as to facilitate the parent company to prepare Consolidated Financial statement in compliance to Ind AS. The Indian subsidiaries, Associates, Joint Ventures of Multinational company operating in India who meets the criteria laid down, shall prepare its financial statements in compliance with Ind AS. f) Those companies which do not fall in the purview of the roadmap laid down by MCA shall continue to apply the existing accounting standards.

Computation of Net Worth

The company’s net worth shall be calculated as per the clause 57 of the section 2 of the Companies act 2013. Accordingly

Net Worth =	Paid up capital Add: Reserves created out of Profits Add: Securities Premium Less: Aggregate Value of Accumulated Losses Less :Deferred Expenditure if any Less: Miscellaneous Expenditure not written off Less: Revaluation Reserves Less: Write back of depreciation (Adjustments if any)
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The net worth of the company shall be computed in accordance with the stand- alone financial statements as on 31st March 2014 or the first audited financial statements for accounting period which ends after that date. This means that if any company’s net worth is equal to or more than Rs. 500 crore on 31st March 2015, than company shall comply with adoption of Ind As from 1.4.2016.

Those companies which are not in existence on 31st March 2014 or those existing companies which are covered by the criteria (as mentioned in Table 1 and 2) for the first time after 31st March 2014, the net

worth shall be calculated on the basis of first audited financial statement ending after that in respect of which it meets the criteria specified. This means that those companies complying with the criteria for the first time at the end of an accounting year shall apply Ind As from the immediate next accounting year.

For instance the companies meeting the criteria for the first time as 31st March 2017 shall prepare its financial statements for the year 2017-18 in compliance to the Ind AS.

IND AS v/s Indian GAAP

The Ministry of Corporate Affairs (MCA), based on the recommendation of the Institute of Chartered Accountants of India (ICAI), has issued 39 converged Indian Accounting Standards (Ind-AS) in the notification dated 16th February 2015. (Refer annexure I)

A study of Ind AS depicts that there are many differences between the existing Indian GAAP and Ind AS. In the succeeding part of the paper the author has highlighted the major points differentiating Ind AS with existing accounting standard and also its impact on the financial reporting. Due to time constraint a detailed analysis has been ignored.

Major Differences

Use of Fair Value:

The MCA has issued Ind AS 113 related to Fair Value Measurement. The standard defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

The Indian Converged Accounting Standard has given much more emphasis on the use of fair value for measurement of various items in the financial statements. Following are some of the important financial items where the use of fair value is proposed by Ind AS which shall result into significant differences from financial information currently presented.

Revenue Recognition: Ind As 115 v/s AS 9

Ind AS 115 has suggested that to determine the transaction price for contracts in which a customer promises consideration in a form other than cash, an entity shall measure the non-cash consideration at fair value. The fair value of the non-cash consideration may vary because of the form of the consideration (for example, a change in the price of a share to which an entity is entitled to receive from a customer).

As against this Under AS 9, the revenue is measured by the charge made to customers or clients for goods supplied and services rendered and by the charges and rewards arising from the use of resources by them. With adoption of Ind AS 115, adoption of fair value concept will help the Indian business entities to reflect the true performance.

Business Combination: Ind AS 103 v/s AS 14, AS 21

Under Ind AS 103 the net assets taken over are to be recorded at fair value. As against this under AS 14 net assets are to be recorded at carrying value or at agreed value.

The contingent consideration in a business combination under Ind AS 103 is to be measured at fair value at the date of acquisition, while under AS 14 it is recorded at the value at which is agreed if reliably measured as on the date of acquisition.

Ind AS 103 provides an option to measure any non-controlling (minority) interest in an acquiree at its fair value, or at the non-controlling interest's proportionate share of the acquiree's net identifiable assets. AS 21 does not provide the first option. It requires minority interest in a subsidiary to be measured at the proportionate share of net assets at book value.

Ind AS 103 requires that, in a business combination achieved in stages, the acquirer remeasures its previously-held equity interest in the acquiree at its acquisition date fair value. The acquirer is to recognize the resulting gain or loss, if any, in profit or loss. There is no such requirement under Indian GAAP. Under AS 21, if two or more investments are made in a subsidiary over a period of time, the equity of the subsidiary at the date of investment is generally determined on a step-by-step basis.

Accounting for Employee Share Based Payments:

The guidance note issued by Institute of Chartered Accountants in India suggests that those companies which use share-based payments as a part of remuneration package for their employees in terms of Employees Stock Options (ESOPs) are permitted to account ESOPs either through Fair Value method or Intrinsic Value Method with fair value disclosures. As against this Ind AS 19 suggest only Fair Value method for accounting employee share based payments.

Accounting For taxes:

Ind AS 12 requires the recognition of deferred taxes in case of business combinations. Under Ind AS, the cost of a business combination is allocated to the identifiable assets acquired and liabilities assumed by reference to their fair values. However, if no equivalent adjustment is allowed for tax purposes, it would give rise to a temporary difference. Under Indian GAAP, business combinations (other than amalgamation) will not give rise to such deferred tax adjustment.

Group Structure and Group accounts: Ind AS 110 v/s AS 21

The definition of control has changed as compared to that as given by AS 21. As per Ind AS 110, an investor controls an investee when it is exposed, or has rights, to variable returns from its involvement with the investee, and has the ability to affect those returns through its power over the investee. An investor may still have power over an investee even when the investor does not have a majority of the voting rights of that investee. An investor may have power over specified assets of an investee that are considered to be a separate 'deemed entity' such that control could exist at a level below a legal entity.

Under Ind AS 110, consolidation is must for all subsidiaries except investment entities, subject to certain conditions. While AS 21 provides for two exemptions from consolidation. Firstly the parent company which acquires control in the other company which is temporary in nature and is to be disposed of in near future and Secondly Subsidiary operates under severe long term restriction and is not able to transfer the funds to parent company.

For preparation of consolidated financial statements, uniform accounting policy is a pre-requisite and this is proposed by Ind As 110 and AS 21. However the existing standard allows a six-month gap for subsidiaries and jointly-controlled entities while Ind AS 110 allows a three-month gap between financial statements of a parent or investor and its subsidiary, associate or jointly-controlled entity.

Ind AS, changes in ownership interests of a subsidiary (that do not result in the loss of control) are accounted for as an equity transaction, and have no impact on goodwill or the profit and loss statement. Indian GAAP provides no guidance on changes in ownership interest of a subsidiary that do not result in loss of control.

Components of Financial Statements

Under the Indian GAAP, the requirement relating to financial statements presentation setup by various regulatory bodies such as schedule III of Companies Act 2013, and accordingly Balance sheet, Statement of Profit and Loss, Cash Flow statement and Explanatory notes with significant accounting policies are prepared.

Under the Ind AS the components comprises of Statement of Financial position, statement of comprehensive income displaying profit and loss, statement of Cash Flow and statement of Changes in Equity.

Impact on Financial Reporting

Adoption of Fair value for the purpose of recognition of revenue will help the Indian business entities to reflect the true performance.

Adoption of fair value approach for valuing the net assets taken over, Contingent consideration and non-controlling i.e. Minority Interest in case of Business Combination shall significantly change the value of goodwill recorded in financial statements. The Goodwill so calculated will project actual premium paid by an entity for the acquisition.

The post deal results of the acquirer shall go under a significant change with the adoption of Ind AS 103 The depreciation henceforth shall be charged on their fair value of the assets. Goodwill is not allowed to be amortized rather shall be tested for impairment losses annually. On other hand Negative goodwill is required to be posted to the credit of income statement immediately. This shall lead to heavy fluctuation in the income statement.

Recognition of deferred tax is on Fair value adjustment of acquired Assets (Goodwill being difference between asset taken over and the purchase consideration) and Liabilities including contingent liabilities. Now the deferred tax asset or liability in any year will be reversed or adjusted in the future years to come. Thus it will affect the tax expense or income of those years to come in future. Thus the effect of acquisition deferred taxes on future financial statements will differ significantly under Ind AS and Indian GAAP.

The accounting for ESOPs using the fair value method shall result in increased charges for ESOPs and will have a significant impact on profits of the company and other indicators such as earnings per share finally affecting the P/E ratio and market price of the share.

Adoption of Ind AS may result in de-consolidation of certain subsidiaries in some cases. Under the existing standards, two groups can consolidate the same entity, i.e., one group consolidates as it holds the majority ownership stake; whereas, another group consolidates as it controls the board of directors. Under Ind AS, control can be held only by one entity, and it is unlikely that two entities would consolidate the same company.

For consolidation of the accounts of Investor and Investee Company, the mandatory use of uniform accounting policy for subsidiaries, Joint Ventures, and associates shall pretense significant challenges especially in the case of associates where the entity does not have control over the associate. On

conversion to Ind AS, many group entities will have to change their accounting policies to bring them in line with the parent entity.

Preparation of the Balance sheet as stated in Schedule III of Companies Act 2013 and also preparing Statement of Changes in Equity and Statement of comprehensive income shall lead to a better presentation and shall bring improved transparency in financial statements.

Adopting Ind AS 1 the companies shall prepare the balance sheet disclosing current and non-current item as given in Schedule III of the companies act 2013.

Conclusion

The current scenario all over the world is that more than 130 countries have adopted for IFRS. India shall be joining them with a convergence model adopting Indian Converged Standards- Ind AS. Adoption of Ind AS shall increase comparability of entities at national and global level. Convergence encourages international investing and thereby leads to more foreign capital flows to the country. The companies in India will be able to raise capital from the foreign markets at a lower cost. A common global accounting language when adopted helps investors better understand investment opportunities as opposed to financial statements prepared using a different set of national accounting standards.

Analysis the crucial areas of differences between the existing Indian GAAP and IND AS, a conclusion can be drawn that the adoption of Ind AS by the Indian corporate sectors is a challenging task. The fair value accounting would bring in volatility in the earnings of the company and the same volatility would have to be explained to all the stakeholders. (Investors, customers, lenders and employees) of the Company which could be a challenge.

The process of changeover to Ind As depends to a large extent on the differences as stated in this article. It is also observed by many other researchers, analyst and academicians that Ind AS is not the same as IFRS. The Institute of Chartered Accountants of India has listed out the major carve-out in Ind AS vis-à-vis IFRS. Thus an attempt of making Ind As fully compliant with IFRS will help the stake holders to garner the benefits at national and global level.

References

Notification Issued by Government of India- Ministry of Corporate affairs - Companies (Indian Accounting Standards) Rules, 2015.

Rawat D.S., Students Guide to Accounting Standards – 23rd Edition, Taxmann Publication (P) Ltd. New Delhi, 2013

Dr. Saini A.L., A Complete guide for Converged Indian Accounting Standards IND as & IFRS – 6th Edition, Snow White Publication, 2011

Voices on Reporting- issued by KPMG.

Websites

<http://www.channeltimes.com/expert-speak/>

<http://www.mca.gov.in/>

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Relationship between Emotional Intelligence and Individual Job Performance: Statistical Perspective

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Abstract

The concept of Emotional Intelligence (EI) has been growing its popularity since its inception and has resulted in to number of researches/publications in organizational behaviour domain emphasizing and sometimes overemphasizing its importance. Especially, job performance is considered to be closely associated with Emotional intelligence irrespective of intelligence quotient of individual. However, that does not appear to be the case in general. The paper explores the impact of other associated factors like, conscientiousness, mental ability and type of job on interrelation of job performance and Emotional intelligence. Our study illuminates that the relationship between emotional intelligence and job performance is not direct as it is perceived, in general.

Introduction

Large number of studies (e.g., Goleman, 1995; R. Bar-On, 2000; Law, Wong, & Song, 2004) in the field of Organizational behaviour and Psychology have concluded that, Emotional intelligence exhibits close and positive correlation with individual job performance. However, significance of conscientiousness, mental ability and types of job on the correlation has largely been neglected. Available literature on the field (e.g., A. E. Feyerherm & C. L. Rice, 2002; K. A. Barchard, 2003; etc.) reveals that majority of studies have ignored to explore crucial impact of these three factors on the association between Emotional intelligence and job performance, while overstressing the positive correlation-ship between both. We believe, due to ignorance of how these factors affect the job performance in the light of emotional intelligence, prediction of job performance on the basis of emotional intelligence doesn't turn out to be accurate. This has led to large number of researchers (e.g., Roberts et al., 2001; Brody, 2004; etc.) criticizing the importance of Emotional intelligence.

There have been numerous causes for conflicting results in the field. The first and important cause could be the process of measurement of emotional intelligence of the subjects under consideration. Great amount of variation in the measurement techniques related to different models of EI could be one of the culprit leading to conflicting and sometimes, contradictory results. The so called, three models of EI, namely abilities model, mixed model and trait models differ considerably. With the view of EI measurement, these models are divided in to two broad categories: Self report measures and performance based measures. Many experts (e.g., MacCann, Roberts, Matthews, & Zeidner, 2003) have condemned the widely-used self-report measures as they lack discriminant validity from measures of personality. (We have used ability based measures (MSCEIT) due to Mayer and Salovey, which have been reported as one of the most stable measures of emotional intelligence)

The second factor tending to massive variability in results of EI is control variables employed for the study. For instance, numerous publications (e.g. Van Der Zee, Thijs, & Schakel, 2002; Petrides, Frederickson, & Furnham, 2004, etc) have recorded high degree correlation between emotional intelligence and individual performance, while others (e.g., Newsome, Day, & Catano, 2000; Barchard, 2003) have concluded that the correlation is negligible if the sample is controlled for mental ability and personality.

Job performance is defined as a multidimensional construct. But when it comes to literature studying relationship between Emotional intelligence and job performance, the factor of job performance has been treated as a factor having single category. Logically, job performance in the tasks involving high amount of interpersonal interactions could be largely affected by emotional intelligence, whereas, that in the others which does not require any interpersonal skills should not get largely influenced by emotional intelligence.

Roadmap

Research objectives

We aim to study interrelation between Emotional intelligence and job performance in the light of three factors: conscientiousness, mental ability and type of job. Mainly, we aim to check the validity of following hypothesis at the end of our study.

1. Interpersonal effectiveness has a strong and positive correlation with emotional intelligence.
2. High level of conscientiousness strengthens the correlation between interpersonal effectiveness and emotional intelligence.
3. The correlation of emotional intelligence and job performances varies significantly from one job type to the other.

Research Methodology

For the study, engineering students (N = 105, 80 males, 25 females) of first to eighth semesters of various branches (Mechanical engineering, Chemical engineering, Chemical technology, Environmental science and technology, electrical engineering) of an engineering institute were involved as subjects. As the institute has implemented 5S workplace management system, all students compulsorily have to join in 5s activity every week for one hour (Wednesday, 3:30 pm to 4:30 pm) at the institute. We have selected various 5s subzones of the college involving considerable amount of variation in terms of responsibilities and tasks. In particular, canteen, corridors and washrooms are considered to be challenging subzones with reference to 5S implementation. We have involved student members of these subzones as subjects in our study.

Students working with these 5s subzones have to deal with various departments. They need to coordinate with housekeeping dept., administrative dept., canteen contractor and his staff, students, faculty members and principal. Maintaining cleanliness, labelling of every instruments and objects, yellow marking of all designated areas, development and adherence to standard operating procedures are key components of 5S, which are to be taken care of by these students. Biweekly, students need to present their progress report to the 5s central committee of the institute. Apart from different and novel tasks allotted to subzones, every month, best 5s idea competition, slogan competition, energy conservation competition etc. are organized, where students have to participate as a team (Every subzone participate in a competition as a team).

The study took place for 3 months, where different parameters were evaluated continuously. CCTV footage of all 5s hours of different subzones under consideration was made available to the team members involved in quantifying factors/parameters of the study. During every 5s hour there are number of instances (due to nature of various activities), where students were exposed to stress, forced to take quick decisions, needed to work as a team and required interpersonal effectiveness. We have divided various existing tasks of 5s (and have also developed and added several tasks during these 3 weeks to increase variability of tasks in terms of interpersonal skills needed to fulfil them) in to five categories. The categories form likert scale with five ordinal stages (1 to 5), ranging from (1) needing no interpersonal skills to (5) strongly requiring such skills.

Team members involved in the quantification of parameters were given trainings by psychology research students for two days. We considered five factors namely Job type, Interpersonal Effectiveness, Emotional Intelligence, Conscientiousness and Mental ability. Every job was categorised on five point likert scale as discussed earlier. Every subject of the study was graded for every job instance (i.e. every task) for remaining four factors (Interpersonal effectiveness, Emotional Intelligence, Conscientiousness and Mental ability) and the grades were transformed to 5 point likert scale each. Thus, we arrive at five factor sample of 105 subjects leading to 525 observations.

Data Analysis and Discussion

We have carry out primary descriptive statistical analysis and mainly focused on exploration of measures of associations among the factors in the light of our hypotheses mentioned in research objectives.

As all the factors had a common range and very small variations (5 units), their descriptive statistics doesn't differ drastically.

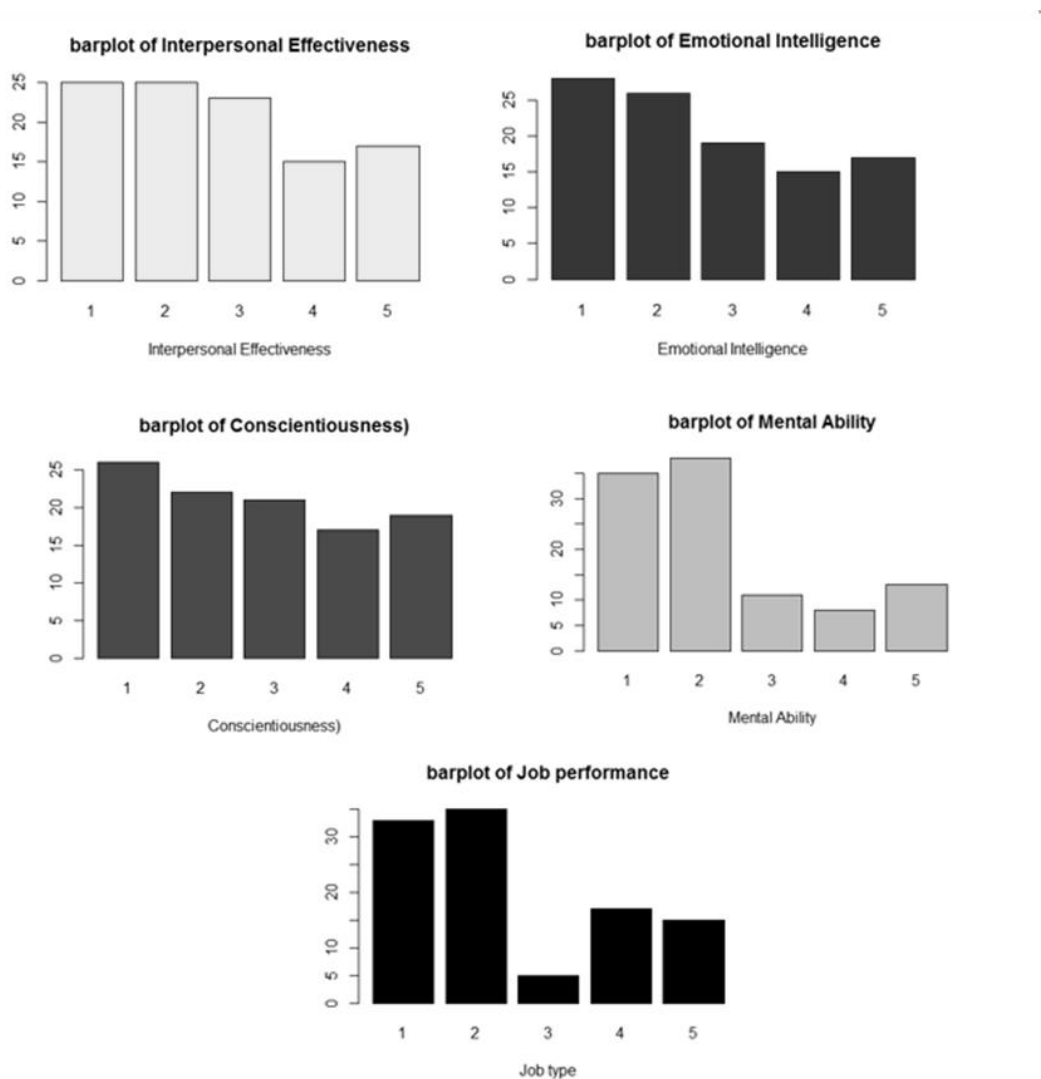
Table 1: Basic sample statistics

Factor	Mean	Median	SD
Job type	3	3	1.4209
Intellectual Effectiveness(IE)	2.752	3	1.3921
Emotional Intelligence(EI)	2.686	2	1.4231
Conscientiousness	2.819	3	1.4396
Mental Ability	2.295	2	1.3367
	2.486	2	1.44191

Figure 1 shows the bar plots of all the factors evaluated using individual subjects, whereas Figure 2 shows comparative box plots of all the factors. It can be observed that, Emotional Intelligence (EI)

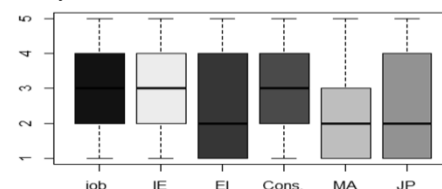
and mental ability differ significantly whereas other two factors tend to have similar fashion in terms of spread of observations.

Figure 1: Bar plots of factors considered in the study



The only noteworthy statistical observation we could make from the comparative box plot was regarding significant difference of the two factors (EI & mental ability) when compared to the remaining in terms of spread of sample entries. Sometimes, conclusions drawn from a single graph could be misleading. In order to have a better check, we generated kernel density plots of all the factors of the study. The plot is shown in Figure 3. It can be clearly observed that, both the factors (esp. mental ability) have quite different kernel density plots than the remaining ones.

Figure 2: Box plots of factors considered in the study

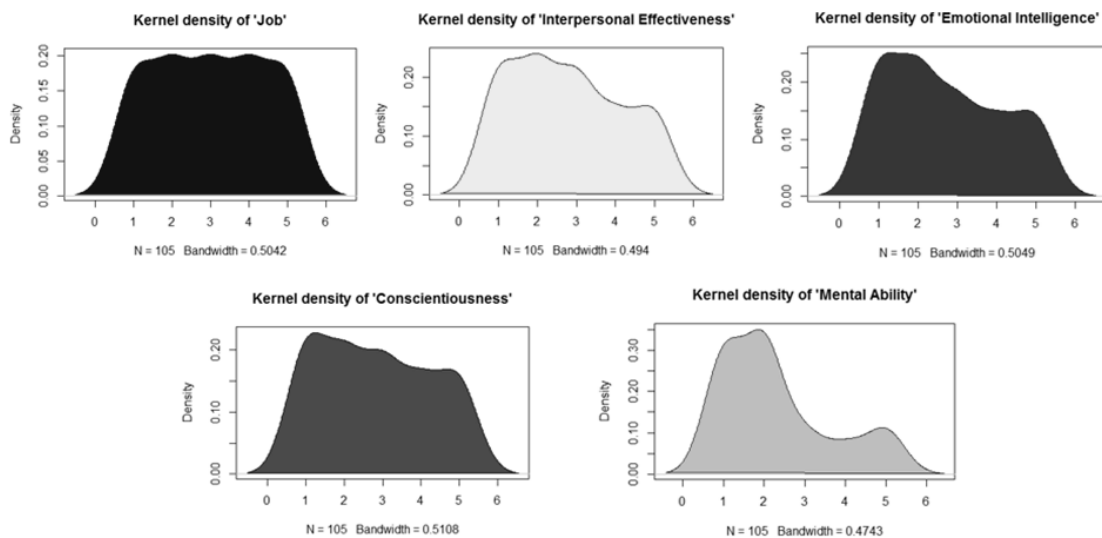


The main aim of the study was to investigate measures of association among the factors and to test the hypothesis formulated at the beginning of the study. We evaluated pair wise correlation

coefficients giving rise to correlation matrix for the set of vectors. Note that, the factor job type is not derived from subjects under consideration and hence has almost no correlation with the remaining factors

as expected. From the remaining pairs of factors, conscientiousness and mental ability exhibits minimum correlation, which, nonetheless is positive and numerically is about 0.7.

Figure 3: Kernel density plots of factors considered in the study



From correlation matrix shown in Table 2, one can easily find the strong support for our first hypothesis. As the correlation between Interpersonal Effectiveness (IE) and Emotional Intelligence (EI) is 0.9747, it is clear that, both the factors exhibits high

degree positive correlation, which is near to perfect positive correlation (i.e. 1). The matrix scatter plot shown in Figure 4 also reiterates the same fact graphically.

Table 2: Correlation matrix of factors under consideration

	JT	IE	EI	Cons.	MA	JP
JT	1.0000000	0.2673307	0.3280808	0.1363020	0.2379084	0.2299481
IE	0.2673307	1.0000000	0.9746813	0.8505637	0.7733391	0.7733391
EI	0.3280808	0.9746813	1.0000000	0.8589626	0.7922288	0.7922288
Cons.	0.1363020	0.8505637	0.8589626	1.0000000	0.6975102	0.7792148
MA	0.2379084	0.7733391	0.7922288	0.6975102	1.0000000	0.8028542
JP	0.2299481	0.7733391	0.7922288	0.7792148	0.8028542	1.0000000

Another analysis implies that, the correlation of Interpersonal effectiveness and Emotional Intelligence for the subjects with the value of conscientiousness less than 3 is 0.6003, which drastically rises to 0.8461 for the subjects having conscientiousness greater than 3. This indices statistically supports our second hypothesis.

computed for all subjects for job type (1) involving no interpersonal skills, and that of job type (5) essentially requiring interpersonal effectiveness differ by a large value. That of the earlier is 0.0031, where as that of the later is 0.6231. This supports our third and final hypothesis.

It is interesting to note from the matrix scatter plot that, the factor of job type seem to have no correlation with any of the remaining factor. However, the value of correlation coefficients

Conclusions

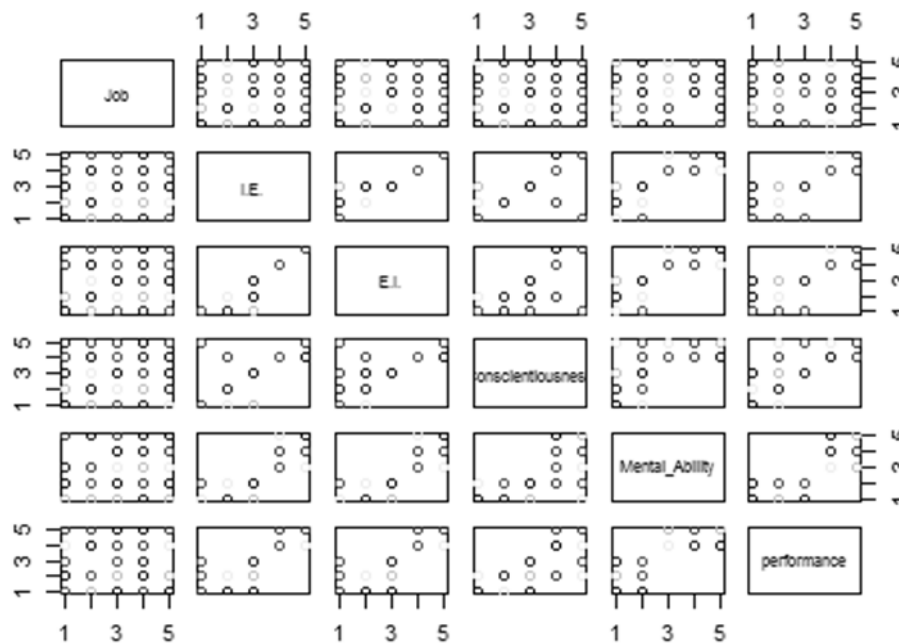
The study enables us to conclude that,
 1. Emotional Intelligence (EI) and Interpersonal effectiveness (IE) are highly correlated. The

correlation becomes stronger in the case of subjects with high degree of conscientiousness.

2. Emotional Intelligence (EI) and Individual job performance are positively correlated. However, the degree of correlation shows significant variation depending on the type of job. i.e. The job

performance of the individuals having high EI in the jobs requiring high degree of interpersonal interactions and team work will be significantly high compared to those who lack on the front of emotional intelligence.

Figure 4: Matrix scatterplots of factors considered in the study



3. There isn't linear correlation between Emotional Intelligence (EI) and Job type, but job type plays an important role in the relationship between Emotional Intelligence (EI) and Job Performance. i.e. EI and job performance manifests high degree positive correlation only for those jobs, which requires significant amount of human interactions. For rest of the jobs, the correlation between this two factors is not at all significant.

References

Bar-On, R. (2000). Emotional and social intelligence: Insights from the emotional quotient inventory. In R. Bar-On, & J. D. A. Parker (Eds.), *The handbook of emotional intelligence* (1st ed., pp. 368–388). San Francisco, CA: Jossey-Bass.

Barchard, K. A. (2003). Does emotional intelligence assist in the prediction of academic success? *Educational & Psychological Measurement*, 63, 840–859.

Barrick, M. R., Mount, M. K., & Judge, T. A. (2001). The FFM personality dimensions and job performance: Meta-analysis of meta-analyses. *International Journal of Selection and Assessment*, 9, 9–30.

Brackett, M. A., & Mayer, J. D. (2003). Convergent, discriminant, and incremental validity of competing measures of emotional intelligence. *Personality and Social Psychology Bulletin*, 29, 1147–1158.

Brackett, M. A., Mayer, J. D., & Warner, R. M. (2004). Emotional intelligence and its expression in everyday behaviour. *Personality and Individual Differences*, 36, 1387–1402.

Day, A. L., & Carroll, S. A. (2004). Using an ability-based measure of emotional intelligence to predict individual performance, group performance, and group citizenship behaviors. *Personality and Individual Differences*, 36, 1443–1458.

Feyerherm, A. E., & Rice, C. L. (2002). Emotional intelligence and team performance: The good, the bad and the ugly. *The International Journal of Organizational Analysis*, 10, 343–362.

- Goldberg, L. R. (1999). A broad-bandwidth, public domain, personality inventory measuring the lower-level facets of several five-factor models. In I. Mervielde, I. Dreary, F. De Fruyt, & Guerrero, L. K., Andersen, P. A., & Trost, M. R. (1998). Communication and emotion: Basic concepts and approaches. In P. Andersen, & L. Guerrero (Eds.), *Handbook of communication and emotion* (pp. 3–27). San Diego, CA: Academic Press.
- Jordan, P. J., & Troth, A. C. (2004). Managing emotions during team problem solving: Emotional intelligence and conflict resolution. *Human Performance*, 17, 195–218.
- Judge, T. A., & Ilies, R. (2002). Relationship of personality to performance motivation: A meta-analytic review. *Journal of Applied Psychology*, 87, 797–807.
- Kuncel, N. R., Hezlett, S. A., & Ones, D. S. (2004). Academic performance, career potential, creativity, and job performance: Can one construct predict them all? *Journal of Personality and Social Psychology*, 86, 148–161.
- Law, S., Wong, C., & Song, L. (2004). The construct and criterion validity of emotional intelligence and its potential utility for management studies. *Journal of Applied Psychology*, 89, 483–496.
- Lopes, P. N., Brackett, M. A., Nezlek, J. B., Schutz, A., Sellin, I., & Salovey, P. (2004). Emotional intelligence and social interaction. *Personality and Social Psychology Bulletin*, 30, 1018–1034.
- Lopes, P. N., Salovey, P., & Straus, R. (2003). Emotional intelligence, personality and the perceived quality of social relationships. *Personality and Individual Differences*, 35, 641–658.
- MacCann, C., Roberts, R., Matthews, G., & Zeidner, M. (2003). Consensus scoring and empirical option weighting of performance-based emotional intelligence (EI) tests. *Personality and Individual Differences*, 36, 645–662.
- Mayer, J. D., Salovey, P., & Caruso, D. (2000). Models of emotional intelligence. In R. Sternberg (Ed.), *Handbook of intelligence*. (pp. 396–420). Cambridge, UK: Cambridge University Press.
- Mayer, J. D., Salovey, P., & Caruso, D. (2002). Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT): User's manual. Toronto, ON: Multi-Health Systems.
- Mayer, J. D., Salovey, P., & Caruso, D. (2004). Emotional intelligence: Theory, findings, and implications. *Psychological Inquiry*, 15, 197–215.
- Mayer, J. D., Salovey, P., Caruso, D., & Sitarenios, G. (2003). Measuring emotional intelligence with the MSCEIV2.0. *Emotion*, 3, 97–105.
- Moon, H. (2001). The two faces of conscientiousness: Duty and achievement striving in escalation of commitment dilemmas. *Journal of Applied Psychology*, 86, 533–540.
- Newsome, S., Day, A. L., & Catano, V. L. (2000). Assessing the predictive validity of emotional intelligence. *Personality and Individual Differences*, 29, 1005–1116.
- O'Rourke, J. S. (2004). *Management communication: A case-analysis approach* (2nd ed.). Upper Saddle River, NJ: Pearson Prentice Hall.
- Salovey, P., Mayer, J. D., & Caruso, D. R. (2002). The positive psychology of emotional intelligence. In C. R. Snyder, & S. J. Lopez (Eds.), *Handbook of positive psychology* (pp. 159–171). Oxford, England: Oxford University Press.
- Walker, F. R. (2005). The rhetoric of mock trial debate: Using logos, pathos and ethos in undergraduate competition. *College Student Journal*, 39, 277–286.
- Witt, L. A., Burke, L. A., Murray, B. R., & Mount, M. K. (2002). The interactive effects of conscientiousness and agreeableness on job performance. *Journal of Applied Psychology*, 87, 164–169.

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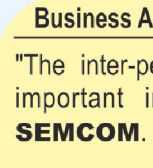
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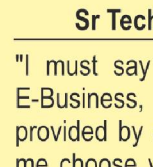
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