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CONTENTS

Editorial

- | | | | |
|-----|----------------------------------|--|-----|
| 1. | J. Rajan
Ambili G.S. | E-Tailing: A Virtual Channel
For Shopping | 5 |
| 2. | Arun Lawrence
Shijina A.S. | Indian Stock Market -
A Study on Recent Development | 16 |
| 3. | J.Rajan
Baiju.J.J | Customer Perception on
Retail Industry in Kerala | 23 |
| 4. | Chithra Mohan. K
P. N. Prasad | Occupational Stress among employees
in the UAE Construction Industry | 31 |
| 5. | J. Vijayan | E-Waste Management – Problems and Solutions | 40 |
| 6. | J. Rajan
Jyotheendranath C.S. | Construction Management towards
Cost effectiveness | 57 |
| 7. | Rajan .J
Premkumar .G | Ethical Issues in Advertising in India :
A review on Customer Perspective | 65 |
| 8. | J. Rajan
Salini.C.R | Role of Financial Institutions in the
Development of Women Entrepreneurship in Kerala | 74 |
| 9. | J.Rajan, Sunil.G | Public Private Partnership in Infrastructure –
A Paradigm Shift | 80 |
| 10. | J. Rajan
Udaya Kumar .A | Water Management and Sustainable Development | 90 |
| 11. | Miss Sani.S,
Manoharan Nair | Occupational stress a study among
female employees in Kerala | 102 |



KNOWING ONESELF THROUGH FEED BACK ANALYSIS

Most people think they know what they are good at. But time and experience show that it is a wrong notion. One can only perform with one's strengths and one can't build performance on weaknesses. For the majority of the people, to know their strengths was irrelevant only a few decades ago. One was born into a job and into a line of work. The peasant's son became a peasant. If he was not good at being a peasant, he failed. The artisan's son was similarly going to be an artisan, and so on. But now people have choices. They therefore have to know their strengths so that they can know where they belong. The only way to find out one's strengths is the *Feed Back Analysis*. Whenever one makes a key decision, and whenever one does a key action, one writes down what one expects will happen. And six months or twelve months later, one then feeds back from results to expectation. Within a fairly short period of time, this simple procedure will tell people first where their strengths are – and this is probably the most important thing to know about oneself. It will show them what they do or fail to do what they deprive them of the full yield from their strengths. It will show them where they are not particularly excellent. And it will finally show them where they have no strengths and can't perform.

Several action conclusions can be drawn from the Feed Back Analysis.

1. The first and most important conclusion is that “concentrates on your Strengths”. Place yourself where your strengths can produce performance and results.
2. The next important conclusion is that “work on improving your strengths”. Feed Back Analysis rapidly shows where a person needs to improve skills or has to acquire new knowledge. It will show where skills and knowledge are no longer adequate and have to be updated. It will also show the gaps in one's knowledge.
3. The third conclusion points out the person's disability ignorance. This means that the Feed Back Analysis identifies areas where people have *intellectual arrogance* that causes disability ignorance. And if one identifies his intellectual arrogance, then it is his duty to overcome that and works on acquiring the skills and knowledge needed to make the strengths fully productive.
4. An equally important action conclusion is to remedy “one's bad habit” – things one does or fail to do that inhibit effectiveness and performance.
5. The next conclusion from the Feed Back Analysis is “what not to do”. Feeding back from results to expectations soon shows where a person should not try to do anything at all. It shows the areas in which person lacks the minimum endowment needed.
6. The final action conclusion is to waste as little effort as possible on improving areas of low competence. Concentration should be on areas of high competence and high skill. It takes far more energy and far more work to improve from incompetence to low mediocrity than it takes to improve from first-rate-performance excellence. And yet most people try to concentrate on making incompetent person into a low mediocrity. The energy, resources and time should instead go into making a competent person into a star performer.

1

E-Tailing : A Virtual Channel For Shopping

J. Rajan*, Ambili G.S. **

Abstract

The retail market is witnessing a new way of shopping, i.e., Internet Retailing. It is the most innovative and challenging contribution to the retail industry. A large number of consumers are frequently using internet for shopping. This includes a wide range of scenarios such as shopping, entertainment, knowledge- transfer and business exchanges. E-tailing involves retailing by using a variety of technologies. With a few click, the customer can order the products according to their choice. The product will reach to the customer within a few days. E-tailing helps the customers by offers additional channel of information, variety choice for purchase, cost savings and convenience. E-tailing is a convenient shopping method not only to the online buyers but also it helps the retailers in terms of lower distribution costs, less inventory and less human capital. It has become imperative for e-tailers to understand in great depth the purchase behavior of online customer's in order to design and support effective websites that match the preferences of their target markets. Internet retailing had witnessed a remarkable growth in the global scenario by gaining a significant

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share in overall retail sales. E-tailing in India is in growth stage. In India, online business has certainly exhibited an upward thrust with powerful organized retailers venturing in to e-business arena. This study is mainly focused on the growth and importance of e-tailing in Indian economy.

Key words: Retail Market, technologies, Internet, e-tailing, Online Customers.

1. Introduction

E-tailing is a new version of retail marketing. It is not similar to the organized retail shops. It is the most innovative and challenging contribution to the retail industry. According to Meuter et al. (2000) “e-retailing is a virtual realm where products and services exist as digital information and can be delivered through information based channels”. Various marketing activities can be performed more efficiently than ever before with the help of internet. Some of the benefits associated with online marketing include the availability of information. In a relatively short space of time, internet retailing has firmly established itself as a viable alternative to store-based shopping (Rosemary Varkey et. al., 2009).

All e-tailer operate in a similar manner. The e-tailer displays the products in an electronic store-front (the web site of the e-tailer). It contains graphic displays of the products, product catalog and descriptions. Well designed and attractive front page attracts good traffic. The customer makes a selection, after detailed searching. This activates another area of online store known as shopping cart. The shopping cart is software on the web that acts like a basket, where the customer can collect the purchase products. The items in the shopping cart can be added, deleted, or even saved for a future visit. The customer needs to checkout at the completion of sale. At this time, the customer enters the personal and financial data through the internet. There are various payment method available such as credit card, internet money transfer, cash on delivery etc. the customer can choose any one of the payment method according to his/her convenience. After that the customer receives an online conformation notice of the purchase. Next is the turn of e-tailer. The e-tailer processes the order and sends it to the order fulfillment centre, where the product is packed and shipped. The shipping information is informed to the customer, so that the customer can track the order. Normally the customer receives the purchased product after a few days after the purchase process completion

1.1 Objectives

The present study is focused on the following objectives:

1. To study the growth and importance of e-tailing.
2. To analyse the present scenario of e-tailing in Indian economy.
3. To make suggestions for the development of e-tailing in India.

1.2 Methodology

The study is analytical in nature where the fact of information already available has been used. Data collection is accessed on the literature survey report.

2. The Growth and importance of E-Tailing

E-tailing began to work for some major corporations and smaller entrepreneurs from 1997 onwards when Dell computer reported multimillion dollar orders taken at its web site (Sharma D.P, 2009). The electronic retailing to consumers (B2C) was developed on a large scale in the 1980's. E-retailing, defined by Harris and Dennis (2002) as the sale of goods and services via internet or other electronic channels, for personal or household use by consumers, has continued to grow and has made a significant impact in a number of product markets. Internet is one component which has recently become the key ingredient of quick and rapid lifestyle. The internet knows no borders, and customers may often buy the same products at a clearly cheaper price abroad than in their home country. Internet has been the heart of any communications or explorations, connecting with individuals for personal or official purpose. Software such as Microsoft internet explorer, Mozilla Firefox, Google chrome etc facilitate web surfing. One of the main advantages of internet is the uniformity of image across most websites. The internet crosses traditional boundaries and opens up new markets (Andrew .J. Newman. 2002).

Consumer uses internet for many different reasons ranging from only gathering information to purchase products (Forsythe and Boshi, 2003). The key underlying reasons behind e-tailing are consumer time poverty, consumers wanting to have more control over the time and place of transactions, the technology convergence allowing change to take place and growing experience of the benefits of the medium (David Gilbert, 2011). The internet is the greatest direct marketing medium ever invented (Seth Godin., 2006). In the online environment, the customer can experience or interact with the brand more frequently to a greater depth (Dave Chaffey, 2009). In the words of Paco Underhill (2009), internet and e-commerce were the most remarkable discoveries since well, ever. They would allow us to conduct business, trade stocks, buy all these cool gear, antique furniture etc., within the context of united global community. The web stores often have huge assortments,

impossible for conventional retailers to match and can find special products and rarities that are not sold anywhere else and served online retailers have made a business of ‘the long tail’, selling small volumes of hard to find items to many customers, instead of only selling large volumes of a reduced number of popular items as typical brick and mortar retailers. The online companies do not need to run a full-fledged retail operation. They have large ware houses to store the goods. The absence of a brick-and-mortar business model reduces costs vastly and hence they are able to pass on the savings to the customer in the form of discounts. According to Seth Godin (2006); the internet is going to change marketing before it changes almost anything else, and old marketing will die in its path.

2.1 E-tailing classification

1. **Pure plays:** The businesses that operate only through the online channel come under this category. Examples are: *Dell, Amazon, e-Bay*.
2. **Clicks and Bricks:** The businesses that use the internet to push its goods and services but also have the traditional physical store available to customers. Examples are: *Barnes and Nobles, wall mart, Big Bazaar*.
3. **Drop-ship model:** The retailers who do not stockpile, but transfer customer shipment details to the manufacturer or a wholesaler, who ships the product directly to the customer. This model saves the warehousing cost. Inventory costs are major component for e-tailers, if not managed properly, affect the gross margin. Examples are: *Indiaplaza, Naaptol*.

With the fast development of various e-business solutions the companies seek for new opportunities to keep in touch with the consumers and build new type of relationships by opening e-stores and managing e-tailing. E-tailing brings a lot of financial and operational benefits to the customers as well as the e-tailers. Through e-tailing every customers from different parts of the world can visit the related web sites any time (24 hours a day, 7 days a week) and purchase similar products according to their desire. The website is available and open to anyone with an internet connection, irrespective of geography, time zone or computer system. This makes the offer of retail products more accessible to the new global market place. Various players like Tesco, HP, Cisco, Amazon, E-Bay, Lastminute.com etc., and opened electronic stores to satisfy instantly the consumer needs. It allows for easier comparisons across broad product categories with the evolution of this type of mechanisms. It also offers flexible pricing mechanisms to the consumer.

Internet is accelerating and women are fast catching up with men as a spending force. Women often visit a new site a dozen or so times before making a moderate first purchase, typically of about \$50. Men on the other hand tend to buy after just a few visits and to spend larger amounts. But, once women feel comfortable, those spending habits can ramp up fast (Sarah Lacy, Business Week, January 4, 2005). There are two main barriers to stronger e-tail growth; i.e., security and delivery. Retailers are on a steep learning curve in understanding what motivates the internet consumer. The behavior patterns and expectations of the online consumers are different from physical store consumers. There is a significant time lag between going online and buying a product. Shoppers are also much demanding about seeing and experiencing constant newness and getting the best deal. While price discounting has typified retail internet activity; upping value added elements of the offer and leveraging brand values will be essential for retailers as it will lead to greater profitability.

E-tailing offers wide range of information in the form of websites with useful links to similar sites that allow the customers to compare products by looking at individual items. Shopping at the home or office reduce the stresses of finding parking place, searching for products, waiting in lines and dealing with irritating sales people. Nagurney et al., (2001) highlighted the phenomenal increase in the internet based shopping over the distant shopping modes. E-tailing is a great tool for comparison shoppers who visits various sites for bargain shopping or find lowest price for a specific item. According to specialists, a strong business model, a tough search engine and a foolproof delivery system are the key ingredients to make online retail successful. Individual consumers consider each element of e-retail marketing in relation to their culture, attitude, previous experience and personal perception. Online retailers offer discounts, gift coupons, and other offers that physical retailers cannot. For example, in the case of music the customer need not buy an entire CD (Compact Disk) for one song. An online retailer has the license to sell that selected song which the customer can download for a cheaper price than the CD. It is convenient for the customers. Wang et al. (2002) identified several advantages of e-tailing over retailing. E-tailing provides additional distribution channels. Customers can visit the websites, browse the products, and make an order as they do in a traditional store. With the support of advanced information technology, there are no temporal or geographic limitations for retailers or customers. This helps marketers reach larger audiences more efficiently.

2.2 Importance of e-tailing

1. A retailer is restricted to a particular location. But an e-tailer can go global. A Brick-and-mortar retailer has to identify a good location for his operations and wait for

customers. He has only limited area of operation. But an e-tailer has to virtually attract a customer to his site and offer him exemplary services. This leads to increasing the potential customer base.

2. In retailing half of the initial investments go towards acquiring real estate. Post-acquisition of real estate, a retailer has to spend a considerable time, effort and money in setting up his shop, stocking inventory and creating display patterns. The real estate costs in the metropolitan cities are sky high. But an e-tailer has no such hassles. The maintenance cost of virtual store is much less.
3. Easy and comfortably obtained information is another feature of e-tailing. On the internet, product information is just a few clicks away, all accessed in the comfort of a home. In the traditional retailing, the consumer searches frantically, runs up and down, ask help to the store assistants, bargain with the retailer and lost his valuable time. On the other hand, shopping on the internet, spending 15 minutes could save a two hour trip to the retail shop. Consumer prefers to save this time so that they can devote more time for their professional and domestic priorities.
4. An e-tailer can able to establish interaction with large number of customers across the world. i.e.; the ability of reaching customers on an individual basis and react appropriately to responses of individual customers. This will lead to great customer satisfaction and can able to maintain a good relationship with the customers.
5. Disintermediation is another feature of e-tailing. It is the direct selling of goods by the manufacturers to customers. A study conducted by Earnest and Young (1999), found that majority of manufacturers are willing to sell online.

2.3 Reasons for the popularity of e-tailing

1. **User friendly:** Customers can execute transactions through the same medium. So there is no disconnecting between the desire to purchase and the ability to purchase the products and services.
2. **Effective price discrimination:** e-tailers can use price discrimination in an effective and efficient manner. They can use previous transactions to identify the likelihood of products being purchased at certain price points and use this information for price discrimination.
3. **Global reach:** A variety of e-tail sites can be chosen by the e-tail customers. They have a wider choice. The web creates a global market place that brings together multiple consumers and retailers.

4. **Customer interaction:** The e-tailers can able to interact with the customers. Such an interaction allows the retailers to reach the individual customers and react appropriately to their responses. Interaction acts as a vital tool for mass communication. This also leads to greater satisfaction among the online customers.
5. **Search option:** It is easy to find the particular types of goods and services required by the customer, with the help of web search capabilities. The customer decides what he want to purchase rather than the retailer offering what he want to sell. This ultimately leads to customer empowerment.
6. **Comfortability:** The internet offers almost all the required information to the customers. The customers can comfortably sit in to his/her house and easily access product information. Customers normally prefer to save their valuable time so that they can better utilize this technology.
7. **Customization :** E-tailers can change the online display of a product based on the previous transactions in order to increase the visibility of goods that the user is more likely to buy based on the previous encounter at the time of purchase. This allows a contextual design of placement to ensure conversion of a visit to the website in to a sale.
8. **Less investment:** E-tailing is operated through web sites and thus saves drastically on the real estate costs. The real estate costs in the metropolitan cities are sky high. The e-tailers no need to invest in the ware houses, showrooms or other commercial properties at prime locations. They are exempted from maintenance costs also.
9. **Wider choice:** Much wider choice at the fingertips of the consumers. With web search capabilities, it is easier to find the type of goods and services a customer is searching for, catalogs are received passively, at the behest of the retailers.
10. **Wide area of operation:** A retail store is limited in its area of operation. It caters to a specific geographical location. However, the website is globally accessible leading to a worldwide reach and an increased potential customer base.
11. **Internet penetration:** The numbers of internet users are increasing. Internet user largely comprises youth who are technology savvy and have disposable incomes, are big on online shopping. The studies say that India has one of the world's youngest Internet populations, with 75 percent of the users being under 35 years.
12. **Safe payments:** Many e-tailers follow safe payment systems, which enable the growth of online industry. Along with other mode of payments, cash on delivery

(COD) is also introduced; where the e-tailers allow the customers to make their payment at the time of receiving the goods. This system solved the credit card issue.

13. **30- day return policy:** Replacement guarantee or 30-day return policy, offered by online retailers gives the customer the leeway to send back a merchandise he is not satisfied with.

3. E-Tailing Scenario in India

The Indian population is witnessing a significant change in its demographics. The number of nuclear families in India is increasing. Women are earning income, so the spending capacities of the Indian families are increasing. Internet usage in India is growing rapidly. The attitude of people towards shopping is also changing from the regular purchasing to recreational and developing experiences. The lifestyles of Indians are changing rapidly and quickly. Indians have always been great shoppers anywhere in the world. Indians are just beginning to get a taste of things to come. Internet shopping is one such taste which the Indians have begun to savour. The Indian corporate world was quick to realize the commercial potential of the web and embraced it as part of its business and marketing strategies (Gaytri Varma, 2005). In India, e-tailing has begun catching the attention of many entrepreneurs. There are certain firms doing e-tailing business such as rediff.com, jaldi.com, fabmart.com, Tsnshop.com etc. Because of the popularity of internet, e-tailing is assuming greater significance.

A number of products and services are on e-tail offer and novel plans are being worked out by many e-tailers. Initially people were too reluctant to buy anything online due to security risk and what is recognized as the Indian preference for touch and feel. The issue that the retailers in India needs to address whether the internet is able to sustain on its own as a channel or whether it should be used in conjunction with other retail stores. The times are changing though. Many experts believe that the future of online marketing is very promising and expects its exponential growth in the coming years. According to a study, there are 5 million internet users in India and the number is growing. Computer hardware, books, music CD's, travel tickets and gifts are sold through the net in a big way. According to Katherine Bourzac, Business Line, (2011), for every 100 people who visit a retailer web site, only about two will buy something; the other 98 will just leave. But with enough reminders, some of these 98 people might become customers some day.

E-tailing in India can be a success if the e-tailers change their business models and understand their customers more. The work of Sinha and Kar (2010) emphasized the role of internet shopping as a developing retail format in India in the 21st century. India becomes

an exciting e-retail market as middle-class customers with an Internet facility plump for Online shopping (Anupama katakam., 2012) . Online retailers, retail analysts, shoppers and retailers say Indians are finally shedding their fear of online shopping (Frontline 2012). According to a survey conducted by Associated Chamber of commerce and Industry of India (ASSOCHAM), the market size of online retail in India is likely to touch Rs. 7000 crores by 2015 owing to increasing internet penetration. Currently the online retail market stands at Rs.2000 crores and is growing at an annual rate of 35 percent. A survey done by Boston Consulting Group (BCG) in 2011 estimates that India's online retail will touch Rs.8, 400 crores by 2016 and will account for 4.5 percent of the total retail trade in the country. Another report of Comstore Media Matrix report, it was founded that nearly 60 percent of online users in India visited a retail site in November 2011, with the number of online shoppers increasing by 18 percentages in the past year. The report also founded that coupon sites are rapidly gaining in popularity with 16.5 percentage of the Indian online population visiting the category in November, lead by Snapdeal.com Mydala.com.

Conclusion

E-tailing is poised to grow significantly in the coming years in India. Factors such as increased net connectivity, a growing disposable income and increased reliance on plastic money have contributed to this. As internet costs go down and broadband penetration goes up, this segment will experience a leap. The increased competition and rising maintenance costs also meant that e-tailers have struggled to manage higher customer acquisition. The innovations for consumer-centric-services, such as cash on delivery (COD), free shipment, money back guarantee and the option to pay in equated monthly installments (EMI) not only enhanced customer experience, but revolutionized online shopping.

To be successful, the e-tailers will need to choose target segments carefully and position themselves strongly. It is important for retailers to consider how they can use the internet in their own multi-channel operations and how they should respond to the competitive environment. The internet facilitates radical changes in the sale of many goods. The India has made a good start and hopefully the emerging online industry will be productive for the country. Therefore the businesses must boost their efforts to fine-tune operations and lure back existing customers or be left behind. Finally, online shopping websites demonstrate excellent operational competence, so they can deliver high-quality day-to-day performance. It is better to place a proper system and process to facilitate timely transactions with online shoppers and to ensure that the goods and services they receive are strategically consistent. Therefore, online shopping websites need to offer attractive service features that distinguish them from their competitors. By providing sophisticated services and maintain good customer

relationships, internet selling may open up new opportunities to expand business in to new service areas.

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2

Indian Stock Market A Study on Recent Development

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Abstract

The origin of the stock market in India goes back to the end of the eighteenth century when long-term negotiable securities were first issued. However, for all practical purposes, the real beginning occurred in the middle of the nineteenth century after the enactment of the companies Act in 1850, which introduced the features of limited liability and generated investor interest in corporate securities. An important early event in the development of the stock market in India was the formation of the native share and stock brokers 'Association at Bombay in 1875, the precursor of the present day Bombay Stock Exchange. In stock market, share prices rise and fall depending, largely, on market forces. Share prices tend to rise or remain stable when companies and the economy in general show signs of stability and growth. An economic recession, depression, or financial crisis could eventually lead to a stock market crash. The government of India introduced many schemes and agencies, to attract investors in stock market and to protect the interest of investors in stock market. Now, the market features a developed regulatory mechanism and a modern market infrastructure with growing market capitalization, market liquidity, and mobilization of resources.

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Introduction

The Indian stock market is one of the earliest in Asia being in operation since 1875, but remained largely outside the global integration process until the late 1980s. The Indian stock market has become the third biggest after China and Hong Kong in the Asian region. Globalization and technological developments have led to widespread liberalization and implementation of stock market reforms in many countries, mainly focusing on integrating the stock markets with the global market. The application of many reforms and developments in Indian stock market has made it comparable with the international stock markets.

According to the latest report by ADB, it has a market capitalization of nearly \$600 billion. As of March 2009, the market capitalization was around \$598.3 billion (Rs 30.13 lakh crore) which is one-tenth of the combined valuation of the Asia region. World over, the investors today seem to gain by the growth in stock market activity. Conceptually, well-developed financial infrastructure is important for growth of the stock market activity in a given economy due the efficient underlying functions the financial institutions are expected to perform. The co integration among the global stock markets is significant to quick flow of data and information from one market to another and to develop these markets.

The share market may be classified as primary market and secondary market.

Primary Market

The primary market is an intermittent and discrete market where the initially listed shares are traded first time, changing hands from the listed company to the investors. It refers to the process through which the companies, the issuers of stocks, acquire capital by offering their stocks to investors who supply the capital. In other words primary market is that part of the capital markets that deals with the issuance of new securities. Companies, governments or public sector institutions can obtain funding through the sale of a new stock or bond issue. This is typically done through a syndicate of securities dealers. The process of selling new issues to investors is called underwriting. In the case of a new stock issue, this sale is called an initial public offering (IPO).

Secondary Market

The secondary market is an on-going market, which is equipped and organized with a place, facilities and other resources required for trading securities after their initial offering. It refers to a specific place where securities transaction among many and unspecified persons is carried out through intermediation of the securities firms, i.e., a licensed broker, and the exchanges, a specialized trading organization, in accordance with the rules and regulations established by the exchanges.

Scope and Significance

In stock market, share prices rise and fall depending, largely, on market forces. Share prices tend to rise or remain stable when companies and the economy in general show signs of stability and growth. An economic recession, depression, or financial crisis could eventually lead to a stock market crash. Therefore movement of an investor to stock market involves huge risk. They seek a large amount of developments in stock market regularly. This study tries to analyze the reforms in Indian stock market and helps to know the recent developments in Indian stock market.

Objective

The objective of the study is to analyze the recent developments in Indian stock market.

Methodology

Secondary data are used for this study. Secondary data are collected from different text books, journals, websites etc.

Recent Developments in Indian Stock Market

The major developments undertaken by Indian stock market includes:-

Rajiv Gandhi Equity Saving Scheme

Rajiv Gandhi Equity Saving scheme was introduced in the budget (2012-13) this year by the Finance Minister. This is first of its kind scheme in India which allows the retail investor to invest up to Rs.50, 000 directly into equity shares and avail tax benefit on 50% percent of investment made directly into equity shares.

Some of the conditions put under the scheme to avail tax benefits are

- 1) The investor should have income of less than Rs. 10 lakhs in a year,
- 2) The benefit under the scheme will be given to the first time investors into equity market only,
- 3) Investments will be subject to lock-in period of three years and
- 4) If the assessee has claimed and has been allowed a deduction under this section for any assessment year in respect of any amount, he shall not be allowed any deduction under this section for any subsequent assessment year. This is as per Section 80CCG.

Smart Order Routing (SOR) System

National Stock Exchange (NSE) of India introduced the Smart order routing [SOR], recently [Apr 2011], which would allow the orders to pass from NSE to various other

Arun Lawrence, Shijina A.S.

stock exchanges. What SOR does is that it looks for the best possible price across various exchanges. So if Reliance is trading at 995 in NSE and at 1000 in BSE, this SOR system would execute your order on NSE and thus save you Rs 5 per share. Smart order routing is a new phenomenon in our markets, though this concept is already in existence in US, UK and Saudi markets.

What SOR would further do is that it will bring in more algorithmic trading. Algorithmic or Program trading is again a new concept in Indian financial markets. NSE bought it in early 2009 and BSE too started algorithmic trading in early 2010. What Algorithmic trading means is that instead of manual orders, the control would be given to the algorithms which will decide when to take position in the market and when to square off the positions. So with these algorithms various strategies can be developed, and without manual intervention, these algorithms can generate huge profits for the traders.

Introduction of ASBA account

ASBA means “Application Supported by Blocked Amount”. It is a process developed by the Securities and Exchange Board of India (SEBI) for applying to IPO. In ASBA, an IPO applicant’s account doesn’t get debited until shares are allotted to them. ASBA is an application containing an authorization to block the application money in the bank account, for subscribing to an issue. If an investor is applying through ASBA, his application money shall be debited from the bank account only if his/her application is selected for allotment after the basis of allotment is finalized, or the issue is withdrawn/failed.

The procedure of applying in IPO through ASBA account is;

Under ASBA facility, investors can apply in any public/ rights issues by using their bank account. Investor submits the ASBA form (available at the designated branches of the banks acting as SCSB) after filling the details like name of the applicant, PAN number, demat account number, bid quantity, bid price and other relevant details, to their banking branch by giving an instruction to block the amount in their account. In turn, the bank will upload the details of the application in the bidding platform. Investors shall ensure that the details that are filled in the ASBA form are correct otherwise the form is liable to be rejected.

Establishment of SEBI:

The Securities and Exchange Board of India (SEBI) was established in 1988. It got a legal status in 1992. SEBI was primarily set up to regulate the activities of the merchant banks, to control the operations of mutual funds, to work as a promoter of the stock exchange activities and to act as a regulatory authority of new issue activities of companies. Under

the purview of the SEBI the Central Government of India has set up the Investors Education and Protection Fund (IEPF) in 2001. It works in educating and guiding investors. It tries to protect the interest of the small investors from frauds and malpractices in the capital market. The SEBI was set up with the fundamental objective, “to protect the interest of investors in securities market and for matters connected therewith or incidental thereto.”

The main functions of SEBI are:-

- To regulate the business of the stock market and other securities market.
- To promote and regulate the self regulatory organizations.
- To prohibit fraudulent and unfair trade practices in securities market.
- To promote awareness among investors and training of intermediaries about safety of market.
- To prohibit insider trading in securities market.
- To regulate huge acquisition of shares and takeover of companies.

Establishment of Credit Rating Agencies:

Three credit rating agencies viz. The Credit Rating Information Services of India Limited (CRISIL - 1988), the Investment Information and Credit Rating Agency of India Limited (ICRA - 1991) and Credit Analysis and Research Limited (CARE) were set up in order to assess the financial health of different financial institutions and agencies related to the stock market activities. It is a guide for the investors also in evaluating the risk of their investments.

Rolling settlement

The rolling settlement ensures that each day's trade is settled by keeping a fixed gap of a specified number of working days between a trade and its settlement. At present, this gap is two working days after the trading day. The waiting period is uniform for all trades. In a Rolling Settlement, all trades outstanding at end of the day have to be settled, which means that the buyer has to make payments for securities purchased and seller has to deliver the securities sold. In India, we have adopted the T+2 settlement cycle.

Growth of Derivative Transactions:

Derivatives are contracts that are based on or derived from some underlying asset. Most common financial derivatives that are used in shares are futures and options. Since June 2000, the NSE has introduced the derivatives trading in equities. In November 2001 it also introduced the future and options transactions. These innovative products have given variety for the investment leading to the expansion of the stock market.

Conclusion

The origin of the stock market in India goes back to the end of the eighteenth century when long-term negotiable securities were first issued. However, for all practical purposes, the real beginning occurred in the middle of the nineteenth century after the enactment of the companies Act in 1850, which introduced the features of limited liability and generated investor interest in corporate securities. Stock market investment is open to both the large and small stock investors because a person buys the number of shares they can afford. Therefore the Stock Exchange provides the opportunity for small investors to own shares of the same companies as large investors.

The government of India introduced many schemes and agencies to attract investors in stock market and to protect the interest of investors in stock market. Now, the market features a developed regulatory mechanism and a modern market infrastructure with growing market capitalization, market liquidity, and mobilization of resources.

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3

CUSTOMER PERCEPTION ON RETAIL INDUSRY IN KERALA

J.Rajan * & Baiju.J.J **

Abstract

Perception is the process of attaining awareness or understanding of the environment by organizing and interpreting sensory information. The service offered at any retail stores may be perceived positively by a certain set of customers due to the opportunity it provides them to look up the product at leisure. While another set of customers may perceive it negatively. The traditional retail industry in India comprised of large, medium and small grocery stores and drug stores which could be categorized as unorganized retailing. Organized retail business in India has entered in 1990s but become more popular after 2002 onwards and organized retail stores become the part of middle class family from 2006 onwards. The customers perceive these two retail sectors in different manners. This paper tries to identify the factors affecting the customer perception in organized and unorganized retail sector.

Key Words: Perception , Sensory information ,Organized retailing .

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Introduction

Perception is the process of understanding of the environment by organizing and interpreting sensory information. All perception involves signals in the nervous system, which in turn result from physical stimulation of the sensory organs. Recognition, selection, organization, and interpretation of particular stimulus are a highly individual process subject to individual needs, values, and expectations. A stimulus is any unit of input to any of the senses. The same stimulus may be perceived differently by different set of customers based on their unique personal and situational context.

Retail comes from the French word *retailer* which refers to “cutting off, clip and divide” in terms of tailoring. Retailing consists of the sale of goods or merchandise, from a fixed location such as a department store or kiosk, in small or individual lots for direct consumption by the purchaser. It has been started from religious fairs which used to be held at some religious places and on some religious occasion, but with the emergence of high profits in selling the overproduced production, then it become a business to earn a livelihood. Earlier, people use to wander here and there for their but when they find difficulty in it they started the business as shops known as retail shops. Organized retail is nothing but a retail place all the items are segregated and brought under one roof, unlike the unorganized retail where there are different things are sold in different shops. Most of the organized retailing in India had recently started and was mainly concentrated in metropolitan cities. India is called a nation of shop-keepers but in the recent past time organized retail business has entered into Indian retail market. India’s large youth population is driving the consumerism trend in country. Organized retail business in India has entered in 1990s but become more popular after 2002 onwards and organized retail stores become the part of middle class family from 2006 onwards.

Literature Review

Sharif Menon (2011) explained that brand identities were designed to reassure a public anxious about the whole concept of factory produced goods. Brands have transformed the process of marketing into one of perception building, so, image is now everything. Consumers make buying decisions based around the perception of the brand, rather than the reality of the product. Perception is a fragile thing. Dr. Joshi Sandhya (2011) explained that the surest path to a strong business bottom line is assuring that customers receive the highest appropriate quality of service across multiple applications and delivery mechanisms. S.P. Thenmozhi Raja, Dr. D. Dhanapal & Dr. P. Sathyapriya (2011) explained that perception of retail service quality varies across different cities, the retailers can meet the customer expectations based on the factors drive them. Fulbag Singh and Davinder Kaur (2011),

explained that an organization can not survive in the long run if its customers are not satisfied. Therefore, it is the utmost duty of an organization to safeguard his interest and meet his expectations with the product/service offered.

K.C. Mittal and Anupama Parashar (2010) explained that irrespective of area, people prefer grocery stores to be nearby, product assortment is important for grocery. Ambience of the grocery stores has been perceived differently by people of different areas and prices are equally important for all grocery. Dr. Chandan A. Chavadi and Shilpa S. Koktanur (2010), tried to find out the various factors (product mix, ambience, services and promotional strategies) driving customers towards shopping malls and consumer buying response for promotional tools. Hazra Sandip Ghosh & Srivastava Dr. Kailash B.L. (2010), service quality has become vital for service firms to pay attention due to increased competition. Therefore, firms are using service enhancement and are developing a range of techniques to measure service quality improvement.

Theoretical Framework

Through the deep review of literature the researcher identified factors such as; Price, Quality, Services, Distance, Variety, Cleanliness, Safety, Behavior, Good and Space for the study of customer perception on retailing industry

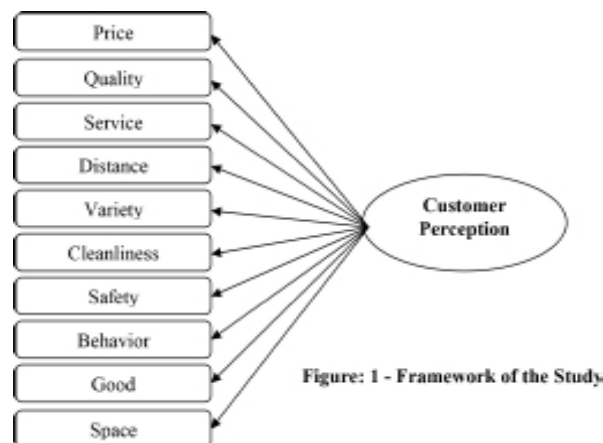


Figure: 1 - Framework of the Study.

Objective of the Study:

1. To study the prime factors influencing customer perception.
2. To compare the customer perception of the organized and unorganized retail industries.

Methodology of the Study

This study is descriptive in nature. The population for study is customers who have visited the departmental stores, grocery shops, local market, vendors, supermarkets in Ernakulam. Sample size of the study is 75 respondents. Convenience sampling method has been followed for collecting the data. The study is based on both primary and secondary data. The primary data has been collected by a self-structured questionnaire through interview method and secondary data has been collected from books, manuals, journals and internet.

Tools for analysis:

Factor Analysis and correlation have been used to analyze the data and get results. Factor analysis is basically used to condense the larger number of variables in fewer variables and here, this technique is used to determine significant factors influencing customer choice regarding retail industry.

Data Analysis and Interpretation

The below table inferred that respondents prefer the quality most in the selected variables for the study. The second important factor is considered to be prices and the third are services of the retail store and distance of retail store from their house. The other important factors are availability of variety of goods, goods availability, cleanliness, behaviour and safety. The least important factor as considered by the respondents is availability of space as they consider it to be dissatisfiers.

	Mean	Std. Deviation
Price	6.94	2.52
Quality	6.15	2.44
Services	5.17	2.35
Distance	5.18	2.29
Variety	5.04	2.20
Cleanliness	4.84	2.24
Safety	4.67	2.48
Behavior	3.81	2.50
Goods	4.25	2.54
Space	2.88	2.78

Table: 1 - Average weightage of customer for retail stores

The above table: 1 inferred that quality is the most selected variable for the study. The second important factor is price and the third are services of the retail store and distance of retail store from their house. The other important factors are availability of variety of goods, cleanliness, behavior and safety. The least important factor as considered by the respondents is availability of space as they consider it to be dissatisfiers.

	Prices	Quality	Services	Distance	Variety	Cleanliness	Safety	Behaviour	Goods	Space
Prices	1.000	.586	.318	.367	.101	-.192	-.276	-.215	-.179	-.328
Quality	.586	1.000	.351	.404	.144	-.212	-.256	-.165	.010	-.489
Services	.318	.351	1.000	.126	-.031	-.136	-.009	.010	-.171	-.290
Distance	.367	.404	.126	1.000	.186	-.145	-.366	-.270	-.083	-.209
Variety	.101	.144	-.031	.186	1.000	-.049	-.110	-.090	.007	.061
Cleanliness	-.192	-.212	-.136	-.145	-.049	1.000	.508	.047	-.063	.187
Safety	-.276	-.256	-.009	-.366	-.110	.508	1.000	.152	-.031	.138
Behaviour	-.215	-.165	.010	-.270	-.090	.047	.152	1.000	.075	.208
Goods	-.179	.010	-.171	-.083	.007	-.063	-.031	.075	1.000	.208
Space	-.328	-.489	-.290	-.209	.061	.187	.138	.208	.208	1.000

Table: 2 correlation between Factors

Table -2 shows there is high positive correlation between price and quality. Price also has positive correlation with services, distance and availability of variety of goods. Price has a negative correlation between cleanliness, safety, behavior of staff and management, availability of goods, and space availability.

Services of a retail store are positively correlated with prices and quality. Besides prices and quality, it is positively correlated with distance of retail store from the respondents' house and behavior of staff and management. Services of a retail store are not correlated with the availability of variety of goods, cleanliness, safety, availability of goods and space availability.

Cleanliness is negatively correlated with most of all the factors except safety, behavior of staff and management and space availability.

Safety is also negatively correlated with all other factors except cleanliness, Behavior of staff and management and space availability.

	N	Mean	Std. Deviation	Std. Error Mean	Sig. (2- tailed)	t
Prices	255	6.38	2.352	.147	.010	2.583
quality	255	6.03	2.212	.139	.810	.241
services	255	5.89	2.280	.143	.447	-.761
distance	255	6.73	2.402	.150	.000	4.875
variety	255	5.92	2.258	.141	.561	-.582
cleanliness	255	5.66	2.247	.141	.018	-2.383
safety	255	5.44	2.387	.149	.000	-3.725
behaviour	255	5.94	2.258	.141	.658	-.444
goods availability	254	5.96	2.260	.142	.760	-.305
space availability	255	5.43	2.413	.151	.000	-3.750

Table: 3 - Customer Perception of Unorganised Retail Sector

Table-3 explains: Easy approachability of unorganised retail stores like kirana stores, departmental stores near by to their houses & the local markets near to their home place and prices are affordable to their pocket. They perceive the quality of the unorganised retail stores as the moderate factor to satisfy them.

Customers also perceive that :

- the services of the unorganised retail sector are unsatisfactory;
- availability of variety and goods are not sufficient in unorganised retail sector;
- behavior of staff and management in unorganised retail sector is not that much friendly;
- the unorganised retail stores are also that secure from the various factors;
- The unorganised retail stores are not spacious as there is no display facility.

	N	Mean	Std. Deviation	Std. Error Mean	Sig. (2-tailed)	t
Prices	255	6.57	2.794	.175	.001	3.261
Quality	255	7.00	2.676	.168	.000	5.956
Services	255	6.72	2.601	.163	.000	4.419
Distance	255	6.15	2.700	.169	.361	.916
Variety	255	6.44	2.737	.171	.011	2.551
Cleanliness	255	6.55	2.694	.169	.001	3.242
Safety	255	6.37	2.689	.168	.027	2.224
Behaviour	255	6.32	2.751	.172	.068	1.833
Goods availability	255	6.22	2.768	.173	.210	1.256
Space availability	255	6.33	2.898	.181	.072	1.804

Table:3 -Customer Perception of Organised Retail Sector

Table :3 explains in the organised retail sector, the customers perceive that this retail sector provides better quality and services to them as compare to unorganised retail sector. Customers also perceive that the prices charged by the organised retail sector are worth according to the quality provided to them. The organised retail store are much more clean than unorganised retail stores. Customers have the perception that these organised retail sector provide better variety of products to them. Customers perceive that the organised retail stores are more secure and staff and management of these stores is friendlier as they are trained employees. Customers also perceive that these stores are also spacious as they provide display facility of the products. The organised retail stores are very far from their home place which leads to purchase of their perishable products and day to day products from the unorganised retail stores and they also perceive that these organised retail stores don't have availability of goods demanded by them whereas they provide the other variety of the same product which may generally be their own label branded product.

CONCLUSION

According to this study, it is very clear that the customers perceive the organised retail sector as the better option as compare to unorganised retail sector for the selected variables. The organised retail stores are very far from their home place which leads to the existence of the unorganised retail sector. Organised retail industry is also limited to urban areas only which means it has not been extended to the rural areas. So in these rural areas unorganised retailing is successful.

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4

Occupational Stress among employees in the UAE Construction Industry

***Ms. Chithra Mohan. K & **P. N. Prasad**

Abstract

A literature review was conducted in the topic of occupational stress and corresponding stress management techniques among different levels of personnel in the construction industry in United Arab Emirates, where the construction industry depends largely on foreign expatriate labour. As the UAE undergoes one of the largest construction booms in the world, at least half a million migrant construction workers are employed there. Behind the glitter and luxury, the experiences of these migrant workers present a much less attractive picture of wage exploitation, indebtedness to unscrupulous recruiters, and working conditions that are hazardous to the point of being deadly. The primary objective of the study is to know the current level of occupational stress experienced by them and to identify the most common stressors identified by the employees. The result from this study is that the job stress comes down when the employee is paid well. A person who experience occupational stress will express symptoms like depressed mood, excessive drinking, irritability, difficulty concentrating, poor decision making, planning deteriorates, worry and anxiety, insomnia, headaches and changes in lifestyle habits.

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Key words Occupational Stress, Work Overload, Job satisfaction, Distress

Introduction

Working in a stressful environment increases the risk both of suffering physical illness or symptoms of psychological distress (Cooper and Cartwright 1994; Cooper and Payne 1988), and also work-related accidents and injuries (Sutherland and Cooper 1991). The substantive body of well-documented research evidence supporting a causal relationship between working conditions, both physical and psychosocial, and individual health and well-being, has legitimized the concept of stress-induced illness and disease. Contemporary definitions of stress tend to favour a transactional perspective; this emphasizes that stress is located neither in the person nor in the environment, but in the relationship between the person and the environment (Cooper et al. 2001). Within this perspective the term 'stress' refers to the overall transactional process, not to any specific elements, such as the individual or the environment. Stress arises when the demands of a particular encounter are appraised by the individual as about to exceed the available resources and, therefore, threaten well-being, and necessitate a change in individual functioning to restore the imbalance (Lazarus 1991). Stressors refer to the events that are encountered by individuals, while strain refers to the individual's psychological, physical and behavioral responses to stressors (Beehr 1998).

The work place stressors that have been investigated by researchers in relation to work accidents have focused on intrinsic job characteristics (quantities workload, work schedules and exposure to risk and hazards), organizational roles (role ambiguity, role conflict and role overload), relationship at work (quality of interpersonal relationships and lack of social support from others in the work place) and career development (job insecurity), with little attention given to the home-work interface. The safety literature has emphasized the role of organizational structure and climate in the causation of accidents, but few researchers have examined these variables in the context of their potential to act as sources of strain. Cartwright and Cooper (2002) designed ASSET specifically as a stress audit tool to be used by industry, rather than as a research instrument. Previous measures, such as the OSI (Occupational stress indicator), have been developed for use with managerial and/or white-collar populations; however, ASSET is aimed at a wider organizational setting. It measures eight sources of stress (workplace stressors), physical health, psychological well-being and organizational commitment. The theoretical basis of the ASSET instrument has similar roots to the OSI, assuming a transactional perspective of the stress process.

Objectives of the study

This study was conducted with the objective of identifying the most common stressors causes and symptoms of occupational stress among the employees working in construction industry in UAE, mainly concentrating on Dubai. This study will also comprehend whether the employees working in the construction industry feel stressed or not.

Research Methodology

Using convenience sampling method a sample size of 50 was taken from among employees those who are working in different companies in the construction field in UAE. Based on the data from the Dubai Statistical Center (2008) there are around 8 lakh Indian employees are working different construction companies. The study was conducted by collecting data through primary sources such as questionnaires, interviews etc. The data was collected by using structured questionnaires which was send through electronic mail. For comprehensive investigation Karl Pearson's co-efficient of correlation techniques, chi-square techniques, Weighted Average and percentage analysis were used. Secondary sources of data are taken from journals, books, internet websites etc were used by the researcher.

About Construction Industry

The UAE Construction industry is made up of a mix of different nationalities, common to the overall Gulf region and has the following characteristics.

a) Demographic Influences:

The UAE population is relatively low compared to the influx of foreign workers in UAE, especially in the construction industry. Foreigners constitute 95 percent of the workforce in the UAE, and as of 2005, there were 2,738,000 migrant workers in the country. As per the Dubai Statistical Survey 2008 there are around 8 lakh Indian employees working in the construction sector in Dubai. (Dubai Statistical Survey 2007).

b) Diverse Background / Culture Differences

The labour force from these countries have a varied background in terms of culture, education, family background, and individual cases of the need to work overseas to care for specific requirements back home. Some are skilled, some are semi skilled; some have GULF experience, some do not. Productivity from a set of people with similar background also varies.

c) No organized unions or agreed productivity rates

UAE law does not allow organized unions for workmen, nor has statistics on standard productivity rates, except for some surveys on National Workplace Employment Relations (2001). Each contractor has his own experience and database to go by.

d) Environmental Conditions

The UAE has a hot humid climate with temperatures reaching up to 45-47 degrees centigrade and relative humidity, varying from 40 -80 and in some cases up to 95%. The UAE Labour Law stipulates midday break from 12.30 -3.30 pm during the hottest months of July and August every year.

e) Living Conditions

Most of the workmen are housed in labour camps 8 to a room with / without cooking facilities. It is common to find that monthly salaries are retained for up to two months for workmen by most of the contractors. Most workmen go on leave once every two years. High inflation and cost of transport limits their ability to shop and move around.

f) Sponsorship Laws

UAE Labour laws does not allow free movement of labour, except for some exempt categories such as Engineers, Doctors, Qualified Accountants, etc. that too only after they have served at least one year with the current sponsor.

g) Cheap Labour & Short Term Focus

Compared to the liquidity in the region; and the value of the contracts / construction projects, the cost of labour is relatively cheap. This sometimes stifles productivity as contractors would rather push in more people and get the job completed rather than go in to the hassles of increasing productivity. Also most of the projects are of 1½ to 2 years duration; workmen allocated to the project are new / from other sites and teams are formed new.

Analysis of the study and inference**Data Analysis****1. To test the influence of remuneration package on job feeling**

In order to study the influence of remuneration package introduced by the companies on job feeling of the employees, an analysis has been done using correlation.

Table NO:1 Showing the correlation among the variables.

Correlations			
		Remuneration Packages	Job Feeling
Remuneration Packages	Pearson Correlation	1	.142
	Sig. (2-tailed)		.327
	N	50	50
Job Feeling	Pearson Correlation	.142	1
	Sig. (2-tailed)	.327	
	N	50	50

Source: Primary Data (Correlation among Remuneration and Job feelings)

An Analysis has been conducted by using Karl Pearson's co-efficient of correlation technique to examine the influence of remuneration packages of the companies on job feelings, and it is realized that there is a positive correlation coefficient (0.142) between the remuneration packages and the job feelings. This indicates that the employees who are paid well are experiencing a very good satisfaction level.

1. Symptoms of Occupational Stress and its intensity.

Here the researcher has identified ten symptoms of Occupational stress viz Depressed mood, Excessive drinking, Irritability, Difficulty concentrating, Poor decision-making, Planning deteriorates, Headaches, insomnia, Worry and anxiety and changes in lifestyle habits to test whether these variables are independent. Chi square test will be used to measure the dependency of variables.

H0: The symptoms of Occupational stress and intensity are independent.

H1: The symptoms of Occupational stress and intensity are not independent.

Table NO:2 Symptoms of Occupational stress and its intensity

Symptoms * Occupational Stress Cross tabulation

		Never	Rarely	Some- times	Very Often	Always	Total
Symptoms	Depressed Mood	1	0	1	0	0	2
	Excessive Drinking	0	0	4	0	1	5
	Irritability	0	0	4	1	5	10
	Difficulty Concentrating	0	0	5	2	1	8
	Poor decision-making	0	0	2	2	2	6
	Planning deteriorates	0	0	1	1	2	4
	Headaches	0	1	0	1	2	4
	Insomnia	0	0	0	2	2	4
	Worry and Anxiety	0	0	0	1	2	3
	Changes in lifestyle habits	0	0	1	1	2	4
Total		1	1	18	11	19	50

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	52.594 ^a	36	.037
Likelihood Ratio	33.958	36	.566
Linear-by-Linear Association	6.746	1	.009
N of Valid Cases	50		

Source: Primary Data

The frequency observed [O] under each symptom is mentioned in the above table. The expected frequency was derived by using the following formula;

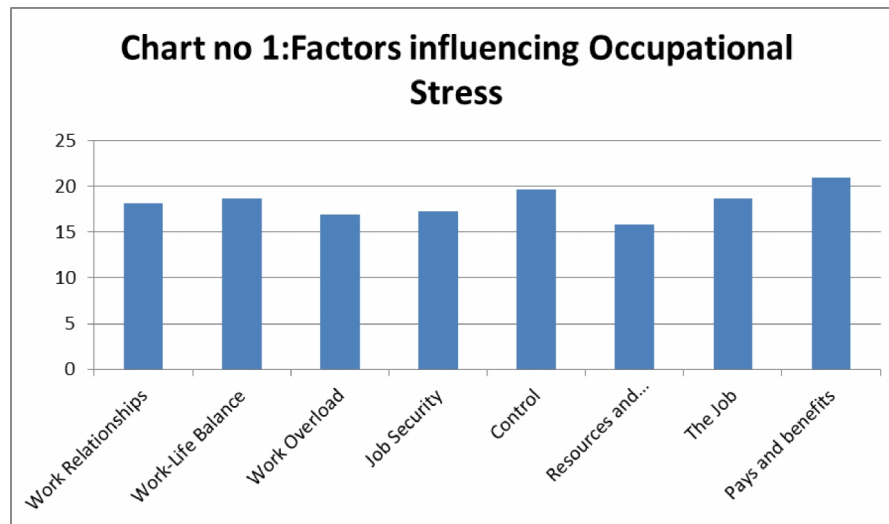
$$\text{Expected Frequency (E)} = \frac{\text{Row Total} \times \text{Column Total}}{\text{Grand Total}}$$

$$\text{Chi square} = \sum \frac{(O_i - E_i)^2}{E_i}$$

Table Value of Chi Square at 5% level of significance and degree of freedom 36 is less than 52.594. Here the calculated value is 52.594. Calculated value is numerically greater than table value. So we reject the null hypothesis. Hence we can comprehend that the symptoms of occupational stress are dependent and a person who feel stressed out can express any of the symptom.

3. To analyze the weightage of various factors influencing Occupational Stress

Weighted average techniques were used to measure the factors that lead to occupational stress. Eight factors were identified the weighted average mean has been calculated separately for various factors and it is derived that stress is arising mainly arising due to problems in pay and benefits(20.2).



SUGGESTIONS

This study reveals that employees in the construction sector are experiencing work stress as a result of not sufficient pays and benefits, lack of proper control on the job and lack of balance between work and life. As a result of this analysis UAE government can take some of the following measures for minimizing feeling of work stress among employees.

1. Establish an independent commission to investigate and publicly report on the situation of the migrant workers in the country.
2. Prohibit companies from doing business with recruitment agencies, in the UAE and abroad, that charge workers fees for travel, visas, employment contract or anything else. Prosecute and implement significant penalties for employers and recruiting agencies that violate the law.
3. Aggressively investigate and prosecute employers who violate other provisions of the UAE labour law. Impose meaningful and consequential penalties on companies that violate workers rights, to put an end to the present atmosphere of impunity.
4. Provide quantitative and qualitative data on labour disputes, deaths and injuries at construction sites, and government actions to address these issues.
5. Give workers opportunities to participate in decisions that affect their jobs.
6. Consult employees about scheduling and work rules.

7. Be sure the workload is suitable to employees' abilities and resources; avoid unrealistic deadlines.
8. Show that individual workers are valued.
9. Offer rewards and incentives.
10. Praise good work performance, both verbally and officially, through schemes such as Employee of the Month.
11. Provide opportunities for career development.
12. Promote an "entrepreneurial" work climate that gives employees more control over their work.

Conclusion:

It is a fact that the concept of occupational stress, its management and impact on individuals and organizations has been receiving a great deal of attention now. One of the reasons for this may be due to fast work or professional life and deadlines of work. The result from this study is that the job stress comes down when the employee is paid well. A person who experience occupational stress will express symptoms like depressed mood, excessive drinking, irritability, difficulty concentrating poor decision making, planning deteriorates, worry and anxiety, insomnia, headaches and changes in lifestyle habits. And also we can see that the feeling about pay and benefits, the control on the job, and the work-life are three most influencing factors that cause Occupational stress. Thus Occupational stress has become a part of one's life, it's how you respond that counts. It is obvious therefore, that stress cannot be totally eliminated, but could be minimized to a manageable magnitude so that it improves both efficiency and psychosomatic wellness or else it may damage your performance and your health.

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5

E-Waste Management – Problems and Solutions

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Abstract:

Electrical and Electronic Equipments (EEE) are inevitable to human beings from cradle to grave. As the population increases at geometric progression and the life span of the EEE slashes drastically due to numerous reasons, the accumulation of Electrical and Electronic Equipment Waste (E-Waste) occurs at an alarming rate ; creating Environmental, Social and economic impact to society. A report of the United Nations predicted that by 2020, e-waste from old computers would jump by 400 per cent on 2007 levels in China and by 500 per cent in India. Additionally, e-waste from discarded mobile phones would be about seven times higher than 2007 levels and, in India, 18 times higher by 2020. This large scale accumulation of the E-Waste should be controlled, harmful element in the E-Waste need be reduced, Best Available Technology need be applied for recycling E-Waste, recycling units in both formal and informal sectors need be integrated by considering Indian condition, Extended Producers Responsibility (EPR) need be effectively implemented and E-Waste Management Laws should be enforced strictly. In this respect, all the stake holders should be made aware of impact of e-waste. If the pollution from the e-waste

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is not brought within the limit, it shall wipe out human beings from the globe itself. On the other hand, e-waste recycling in India can be made profitable and environment-friendly, if it is managed scientifically through the integration of the informal sector with formal sector.

INTRODUCTION

E-waste is one of the fastest growing waste streams in both developed and developing countries. The increasing “market penetration” in developing countries, “replacement market” in developed countries and “high obsolescence rate” of Electrical and Electronic Equipment (EEE) makes e-waste a hard nut to crack. The life span of the EEE has dropped drastically mainly due to the dynamic technological changes, reduction in the prices of the product, modern life style, increase in living standard of people, argumentation of economic growth and so on. For example, life span of computers has dropped in developed countries from six years in 1997 to just two years in 2005 and mobile phones have a lifespan of even less than two years¹. Around 130000 computers are thrown out every day in USA and over 100 million mobile phones are thrown out annually². Developed countries properly recycle only an insignificant portion of e-wastes and the balance is either exported/dumped to developing countries or used for landfill³. In developing countries also, the situation is not reverse. These deeds ultimately result in polluting air, water, soil and contaminate food chain; affect the health of flora and fauna and turn the entire globe into a graveyard through the deposit of hazardous e-waste. Therefore, it is highly essential to reduce, reuse and recycle e-waste by making awareness among stake holders, enacting adequate laws and properly implementing it.

E-waste consists of all waste from electronic and electrical appliances which have reached their end-of-life or are no longer fit for their original intended use and are destined for recovery, recycling or disposal. The EU defines this new waste stream as ‘Waste Electrical and Electronic Equipment’ (WEEE)⁴. Section 3(k) of the Indian E-Waste (Management and Handling) Rule 2011 defines e-waste as ‘waste electrical and electronic equipment, whole or in part or rejects from their manufacturing and repair process, which are intended to be discarded’⁵. EEE means equipment which is dependent on electric currents or electromagnetic fields in order to work properly and equipment for the generation, transfer and measurement of such currents and fields falling under the categories set out in Annex IA and designed for use with a voltage rating not exceeding 1000 Volt for alternating current and 1500 Volt for direct current⁶. E-waste includes computer and its accessories, monitors, printers, keyboards, central processing units; typewriters, mobile phones and chargers, remotes, compact discs, headphones, batteries, LCD/Plasma TVs, air conditioners, refrigerators and other household appliances⁷. The composition of e-waste is

diverse and falls under ‘hazardous’ and ‘non-hazardous’ categories. Broadly, it consists of ferrous and non-ferrous metals, plastics, glass, wood and plywood, printed circuit boards, concrete, ceramics, rubber and other items. Iron and steel constitute about 50% of the waste, followed by plastics (21%), non-ferrous metals (13%) and other constituents. Non-ferrous metals consist of metals like copper, aluminium and precious metals like silver, gold, platinum, palladium and so on⁸. The presence of elements like lead, mercury, arsenic, cadmium, selenium, Hexavalent chromium, and flame retardants beyond threshold quantities make e-waste hazardous in nature. In short, E-Waste contains over 1000 different substances, many of which are toxic, and creates serious pollution upon disposal⁹. In 2006, the International Association of Electronics Recyclers (IAER) projected that 3 billion electronic and electrical appliances would become WEEE or e-waste by 2010. This would tantamount to an average e-waste generation rate of 400 million units a year till 2010. Globally, about 20-50 MT (million tonnes) of e-wastes is disposed off each year, which accounts for 5% of all municipal solid waste¹⁰. According to the Comptroller and Auditor- General’s (CAG) report, over 7.2 MT of industrial hazardous waste, 4 Lakh tonnes of electronic waste, 1.5 MT of plastic waste, 1.7 MT of medical waste, 48 MT of municipal waste are generated in the country annually¹¹. In 2005, the Central Pollution Control Board (CPCB) estimated India’s e-waste at 1.47 Lakh tonnes or 0.573 MT per day¹². The study conducted by GTZ-MAIT (Deutsche Gesellschaft für Internationale Zusammenarbeit - Manufacturers’ Association for Information Technology) in India during 2007 shows that a lion’s share of annual e-waste generated consists of three components – Televisions, Computers and Mobile¹³.

The main problem in connection with e-waste are:

1. E-waste consists of both hazardous metals and fringe commodity,
2. E-waste is illegally imported/dumped to India from developed countries such as America, Britain, etc.,
3. About Five Per cent of the E-Waste is properly recycled,
4. Ninety five Percent of the e-waste is handled by informal sector by adopting rudimentary and unscientific method of recycling. This creates environmental and social impact on the community,
5. Most of the stakeholders of e-waste, especially labourers dealing with the e-waste, are unaware of the harmful impact of e-waste,
6. The health problem of workers working in the informal sector e-waste recycling plants is severe,
7. There is the problem of integrating both formal and informal recycling sectors,

8. Problem of Implementation of Extended Producers' Responsibility and reduction of hazardous substance in the EEE,
9. Enforcing e-waste (Management and Handling) Rule rigidly and enact Rules for regulating the activities of informal sector recyclers,
10. Problem of availability of E-waste statistics.

Objectives

The main objectives of the study include:

1. Examine various causes of e-waste generation
2. To assess the socio-economic and environmental impact of e-waste
3. To offer various methods for solving problems created by e-waste accumulation

Purpose of the Study

All the stake holders should be made aware of socio - economic and environmental impact of e-waste accumulation and force them to take remedial measures

Scope of the Study

The study covers the entire e-waste stream throughout India.

Methodology

The study is descriptive in nature based on empirical data. Secondary data is used for the entire study. The data is collected from research articles, periodicals, international publications and various acts and reports.

Discussions and Analysis

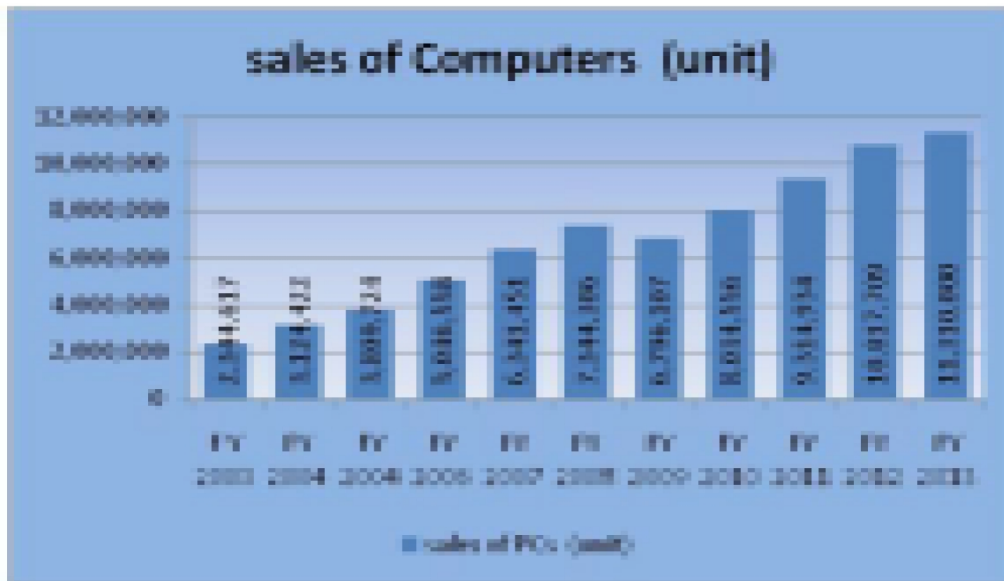
1. Various Causes of E-Waste generation

A. Increased population and consumption:

As we are the second largest in population, economically rich and educated; our total consumption of EEEs are large. Technological advancement enhances the firms to produce and sell EEE at low price. The reduction in the price of the product leads to reduction in quality. This ultimately results in reduced life span of the product, prompting consumers to follow life style of use and throw away. Even if the products are working in a good condition, new inventions prompt the customers to replace the old products with new ones for deriving economic and technological economies. Moreover, Indian economy has witnessed significant growth in the use of EEE in last two decades. It is mainly because of large and growing middle class of 320-340 million with disposable income, low manufacturing costs, skilled labour, raw materials,

availability of engineering skills and opportunity to meet demand in the populous Indian market. Hence, most of the nations of the world look upon India as their market for EEEs. This increased population results in increased e-waste. As Computers, Mobile Phones and Televisions are the leading item of EEEs; its impact is explained. The sale of Computers in India from 2003 to 2012 is shown below

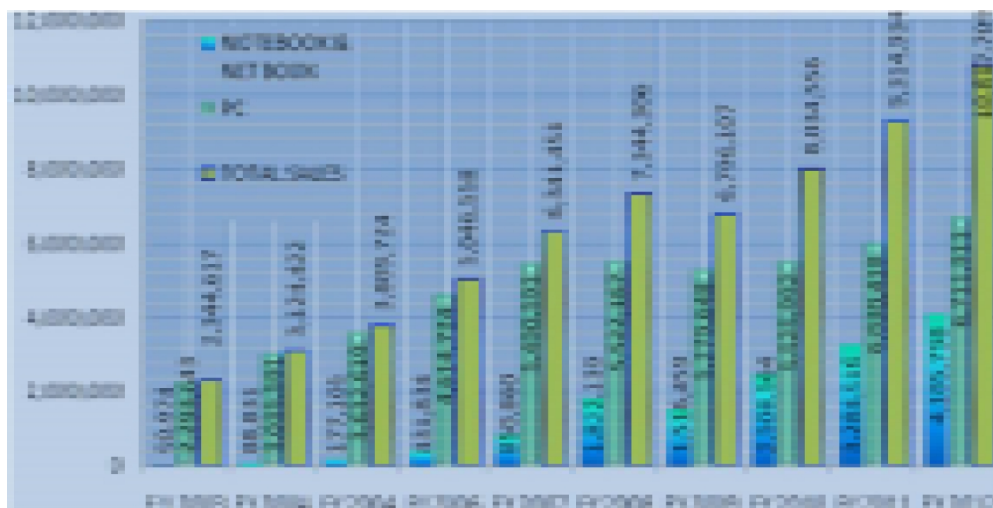
Figure 1.01: Computer Sales in units



Source: MAITS(Manufacturers' Association for Information Technology), Annual Report 2013

The annual sale of computer which stood at 2.344 Million in 2003 is increased to 11.31 Million, showing an Annual Average Growth Rate (AAGR) of 17.04 Percent. But the life span of the computer has dropped to 2 years in 2005 and less than 2 years at present. Therefore, we can say that 11 Million Computers sold in 2012 is WEEE during 2013-14. The e-waste kept in the godown of government department, local bodies and other large establishment shall aggravate the situation of e-waste. It is estimated that sale of computer in 2014 will be 12.11 Million.

Figure 1.02 Comparative Sale of PC and Notebook



Source: MAITS(Manufacturers' Association for Information technology), Annual Report 2012

The Figure 1.02 shows the composition of PC (Personal Computer) and Notebook in the total sale of computers. It is clear that the sale of Notebook and Net book increases at a faster rate than PC. In 2003, of the total computer sold, PC accounted for 98 Per cent and Notebook accounted for only 2 per cent. But in 2012, the share of PC is 62 Per cent of the total and Notebook is 38 Per cent. Here, during the period from 2003 to 2012, PC shows an AAGR of 13 percent and Notebook shows an AAGR of 63 percent

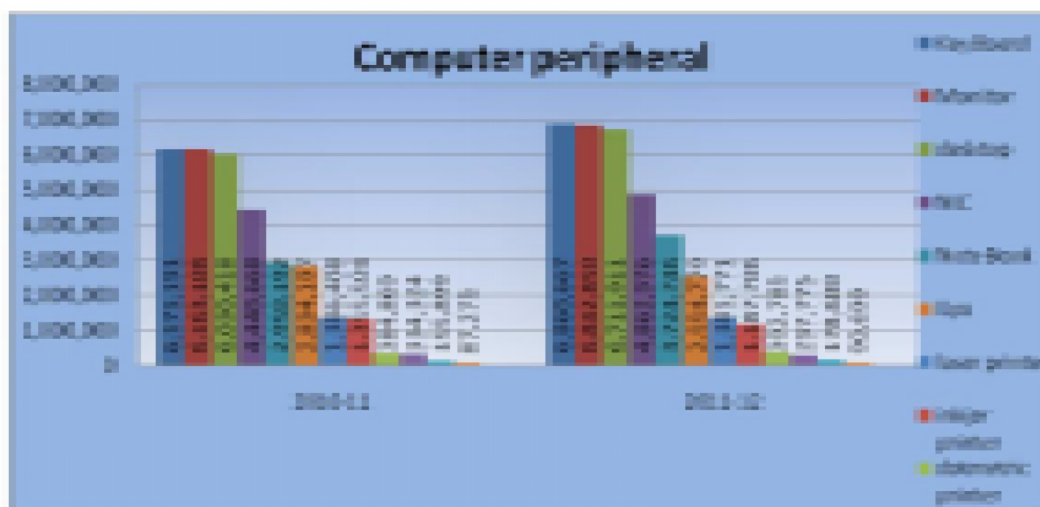
Table. 1.01: estimated sale of desktop, laptop and mobile in 2014

Expected sale of Computers and Smart Phones and Tablet PC in 2014 compare to 2013			
Name ofEEE	Sales in Million Units		Growth Rate
	2012-13	2013-14	
Desktops	6.77	6.99	3%
Note Books	4.40	5.12	16%
Total PC	11.17	21.11	8%
Smart Phone	15.22	21.47	41%
Tablet PC	1.90	3.84	102%
Over all	28.29	37.42	32.27%

Source: MAITS(Manufacturers' Association for Information technology), Annual Report 2013

From the above table it is clear that during 2014, the Tablet PC will record a growth rate of 102 percent, desktop shows a minimum expected growth rate of 3% and Smart Phone will show a growth rate of 41 per cent. Somehow, the total units expected to be sold will be increased from 28.29 Million in 2013 to 37.42 Million in 2014 showing an *AAGR* of 32.27 percent.

Figure 1.03: sale of Computer peripherals



Source: MAITS (Manufacturers' Association for Information technology), Annual Report 2012.

Table 1.02: Sale of computer peripherals in 2011 and 2012

Sale of computer and peripherals			
	2010-11	2011-12	% Change
Key Board	6,171,191	6,860,667	11.17
Monitor	6,163,108	6,842,850	11.03
desktop	6,030,418	6,711,911	11.30
NIC	4,440,668	4,862,976	9.51
Note Book	2,950,192	3,724,746	26.25
Ups	2,834,197	2,554,779	-9.86
laser printer	1,386,408	1,381,771	-0.33
inkjet printer	1,355,504	1,187,706	-12.38
Dot metric printer	384,869	392,785	2.06
Net Book	334,324	297,775	-10.93
hub	155,899	178,600	14.56
Servers	87,275	90,699	3.92
Line Printer	4,234	1,735	-59.02

Source: MAITS(Manufacturers' Association for Information technology), Annual Report 2012

The above table shows the sale of peripherals in 2011 and 2012. In the table, Line Printer, inkjet printer, laser printer and ups show negative growth rate and all other items show positive growth rate. Of these items, line printer shows the highest negative growth rate and note book shows highest positive growth rate.

B. E-Waste imported/dumped from developed countries

E-waste is routinely exported by developed countries to developing ones, often in violation of the international laws. Inspections of 18 European seaports in 2005 found as much as 47 percent of waste destined for export, including e-waste, was illegal. In the UK alone, at least 23,000 metric tonnes of undeclared or 'grey' market electronic waste was illegally shipped in 2003 to the Far East, India, Africa and China. The Developed Nations export e-waste to Developing nation mainly because of the fact that labour cost for recycling is comparatively higher, adequate e-waste for operating plant at full capacity is not available and second hand market is available in developing countries for selling e-waste under different labels

C. Inadequate Formal Recycling units to recycle E-Waste

It is estimated that 95% of the e-waste recycling in India has been carried out in informal sector and balance 5% is recycled in formal sector¹⁴. The formal e-waste recycling sectors are recycling e-waste by applying the Best Available Technology so that it creates little harm to environment and society. The informal recyclers are unorganised and they have large network which ranges from collecting e-waste from household and large firms, assembling and sorting, converting to usable products or till the values from e-waste is extracted. They are applying unscientific and rudimentary methods for recycling e-waste. This entails large impact to the environment, workers and society. Therefore, it is high time that the informal sector should be integrated with formal sector of recycling. Similarly, the formal sector should be extended with public-private partnership. At present, there are 95 formal sector recyclers throughout India, the details of which are given below.

J. Vijayan

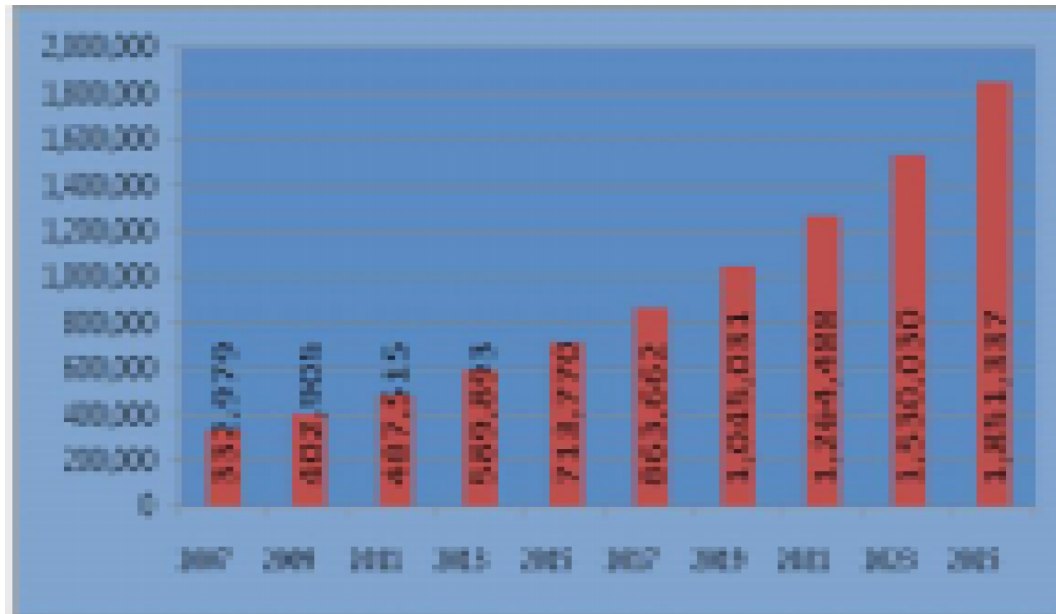
Table 1.03 : Formal Sector Recyclers

Details of Formal Sector Recyclers		
State	Annual Capacity (MTA)	No of Plants
Haryana	6,100	4
Rajasthan	5,130	5
Uttar Pradesh	43,350	10
Uttarakhand	22,150	3
Gujarat	24,431	5
Maharashtra	20,960	15
Madhya Pradesh	6,000	1
Chhattisgarh	1,095	1
Andhra Pradesh	11,800	2
Karnataka	23,090	39
Tamil Nadu	38,927	10
Total	203,033	95

Source: www.cpcb.nic.in

From above table, it is clear that we have only 95 recycling plants throughout India having a capacity of 2,03,033 MT in 2013. Many states including Kerala and none of the Union Territories have a formal sector recycling plants. The waste generated in India which stood at 332797 MT in 2007 is expected to increased to 5,89,893 MT in 2013 and it shall be 1,851,337 MT in 2025¹⁵. This is as shown below

Figure. 1.04. E-waste in India : prediction [Figures in Metric Tonnes] ; 1 MT =1000KG



Source: **Electronic Waste and India** Dr. S. Chatterjee Scientist-E Department of Information Technology Electronics Niketan, 6, C.G.O. Complex based on “E-waste Inventorisation in India”, MAIT-GTZ Study, 2007).

During the 18 years from 2007 to 2025 the e-waste accumulates at an AAGR of 8.79 Percent. But the statistics regarding e-waste is only an estimation and not exact measurement¹⁶.

2. The socio-economic and environmental impact of e-waste

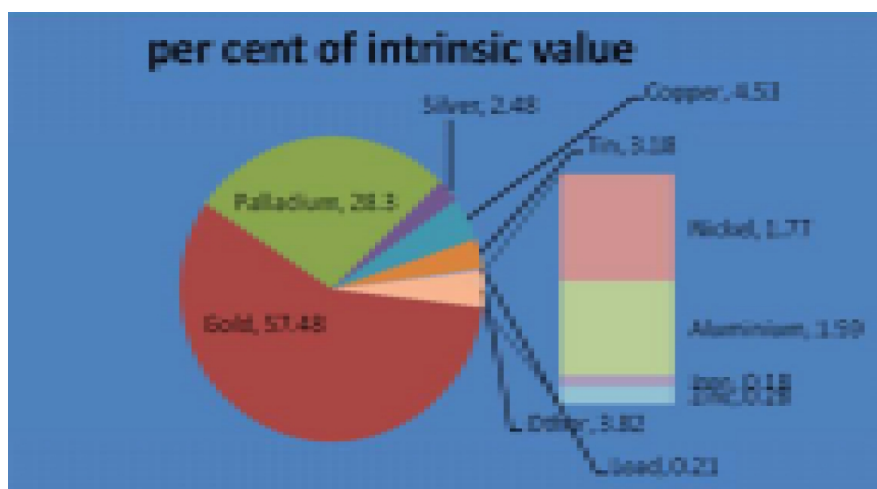
i) Attributes of E-Waste: Hazardous and Fringes

E-Waste consists of both Hazardous substance and Fringes components. The e-waste in typical computer contains 1 per cent of its weight as hazardous. These elements are lead, mercury, arsenic, cadmium, selenium, Hexavalent chromium, flame retardants and so on. The fringes components in a typical computer consist of 27 Per cent mild steel, 8 per cent stainless steel, 27 per cent glass, 27 per cent plastic, 3 per cent copper and 8 per cent other materials. The other materials consist of gold, silver, palladium and so on¹⁷. Of the fringes components, gold and silver, though limited in quantity, are the main attraction of

J. Vijayan

informal sector recyclers. In the case of computer, of the total value of e-waste, gold occupies 57.8 percent in value, followed by palladium 28.3 percent, copper 4.53 percent, tin 3.18 percent and so on.

Figure 1.05 percentage of intrinsic value in the e-waste of Computer¹⁸



Source: http://academicjournals.org/article/article1380705620_Chatterjee%20and%20Kumar.pdf

In the case of mobile phone, a ton of used mobile phones (approximately 6,000 handsets) contains about 3.5 kilograms of silver, 340 grams of gold, 140 grams of palladium, and 130 kg of copper. The average mobile phone battery contains another 3.5 grams of copper¹⁹. Therefore, the informal sector recyclers are attracted to this field for making quick money by mobilizing as much valuable material from e-waste like gold, palladium, etc. This recycling process floats all the E-Waste Management Rules and Regulation. They use rudimentary and unscientific methods for separating the valuable components. This result in polluting air, water and soil; endangering the people who work in this sector and public at large due to the presence of hazardous materials contained in the e-waste so processed.

ii) Stake holders are unaware of harmful impact in e-waste

The workers in the recycling sector are dominated by the urban poor with very low literacy levels and hence they have very little awareness about the potential hazards of e-waste. Among the urban poor, there are a substantial number of women and children engaged in various recycling activities. Similarly, the e-waste collectors, separators, dismantlers or the owners of informal recycling units may be unaware harmful substance of the EEEs and the impact that it may create immediately and in future. E-waste

contains a number of toxic substances such as lead and cadmium in circuit boards; lead oxide and cadmium in monitor - cathode ray tubes (CRTs); mercury in switches and flat screen monitors; cadmium in computer batteries; polychlorinated biphenyls (PCBs) in older capacitors and transformers; and brominated flame retardants on printed circuit boards (PCB), plastic casings, cables and polyvinyl chloride (PVC) cable insulation that release highly toxic dioxins and furans when burned to retrieve copper from the wires. It is reported that in the production of 500 Million computers, the manufactures use 2.96 billion Kgs of Plastic, 0.72 billion Kgs of Lead, 1.361 million Kgs of Cadmium, 0.862 million Kgs of Chromium, 2,86,667 Kgs of Mercury²⁰. Vulnerable impacts of these elements are listed below:

- 1) Lead (Pb) is widely used in electronic goods, as a major component of solders and as lead oxide in the glass of cathode ray tubes as well as in lead-acid batteries. Its compounds have also been used as stabilizers in some PVC cables and other products. Lead is highly toxic to humans, as well as to animals and plants. It can build up in the body through repeated exposure and have irreversible effects on the nervous system, particularly the developing nervous system in children.
- 2) Cadmium (Cd) occurs in electronics both as cadmium metal and as cadmium compounds in rechargeable batteries. Cadmium can accumulate in the body over time. The long-term exposure to cadmium causes damage to the kidneys and bone structure. Cadmium and its compounds are known human carcinogens, primarily through inhalation of contaminated fumes and dusts.
- 3) Mercury (Hg) is still used in some batteries and lighting components for flat screen electronic displays, and it was formerly used in switches and relays. Mercury and its compounds are highly toxic, causing damage to the central nervous system and kidneys.
- 4) PCBs (polychlorinated biphenyls) were widely used in insulating fluids for electrical transformers and capacitors, as well as flame-retardant. They are highly persistent and bioaccumulative chemicals. It rapidly becoming widespread through the environment and building up several thousand-fold in body tissues of wildlife. PCBs exhibit a wide range of toxic effects including suppression of the immune system, liver damage, cancer promotion, damage to the nervous system, behavioral changes and damage to both male and female reproductive systems.
- 5) PBDEs (Polybrominated Diphenyl ethers) are one of several classes of brominated flame retardants used to prevent the spread of fire in a wide variety of materials.

J. Vijayan

They are environmentally persistent, highly bioaccumulative and capable of interfering with normal brain development in animals. Several PBDEs are suspected endocrine disruptors, demonstrating an ability to interfere with hormones involved in growth and sexual development.

- 6) Antimony (Sb) is a metal with a variety of industrial uses. Exposure to high levels in the workplace, as dusts or fumes, can lead to severe skin problems and other health effects. Antimony trioxide is recognized as a possible human carcinogen.
- 7) Large number of other elements such as NP, PCN, TPP and so on which are most dangerous.

iii) Implementation of Extended Producers' Responsibility (EPR) and E-Waste(Management and Handling Rules)

The EEEs are produced and marketed with the sole objective of earning profit; through the products contain hazardous elements capable of contaminating the environment and damaging the flora and fauna. Therefore, the producers of EEEs have the moral responsibility of managing such equipments after its 'End-of-Life'. In India, the producer is entrusted with the sole responsibility to finance and organize the system to meet the cost involved in complying with EPR w.e.f 1st may, 2014 for articles specified in Schedule 1 of the E-Waste (Management and Handling) Rule, 2011. The provisions in this respect are:

- a) Producers intending to sell EEE listed in schedule 1 are requested to take authorization from State Pollution Control Board (SPCB) and it should be intimated to CPCB. In the request for authorization, producers should ensure the method for channelization of E-Waste at the end of its life. The producer is required to achieve 100 percent collection of e-waste.
- b) The producer shall finance the EPR system either by setting up individual collection system or by jointly a common collection system by authorizing them.
- c) The manufacturer should create awareness for consumers regarding hazardous elements in the product as well as handling and safe disposal of the product after use.
- d) He should make public the contact details of authorised collection centers, collection points or mechanism.

iv. Reduction of hazardous substance in the EEE and E-waste take back policy

The producer is bound to reduce the hazardous elements or replace the hazardous elements with the green elements. Certain steps are going on in this respect. They are:

- 1) Wipro has phased out 80 per cent of polyvinyl chloride plastic (PVC) and Brominated Frame Retardants (BFRs) from its products. Wipro updates the information on its use of post-consumer recycled plastics and list which products use them. It provides convenient take-back service to its customers through 17 direct and 300 authorised collection centers.
- 2) HP has phased out 67 per cent of polyvinyl chloride plastic (PVC) and brominated frame retardants (BFRs) from its product range.
- 3) Nokia implemented 600 collection centers throughout the world as a part of take back service
- 4) Acer pledges to eliminate polyvinyl chloride plastic (PVC) by 2012
- 5) Dell has a relatively comprehensive take-back programme and provides good information to its customers on how to recycle discarded electronics,
- 6) Apple was one of the first companies to sell products free of polyvinyl chloride plastic (PVC) and brominated frame retardants (BFRs). It implemented global take-back programme, reporting that 2010 global recycling exceeded its 70% goal.
- 7) Samsung has implemented good take back policy.
- 8) Lenovo made progress by releasing products free of polyvinyl chloride plastic (PVC) and Brominated frame retardants (BFRs)
- 9) Philips has a number of products free from polyvinyl chloride plastic (PVC) and brominated frame retardants (BFRs), as well as six phthalates and antimony. Although Philips no longer sells TVs, it was the first company to release a PVC/BFR-free TV, the Econova LED TV.

Methods for solving problems created by e-waste accumulation

In real sense increased consumption of EEE is not the main reason for accumulation of e-waste. Let it be consumed in large quantities and replace present product with modern product. The real reasons for e-waste accumulation are:

1) Lack of recycling facilities in formal sector

Only the formal sector recycles e-waste with Best Available Technology. This will not create any harm to environment and community as air, water and soil is not polluted. Expand the capacity of recycling plants in formal sector and organize recycling plant in all States and Union Territories. It should be started with public-private-partnership.

2) Integrate Informal sector with formal sector

Informal sector of recyclers have vast networks from house hold collection till the benefits from e-waste is extracted through hook or by crook. They work for the getting maximum benefits from e-waste, ignoring all harmful impact that may occur to environment and community. But formal sector can't compete with informal sector as informal sector incur limited cost in recycling, have extensive collection chain, capable of paying more prices for e-waste collection and need not observe e-waste regulations from time to time. Hence, informal sector need be integrated with formal sector. The informal sector is allowed to collect e-waste, disassemble it, convert the product to usable one by combining good parts of different products and sell it as seconds. But the components containing hazardous elements such as PCB (Printed Circuit Board), where it contain gold, platinum, palladium, silver, etc. , need be evaluated through assy test and handed over to formal sector recyclers for recycling. The formal sector should be specialized in recycling the pure hazardous components only. Moreover, all stake holders in informal sector should be registered through creating an association.

3) Convert informal sector in to formal sector through PPP

Informal sector is not willing them to be converted into formal sector mainly because of the fact that they are not willing to incur huge cost of machinery and technology required for recycling and observe rules and regulation from time to time. As we know human beings, animals and even plants are subject to large number of diseases due unscientific recycling of e-waste by informal sector, the social cost incurred by the Government is exorbitant. Therefore, Governments should take the details of Informal sector recyclers in each region and take initiative for converting them into formal sector through PPP. Government need to bear the cost of machinery and technology and land required for operating the plant is given on long lease. The nominee of the government such as representative of local self government should be in the governing body of the management. This ensures safe recycling, attractive profit to recyclers, and nominal return to government and peace of mind to community and workers.

- 4) Implement EPR as per the relevant E-waste (Management and Handling) Rules and bring all the stake holders dealing with e-waste under its purview
- 5) Reduce hazardous substance in the EEE with green component in a step by step method.

Limitations of the Study

The study suffers from the following limitations:

1. Analysis is based on secondary data.
2. Data is not reliably available.
3. There is no systematic data collection system for the Government of India.

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6

Construction Management towards Cost effectiveness

J. Rajan* & Jyotheendranath C.S. **

Introduction

From the very beginning of the existence of human being on earth, man has been constantly searching for and devising means of safeguarding himself against the ill effects of nature and attack from wild animals. In the ancient times man has no other means but to live on trees and in caves. With the advancement of knowledge and civilization, man realized the benefit of living in groups and devising means for safe living. He started constructing huts and then small houses and sooner, shelter has become one of the basic needs of human being along with food and clothing. With the passage of time, new techniques of construction has been evolved with the changing trends of mind sets of human being and gradually, the construction activity turned into an Industry.

Construction sector

History of construction activities can be traced back to 4000 BC when the sole means of construction were the human labour, without any sophisticated equipment. The monuments of cave temples at Ajanta and Ellora are the testimony of the skill and craftsmanship in construction in those days. The construction industry is one of the oldest and largest industries (perhaps the second largest economic activity next only to agriculture) in India and the construction activity provides employment on a large scale. The Government of India's policy of planned investment in the form of five year plans gives emphasis on the development of the country. In almost all the five year plans, more than 50% expenditure

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incurred is related to construction work in one form or the other such as dams, power and irrigation projects, roads, communication, housing sector etc... With the advancement in all spheres of technology, the civil engineering has also developed tremendously, utilizing all the modern techniques and management concepts.

With the increase in population, the need for housing and industry also increased. Thus, the volume and scope of construction industry has a direct linkage with the population and size of the country and, and plays a vital role in the overall development of the country. Thus it can be said that our national development is directly linked with the development of construction activities which in turn is responsible for the economic progress of our country.

The construction sector has major linkages with the building material industry since construction material accounts for sizeable share of the construction cost. Construction materials like cement, steel, bricks, fine and course aggregates, rubble, paints, timber, aluminium, glass etc. play a major role jointly as well as individually in the construction industry as a whole.

Present Scenario

As technological innovations are taking place at a faster pace, the style and standard of living of people are also changing very rapidly. As the construction is vital to improve the standard of living of people, it needs to be faster, active, quality and cost conscious. As mentioned earlier, the volume and scope of construction industry has a direct linkage with the population and hence, as population increases day by day, the construction activities have also become manifold, becoming more complex and capital intensive. So, the expected growth of construction volume demands sophisticated managerial talent to properly manage these big projects.

The construction sector provides employment on a large scale. At the same time, the industry is facing a shift from the labour intensive style of construction which was being practiced in the ancient times to the highly mechanised style during recent years. The use of machines and equipments have become part and parcel of construction in modern times. They have not only reduced the time of construction but also improved the quality of construction. In most of the developed countries, scientific tools such as construction management techniques are being used. The use of plants and machinery and the adoption of the latest construction management methods should be the essential features of construction industries in modern times.

In this context, it is highly essential to carry out a detailed study on the cost effective and quality oriented construction technologies and, practice the same for the sustainable growth of construction industry and the infrastructure development of the country.

Objectives

The present study is focussed on the following objectives.

1. To review the construction industry with respect to the present scenario with an emphasis on the role of construction management
2. To study application of cost effective and quality oriented technologies in the construction sector and the effect of construction management towards cost effectiveness.

Methodology

The study is empirical cum analytical in nature where the facts of information already available has been used. Data collection has been based on the literature survey and only secondary data has been used for preparing the study report.

Relevance of Construction Management

Management can be considered as a universal process. In every aspects of life, we can see the application of management in one form or other; whether it is an individual, a family, a club, a government, or an organisation. The approach and style of management may differ from one to another. The success and survival of an organisation largely depends upon the persons serving in the key levels. According to Terry, management can be defined as ‘a distinct process consisting of planning, organising, actuating, and controlling performed to determine and accomplish the objectives by the use of people and resources.’

As far as construction industry is concerned, it can very well be seen that the management plays an important role in its success and survival. In every day to day activities, whether it s financial matter, or human resource matter, or inventory control matters, the concerned responsible persons must be very alert, keen, future oriented and opportunity capturing. In financial aspects, the money value gets fluctuated within short periods, and there are lots of price variations as far as construction materials are concerned.

For every construction projects to be undertaken, the rate of return is a key factor to decide whether the project should be undertaken and when to start the project. The cash flows should also be well managed. As far as human resource aspects are concerned, labourers will be somewhat unpolished and there may be both skilled as well unskilled ones among them. It needs different types of tactics to get the works done by them.

J. Rajan, Jyotheendranath C.S.

Moreover, the managers must be well aware about the labour laws and must be capable of solving union problems.

Importance of Construction Management

- In construction industry, the work should be started and finished in a predetermined manner. For this to achieve, recruitment of right people at right time is very essential. Planning & scheduling help in such recruitment.
- Labours will be somewhat unpolished in construction industry and there may be both skilled as well unskilled ones among them. Hence wastage of labour is a common phenomenon in the construction industry. The leadership, decision making ability and proper directing the subordinates help to avoid the wastage of labour.
- Communication and coordination skill helps to maintain the continuity of work and avoid delays.
- In order to extract the maximum and increase the efficiency of labours, motivating the workers with various schemes and awards plays an important role in construction industry.
- Proper monetary control helps to optimize resource utilisation and to keep the construction cost minimum.

Duties and responsibilities of Construction Managers

A construction manager has got so many tasks to perform. Prior to the beginning of a project, so many jobs are necessarily needed to be done like acquisition of land, planning process, obtaining permits, hiring of labours etc. . . . The labours will be interviewed by the manager, hired and disciplined prior to the work and during the work, and even fired in case it is found necessary. Any problems created by the labours should be viewed seriously and dealt with tactically in order to keep the project going without any delay.

A construction manager should review the project in depth and should be very conversant with each and every stage of work so that he can thoroughly understand what will be needed along the way and can act accordingly.

Construction managers are responsible for forming a budget for the project. The two major factors which largely influence the budget are wages and materials. He must order the various supplies required for the project keeping in mind the budget of the project and without compromising the quality of materials.

A construction manager must manage the construction as per the schedule in an effective and efficient manner. This is very crucial as any delay in any part of project may cause the construction cost to boost up. Hence he must be able to resolve any issues arising during the construction project in order to stay as per schedule.

The construction manager is the one who should supervise the project in a regular manner, to give proper directions, and to correct in case if there are any discrepancies. He must review the entire project as and when necessary and ensure that the work is being done as per schedule. If there appears to be any deviation from the planned construction project, it is up to the construction manager to get the project back on the right track.

Need for cost reduction

The rising cost in civil construction industry has become a real menace these days. What contribute to this high cost are not only the high cost of materials and the high rates of wages prevailing in our state, but also the insane craze of the present generation for the new fashionable frills and designs. This high cost of operation not only affects the construction industry directly, but also the overall economy indirectly. Not only that, this high cost of infrastructure translates into higher user charges which again reduces the surplus that can be ploughed back into construction technology upgradation and labour welfare.

More over to that, with the construction work using with traditional building materials like cement, sand, steel etc... the environment is becoming more and more polluted and sophisticated. Building materials like sand, timber etc. are becoming scarce and the cost of production of cement and steel is rising steeply. Trenching of river beds for sand collection, and mining of iron ores, lime stone and clay etc. for steel and cement manufacturing, and felling of trees for wood work in buildings have posed a serious threat to the environment and we will have to face serious set backs in the near future on account of disturbing the environment.

Within a short time, these conventional building materials will become scarce and it is high time to think of non conventional, cost effective and environment friendly approach in the construction process without any compromise on quality aspects. The concept of green architecture has already come into existence and we will be forced to practice the same in constructing our own buildings in the near future. Green architecture, also known as sustainable design, is a method of design that minimizes the impact of building on the environment. Green buildings are not only designed for present use, but consideration is also been given to future uses as well.

Cost effective technologies

Rat trap Bond

This is basically a double-wall technique with bricks are laid on edge and a cross brick connection between each. It produces a 9-inch thick wall with an insulating air cavity in between. This technique reduces the number of bricks required by 25%, thereby

reducing material used, including mortar (1:8 mix), and overall cost. Rat-trap technique is equal to the strength of a solid 9-inch wall in either Flemish or English bond.

Finishing of such walls is not generally required and exposed brick themselves are appealing and form beautiful patterns. This saves the cost of plastering, painting, and maintenance. By avoiding unnecessary plastering, savings can be made up to 10% of the brickwork cost.

Filler Slab

Lightweight, inexpensive materials such as low grade Mangalore tiles, bricks, coconut shells, glass bottles, etc. are used as filler materials in filler slabs to replace the redundant concrete in tension zones.

These materials are laid in the grids of steel reinforcement rods (6mm or 8mm dia.), and concreting is done over them. The concrete mix used is that for the reinforced cement concrete. The grid size depends upon the design, span, and the material used. For Mangalore tiles (size 23cm by 40cm), the grid size is 33cm by 50cm. The slab thickness is 10 centimeters. This technique saves energy-consuming concrete. Roofs and intermediate floors account for 20-25% of the total cost of the building. This type of roofing costs 30-35% less than conventionally used concrete roofing. Thus a considerable amount is saved in terms of materials, energy, and cost.

This technique also reduces the unwanted dead load of roofing. Compared to other roofing systems, it is thermally comfortable and has no health hazards. Galvanized iron and asbestos cement sheet roofs dissipate too much heat and are difficult to live under. Also, asbestos cement sheets are long associated with diseases such as lung cancer, hence must be avoided.

Arches

One of the most effective ways of spanning an opening is by constructing arches. Arches can be a cost-effective alternative to the lintels. In addition, they look more appealing than flat and dull lintels. Arches can be of different shapes and sizes depending upon span and availability of skilled masons. Most common arch shapes come in semi-circular, pointed, corbelled, and bell shapes.

The easiest of the arches is the corbel arch. It can be constructed without any framework and needs less skilled labour. Each row of bricks projects 4-1/2 inches beyond the course below it, until the bricks meet together in the middle. Corbel arches can span openings up to 5 metres. Flat brick arches can span openings up to 1.2 metres. Labour management and type of framework are two essentials in construction of arches.

Rubble Masonry

Random rubble masonry is extensively used as foundation at places where stones are readily available. An 18" (45 cm) foundation base is adequate for most soils and single or double storey buildings. Depth and size may vary with the addition of number of floors. In case of weak soil, the trench can be widened to the tune of 50 to 70cm and the bottom can be laid with concrete of suitable proportion.

For the foundation, a trench 50cm wide is dug and laid with rubble. It can be dry masonry or mud mortar. For higher masonry walls, cement mortar of 1:10 proportion can be used. By proper management, the excavated soil can be piled between the plinth walls to prevent cost of future filling. Proper joints (dovetail) must be provided for stronger bonds as in the case of any other masonry works. Stones must be large in size and the gaps between stones must be filled with smaller stones for proper bonding and stability. Care must be taken to ensure bonding of stones along the length of the wall. Bamboo in lime concrete can be used for foundations, especially in the sandy areas along the sea coast. It is resistant to sea water. It remains intact whereas other foundations will crack with shifting sands.

Bamboo Construction

For most parts of the India, bamboo is a locally available material and has been used as building material for centuries. It can be easily grown and is one of the cheapest construction materials. A good bamboo cut into strips has the tensile strength almost equal to that of steel. It is used for reinforcement, shuttering, scaffolding, roofing, piles, filler material and much more.

Bamboo in lime concrete can be used for foundations, especially in the sandy areas along the seacoast. It is resistant to seawater and remains intact whereas other foundations will crack with shifting sands. For places where stones and bricks are not available, foundation for mud walls can be of moist soil with layers of split bamboo reinforcement inserted. However it needs experience to know about the quality of the bamboo and it is difficult to calculate the exact strength of slabs with bamboo reinforcements.

Jali walls

Creative bricklaying is an art and at the same time very appealing and cost effective also. These provide natural ventilation instead of costly and environmentally damaging air conditioning systems. Jali walls also provide privacy, security, cost reduction in windows needed, and – most dramatically — aesthetic appeal

Hollow Concrete Blocks

Hollow concrete blocks are made by using cement, sand and metal chips. Normally this is made in a yard and a hydraulic or manual pressing and vibrating machine is used for making these types of blocks. About 23% cost reduction can be achieved by using hollow concrete blocks when compared to country burnt bricks. It consumes less time for construction with less number of joints. By using superior quality materials, plastering can be avoided and it provides good thermal insulation also.

Conclusion

The above techniques are the results of scientific and rational studies of the pre existing technologies and approaches of constructions. New results and innovations are the outcome of systematic studies in the relevant field. A lot of technology options may be available for cost effectiveness and through continuous research, arrays of new technologies can also be found out. But it is not as easy as developing a technology to make them practice in the real life. Through proper and well defined management techniques the cost of construction can be definitely reduced to certain extent.

Scientists, engineers and policy makers should make all efforts whole-heartedly to popularise any new technology. Better and proper understanding of the various materials and technology options are to be ensured, their effectiveness and efficiencies are to be assessed and improved, and new methodologies for their implementation are to be sorted out.

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7

Ethical Issues in Advertising in India : A review on Customer Perspective

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Abstract

Advertising is considered as one of the most important methods of Marketing Communications. Every year all over the globe organizations spend billions of dollars as their advertising cost. Whenever a company manufactures a new product or launches a new service they go for advertising as part of reaching customers . Though it is a costlier tool of marketing communication it is accepted as the most effective one . Business ethics which is also called corporate ethics is a form of applied ethics or professional ethics that examines ethical principles and moral or ethical problems that arise in a business environment. Business ethics are often guided by law, but most of the time it provides a basic framework that businesses may choose to follow so as to gain public acceptance. Though there are positive sides for advertising, it is told that advertising introduces the false needs in society, helps misleading the society and makes the product price higher. The purpose of this study is to propose suggestions to improve ethical considerations in the contemporary advertising practices in India.

Key Words: *Business ethics, Advertising, Marketing Communication, Ethical Issues.*

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Introduction

Advertising has emerged as a most demanding & challenging tool of Integrated Marketing Communication in business industry. It is the most visible activity of marketing and it is used to create an image of the products among the customers. It is a paid, non-personal communication by an identified organization to present a persuasive message in order to stimulate sales or some other specific action. Advertising creates primary demand for the product or service ,causes increase in its usage rate in customers. It stimulates the product distribution, builds brand preferences and loyalty. It also reduces the decision making time in purchases. Advertisements remind consumers about their need for a product and where or how to obtain it. It is the most effective form of marketing communication when the organization is focusing at mass consumer markets for marketing their products and services. The media like television, radio, cinema, magazines, newspapers , videogames and internet are commonly used for advertising . Advertising simply mirrors the attitudes and values of the surrounding culture. No doubt advertising does act as a mirror. But, it is a mirror that helps shape the reality it reflects, and sometimes it presents a distorted image of reality (Dr Asha Nagendra and Dr. Sudhir Agrawal, 2010).

There is no universal definition of “ethics”. The Chamber’s Dictionary defines ethics as the science of morals and that branch of philosophy which is concerned with human character and conduct. Ethics is governed by a set of principles of morality at a given time in the society. Ethics will vary from person to person and from society to society. There may be groups of people to whom the advertisements for cigarette and sexually suggestive ads are nothing wrong. But some other group may oppose these advertisements on the grounds of ethics.

Advertising standards in India :

Some of the principal legislations available in India are –

- 1.Cable Television Networks (Regulation) Act, 1955
- 2.Press Council of India Act, 1978
- 3.Cable Television Networks(Amendment) Rules, 2006

In 1985, the Advertising Standards Council of India (“ASCI”), a non statutory tribunal, was established that created a self regulatory mechanism of ensuring ethical advertising practices.

ASCI is a voluntary Self-regulation council. The members comprise Advertiser’s, Media, Advertising Agencies and other Professional/Ancillary services connected with advertising

practice. ASCI entertained and disposed of complaints based on its Code of Advertising Practice

(“ASCI Code”). It is a commitment to honest advertising and to fair competition in the market-place. One of the major goals of ASCI is to maintain and enhance the public’s confidence in advertising. ASCI seeks to ensure that advertisements conform to its Code for Self-Regulation which requires advertisements to be:

- Truthful and honest to consumers and competitors.
- Within the bounds of generally accepted standards of public decency and propriety.
- Not used indiscriminately for the promotion of products, hazardous or harmful to society or to individuals particularly minors, to a degree unacceptable to society at large.
- Fair in competition.

ASCI propagates its Code and a sense of responsibility for its observance amongst advertisers, advertising agencies and others connected with the creation of advertisements, and the media. It encourages the public to complain against advertisements with which they may be unhappy for any reason. It ensures that each complaint receives a prompt and objective consideration by an impartial committee known as Consumer Complaints Council (CCC). The committee takes into account the view point of the advertiser, and an appropriate decision is communicated to all concerned. It tries to achieve compliance with its decision through reasoned persuasion and the power of public opinion.

The Indecent Representation of Women (Prohibition) Act, 1986 prohibits indecent representation of women through advertisements or in publications, writings, paintings, figures or in any other manner. The law relating to obscenity in India is codified in Sections 292, 293 and 294 of the Indian Penal Code. In spite of these provisions, there is growing body of indecent representation of women or references to women in publications, particularly advertisements, etc. which have the effect of denigrating women and are derogatory to women.

Social Role of Advertising

Advertising offers benefits to consumers, organization and society.

1. Benefits to Consumers: A good advertising is generally focused on customer needs and wants. It helps the consumers to learn and understand various choices of products and

services so that it can make a rational and informed decisions. They can make the most suitable purchase.

2. Benefits to Business: The organization can increase their customer base. The revenue and profit can be increased. They can translate the goods into profit.

3. Benefits to Society: The customer education can be improved through advertising and thereby a satisfied society. The increased production and sales increases the overall economy of the society.

Need of the Study:

A lot of advertisements are aired to customers in his day to day life. Advertisements intend to give product information to the consumer but, the problem pertaining to this is the content, the way it is presented and the type of product advertised. Irrespective of the segment, the advertisement is aired and is being viewed by everyone and the impact of some ads can lead to compelled purchases or wrong purchases. Sometimes it leads to misunderstanding and wrong image to the company. Thus, an analysis in ethics in advertisements will give a direction to advertisers towards the content used in advertisements.

Objectives of the study

1. To conceptually examine the meaning of unethical dimensions in advertising.
2. To explore the perception of consumers regarding ethical aspects of advertising.

Methodology

The study is purely based on secondary data collected through literature review. Certain website information are also taken into consideration.

Literature Review:

Advertising today is a huge business and the existence of many industries like the cable TV industry, newspapers, magazines etc are dependent on the inflow of money that it brings. As a result, advertisers try all types of tricks to get attention, and in certain cases this leads to the invasion of privacy of the individual. Although, in most cases exposure to an ad can be avoided if an individual so desires (by changing the channel or not reading an ad in a newspaper/magazine), but there are instances where this avoidance may not be easy (Dr. Jaspal Singh and Namrata Sandhu, 2011, p.291). Thus, there arises a strong ethical concern, because exposure to advertising is not entirely voluntary. In many consumers, desire to buy the product is induced by advertising and that too against the consumer's will

.This takes away the freedom of choice from the consumer and violates his autonomy, coercing him to buy the advertised products. The customers cannot know the benefit of products and which brands are good for them. Therefore the advertising can help them by informing the benefits of the product. Finally, customers will make their own decision which brand is suitable for them, and which brand they are going to buy (Pheraphol Kherathithanakann,, 2010).

How Does Advertising Impact Society?

There are many feedbacks from audiences and related organizations including positive and negative feedback that affect the society. Increased profit and positioning of product in the market are the positive impacts of advertising on the society. Advertising helps companies to achieve their profit by increasing the number of customers in market place. For example, when the company manufactures new product no one knows about; therefore, Pheraphol Kherathithanakann (2010) paraphrases Ringold (1998) that advertisers help the company to provide and persuade the customer to buy the products and services that were advertised. Moreover, they also position the product to customer's mind to make them think about this brand every time they want to buy the same category of the product . For example, Sony Company manufactures Sony Television, the advertisers will advertise and position this brand to the customers' mind by making them every time when customers want to buy a Television, they will think about Sony first. Moreover this also makes customers be "Brand Loyal" to this company such that when they want to buy some electronic products, they will think about the product from Sony Company first, including other product line from this company, such as digital camera, mobile phones, USB pendrives, Tablets , Home theatre systems, etc. Furthermore, advertising also helps the marketer in the terms of product life cycle; it means the marketer will always advertise when the product is in the pioneer stage, because of the new product, no one knows this brand in terms of its characteristics, image and benefits (Pheraphol Kherathithanakann ,2010). Therefore, the marketer will give this information by advertising very often to make the audiences know and persuade them to buy this product.

Deceptive Advertising:

Deception is defined as a false or misleading claim in advertising. Mohammad Noorizzuddin Nooh, (2009) paraphrases Attas, (1999) claims that an advertisement is considered to be misleading or deceptive only if it is reasonable to expect that persons exposed to it, or those targeted by it, would come to hold false beliefs as a result of exposure to it. Mohammad Noorizzuddin Nooh, (2009) also paraphrases Nebenzahl & Jaffe (1998) that ethicality of advertising may be determined by the extent to which it harms consumers and they can be defined as (1) violation of autonomy by control or manipulation, (2) invasion of privacy,

and (3) the violation of the right to know . Mohammad Noorizzuddin Nooh (2009) also paraphrases Jacoby and Hoyer (1990) that people cannot always assume that an advertisement is misleading because there is evidence that the viewer or reader does not understand a particular claim and this is due to miscomprehension and not deceptive advertising.

Advertisement targeting Children :

When discussing the impact of advertising on children, it can be said that advertising has the potential to influence children and teenagers and thus the exposure of children to a vast number of television advertising messages has raised many concerns about ads aimed at children (Dr. Jaspal Singh and Namrata Sandhu, 2011). Dr. Jaspal Singh and Namrata Sandhu also paraphrase Conna, Garrison, Treise and Weigold, 1994 that the most common of these concerns are promotion of harmful products among children like sweets, early awareness of sexuality among children and teenagers, disagreement with parents over the purchase/use of advertised products and finally the circumvention of parental authority . To directly target children, the fast food industry uses different modes like giving away of free toy or a cartoon character or game (Rajeshwari Panigrahi-2012).

Advertisement portraying Women :

There are various criticisms against advertisers for the way they portray women in advertisements. Of all these issues particularly troublesome is the undue focus on women as sex objects. Scantily clad women can be seen in many ads irrespective of their relation with the product advertised(Dr. Jaspal Singh and Namrata Sandhu ,2011). Dr. Jaspal Singh and Namrata Sandhu also paraphrase Pollay, 1986 that excessive sexuality in cases is a threat to accepted standards of decency and deeply wounds the integrity and dignity of women. The Advertisements aired especially in TV in India clearly shows the gender roles and stereotypes of Women. Women are portrayed and as object to add beauty to the advertisements (Rajeshwari Panigrahi 2012).

Materialism and Financial Stress:

Past researches have pointed out another very disturbing impact of advertising on modern life- promotion of materialism, consumerism and thus financial stress. The fact that people are prepared to work long hours, or even turn to crime in order to gain the goods on offer, shows that advertising persuades people to go to great lengths to keep the same standard of living as that they see in advertisements(Dr. Jaspal Singh and Namrata Sandhu, 2011). This encourages people to take loans and purchase things that they really can not afford.

Comparative Advertising :

Comparative advertising is the practice of either directly or indirectly naming competitors' in an ad or comparing one or more specific attributes. Advertisers use comparative advertising primarily to promote their product at the expense of another in terms of price, quality, features, performance etc (Rajiv Kaushik ,2012). Comparative advertising is used mainly to disparage the competitor's products sometime directly and sometime indirectly. Many laws are enacted into Indian constitution to stop unfair comparative advertisements. Due to lack of technically sound mechanism to access the exact loss because of comparative advertising courts are not awarding financial penalties to wrongdoers. Instead courts prefer to stop that advertisement. Now it has become a question of ethics whether comparative advertising is ethical or not. Public is not against the comparative advertising and endorsement of products by the celebrities. Most of them want celebrity endorsements and comparative advertising to be used in advertisements (Dr. Raghbir Singh and Sandeep Vij, 2007) . However, an overwhelming majority of respondents wants legal restrictions to be imposed upon the way advertisements are presented and public policy makers should take a cue from it while framing the media laws in India.

Why Advertisers go for unethical ads ?

Many women and men professionally engaged in advertising do have sensitive consciences, high ethical standards and a strong sense of responsibility. But even for them external pressures-from the clients who commission their work as well as from the competitive internal dynamics of their profession-creates powerful inducements to unethical behavior(Dr Asha Nagendra and Dr. Sudhir Agrawal 2010).

Findings

1. The study clearly shows that majority of the advertisements are demeaning the portrayal of women and children.
2. There is code of conduct (ASCI) in place but most of the Indian advertisements violate the code of conduct.
3. Majority of the companies are violating the law shows that ASCI are ineffective in implementation of the code of conduct.
4. Though most of the advertising professionals have high ethical standards and a strong sense of responsibility, it is the external pressures-from the clients who commission their work as well as from the competitive internal dynamics of their profession-created powerful inducements to unethical behavior.

5. Due to lack of technically sound mechanism to access the exact loss because of comparative advertising, courts are not awarding financial penalties to wrongdoers. Instead courts prefer to stop that advertisement.
6. Customers show interest in advertisements using celebrities.
7. Advertisement imparts promotion of materialism, consumerism and thus financial stress on consumers.
7. The Legal frame work in India needs to be further strengthened.
8. Self Regulation is found missing with the corporate.

Conclusion and Suggestions:

With Globalisation and liberalisation India witnessed the entry of lots of products and services in various categories flooding the Indian market. The cut throat competition in the market is demanding excessive marketing communication and thus, advertising especially through television media plays a very important role .Cut throat competition is leading to false claims and demeaning use of themes and messages in advertisement . A regulatory authority is highly required in our country to control the false claims and demeaning use of themes and messages. ASCI which is a governing body which has laid the rules for advertisements is found ineffective .Majority of the advertisements in India are found to be breaking the common code of conduct and needs strict implementation practices. Advertisements which demean the portrayal of women and children are to be controlled or banned. Comparative advertising is used mainly to disparage the competitor's products sometime directly and sometime indirectly. Many laws are enacted into Indian constitution to stop unfair comparative advertisements. Due to lack of technically sound mechanism to access the exact loss because of comparative advertising courts are not awarding financial penalties to wrongdoers. Instead courts prefer to stop that advertisement. Advertisement imparts promotion of materialism, consumerism and thus financial stress on consumers . They are compelled go for taking loans to purchase products which are not really needed to them. Thus, it can be concluded that ethics is a part of the organisational culture and it has got both positive as well as negative impacts on the customers .

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8

Role of Financial Institutions in the Development of Women Entrepreneurship in Kerala

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Abstract

Financial sector plays an indispensable role in the overall development of women entrepreneurs in our country. The most important constituent of this sector is the financial institutions, which act as a conduit for the transfer of resources from net savers to net borrowers, that is, from those who spend less than their earnings to those who spend more than their earnings. The financial institutions have traditionally been the major source of long-term funds for the economy. These institutions provide a variety of financial products and services to fulfill the varied needs of the commercial sector. Besides, they provide assistance to new enterprises, small and medium firms as well as to the industries established in backward areas. Thus, they have helped in reducing regional disparities by inducing widespread industrial development.

The Government of India, in order to provide adequate supply of credit to various sectors of the economy, has evolved a well developed structure of financial institutions in the country. These financial institutions can be broadly categorised into All India institutions and State level institutions, depending upon the geographical

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coverage of their operations. At the national level, they provide long and medium term loans at reasonable rates of interest. They subscribe to the debenture issues of companies, underwrite public issue of shares, guarantee loans and deferred payments, etc. Though, the State level institutions are mainly concerned with the development of medium and small scale enterprises, but they provide the same type of financial assistance as the national level institutions. This paper deals with the role of financial institutions in the development of women entrepreneurship in Kerala.

Key Words: *Women Entrepreneurs, Entrepreneurship, Economic Development, Small Scale Industries, Government Agencies, Financial Institutions.*

Introduction

Economic development is the result of contributions of the working population, both male and female in the region. Women constitute almost half of the population in the world; therefore, their contribution to the economy is significant. In the patriarchal traditional society, women folk were not expected to have a direct role in industrial and commercial activities. In the modern society, the role and degree of integration of women in economic development is considered as the indicator of social advancement and the women's economic independence.

Women everywhere, in developing economy in the world, are becoming entrepreneurs. The profound structural changes taking place in the developed countries generate new opportunities for women. Changing sociological factors also contribute to this. Since the Second World War, there was a great flow of women to labour markets in the western world. They are found to be motivated by several factors such as need for independence and self sufficiency, domestic financial requirement, increasing rate of divorcing and increasing number of women as heads of households. Changing values and attitudes towards paid work also encourage members of wealthy family to seek self realization outside the home. This emerging pattern in the developed countries inspired their counterpart in the developing countries. In any economy, whether developed or developing, not all women are content to be employees. A growing number are emerging as entrepreneurs. For low income women, the primary motivation is to earn income. But for many women entrepreneurs, such other objective as self realization or doing something worthwhile are as important as earning a profit. A network of organizations is there in the state, which provides loan facilities as well as training, consultancy and marketing services to the women entrepreneurs.

Objectives of the study

To find out the efficiency of women entrepreneurship by way of promotional measures being promoted by the government and financial institutions in the state.

Methodology

The objective of the study will be achieved through collection and analysis of both primary and secondary data. The primary data were collected from women entrepreneurs and the various officials in Government and non government sectors engaged in the development of women entrepreneurship activity. Secondary data has been mainly collected from various records and publications of District Industries and Commerce, State Planning board, DIC, web site of government and non government organisation and also from books, journals and magazines.

Sources of assistance for Women Entrepreneurs in Kerala

The government of Kerala assists the industrial units by providing financial assistance, infrastructural facilities and training or consultancy services. A network of organizations like Kerala State Women's Development Corporation (KSWDC), Kerala Financial Corporation (KFC), Small Industries Development Bank of India (SIDBI), Kerala State Industrial Development Corporation (KSIDC), Kerala Industrial Infrastructure Corporation (KINFRA), Directorate of Industries and Commerce (DIC), Kerala Industrial and Technical Consultancy Organization (KITCO), Kerala Bureau of Industrial Promotion (K-BIP), Centre for Management Development (CMD), National Small Industries Corporation (NSIC), National Bank for Agricultural and Rural Development (NABARD), Khadi and Village Industries Commission (KVIC), Khadi and Village Industries Board (KVIB), SC/ST corporation etc, also provide special assistance to women entrepreneurs in Kerala for identification, selection, training, consultancy and marketing, apart from term loan facilities, on concessional terms.

Financial Assistance

During the pre-independence period, financial constraints had hampered the rapid development of industries in the country. After independence the Government has built up a network of specialized financial institutions with a fairly big capital base to provide financial assistance to all types of industries, including small scale industries. Adequate finance is indispensable to oil the wheels of business activities. Business needs funds for purchase of land, erection of building, installation of machinery etc. and in the case of a growing concern, for extensions and replacement purposes. Finance is also required for the purchase and storage of raw materials, for meeting other expenses for production, and the day to day requirements of the enterprises.

Finance on an adequate scale is necessary for the growth and diversification of industries as well as for the creation and development of entrepreneurship. The institutional set up of financing the business units would be more helpful for rapid growth of entrepreneurship in the economy. Finance is now made available to entrepreneurs on a totality basis by commercial banks, except in cases where the state financial corporations and other similar financing agencies step into meet their medium term requirements. Some of the schemes introduced and implemented by these organizations to provide financial assistance to women entrepreneurs are briefly summarized.

Kerala State Women's Development Corporation (KSWDC)

The Kerala State Women's Development Corporation is a public sector undertaking registered under the Indian companies Act incorporated in the February, 1988 for implementing programmes for the economic development of women in the state and to formulate, promote and implement any scheme aimed at the welfare of women in Kerala and to enable them to earn a better living. To achieve this objective, the corporation has launched several programs for enhancing employment opportunities for women and also for imparting job oriented training to women belonging to families below the poverty line.

Kerala Financial Corporation (KFC)

Kerala Financial Corporation incorporated in 1953 under the state financial Act, is a pioneer in the field of industrial finance and plays a key role in the industrialization of Kerala. During the financial year, the corporation has introduced a scheme for women entrepreneurs to avail loan at a rate of interest of 9 per cent per annum. KFC also provides need based working capital assistance to small scale and medium scale industrial units. The corporation presently extends its activities to cover hire purchase, lease financing, bill discounting, information technology and software development, ISO 9000 certification, technology development and modernisation of jutes, textile industry and so on.

District Industries Centre's (DIC)

Industry department of the state has been arranging General/women entrepreneurship programmes and skill development programmes through DIC's in association with centre for management development, KFC, IDBI periodically. The objective of EDP's are to identify persons with entrepreneurial quality to motivate them and to train them through a structured training course so as to enable them to set up their tiny and small scale industrial ventures with the assistance available from different agencies. The basic objective of imparting training in management subject is to improve the productivity and profitability of the existing entrepreneurs and developing new enterprises. The courses under this programme are designed and conducted keeping in a view the local conditions

J. Rajan, Salini.C.R

and needs of the target groups. The subject covered includes industrial management, specialized management and techno managerial subject.

Khadi and Village Industries Commission (KVIC)

Khadi and Village Industries Commission (KVIC) is conducting multi disciplinary, stipendiary and non stipendiary training programmes in short term durations for prospective entrepreneurs including women.

Kerala Industrial Infrastructure Development Corporation (KINFRA)

KINFRA set up in 1993 by the government of Kerala, is aimed at the development of industrial infrastructure, especially development of industrial parks, townships/zones to provide all facilities, required for industrialization of an area. KINFRA has mainly identified itself with land acquisition and development of industrial infrastructure in the form of development of industrial parks or township or zones, so as to provide all the components needed for industrial development at a given location. This development work of KINFRA is benefiting the social structure around the Industrial centers established by generating more local employment opportunities and adding social facilities to the locality. KINFRA is developing the sector specific industrial parks based on the availability of raw materials and natural resources in the region. Identifying the huge potential of small and tiny industries in Kerala, KINFRA has set up industrial parks extensively for this sector in various districts of Kerala. These are KINFRA Small Industries Parks. KINFRA is involved in providing industrial infrastructure in Kerala and is not directly involved in providing any financial assistance or industrial units coming up in KINFRA. Industrial parks can avail the financial incentives and benefits as announced by the state government and other organizations.

Kerala Bureau of Industrial Promotion (K-BIP)

Kerala Bureau of Industrial Promotion (K-BIP) was constituted under the Industries Department Scheme during the year 1991 as an autonomous body of the State Government. It is envisaged as an agency for tapping the potential business opportunities of the State to the advantage of foresighted entrepreneurs and to highlights the ideal business climate, prevailing in Kerala. K-BIP works in close co-ordination with similar promotional agencies like KSIDC, KINFRA and Techno Park for the promotion of the industrial development, paying specific attention to the strategic advantages, the various governmental supports and other incentives, offered in the different sectors of the industry. K-BIP provides operational flexibility and acts as support mechanism for the Industries Department of the State Government.

Conclusion

Women now constitute a vital force with which the future destiny of the world is inextricably blended. Its natural consequence is that it is most essential to help her throw away the chains that an inequitable tradition has been using to suppress the enormous potential inherent in womanhood, lest universal peace and harmony should ever remain a distant dream. The best way to realize the man women equality and harmony, visualized in the most glorious document in Indian constitution is to bring her into the main stream of economic activity by extending all possible assistance to help her latent capabilities in building up a progressive modern India. All such measures will facilitate women entrepreneurs to get into the mainstream of the socio economic life of the country. Women entrepreneurs of Kerala, both prospective and practicing have tremendous potential and can contribute substantially to the prosperity of our state.

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9

PUBLIC PRIVATE PARTNERSHIP IN INFRASTRUCTURE –A PARADIGM SHIFT

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Introduction

The Indian economy has been growing at an average rate of over eight per cent during the past few years and this trend is expected to continue in the coming years. Infrastructure gaps in several areas such as power, transport etc have been recognized as one of the major drag in the economic growth. Government of India is committed to improving the level and quality of economic and social infrastructure services across the country. In pursuance of this goal, the Government envisages a substantive role for Public Private Partnership (PPP) as a means for harnessing private sector investment and operational efficiencies in the provision of public assets and services.

The financing requirements/ commitments of infrastructure are so large that no amount of resource mobilization within the public sector can meet this challenge. It is in context that the role of the private sector assumes significance. More over the private sector is expected to usher efficiency gains and cost effectiveness. PPP can address such gaps in the infrastructure sector which has lead to a paradigm shift in favor of promoting PPP concept.

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India has already witnessed considerable growth in PPPs in the last one and half decade .It has emerged as one of the leading PPP markets in the world, due to several policy and institutional initiatives taken by the central as well as many state governments. Government of India has set up Public Private Appraisal Committee to streamline appraisal and approval of projects. Transparent and competitive bidding process have been established. To provide a broader cross sectoral fillip to PPS ,extensive support has been extended through project development fund, viability gap funding, user charges reforms, provision of long tenor financing and refinancing as well as institutional and individual capacity building. PPPs are now considered as the preferred execution mode in many sectors viz highways, ports, airports, communication. Over the years an elaborate ecosystem for PPPs has developed including institutions, developers, financiers, equity providers, policies and procedures.

The growing PPP trends justify the need for a broad policy framework that sets out principles for implementing larger number of projects across sectors to complement the inclusive growth aspirations of the country. The National PPP policy seeks to facilitate this expansion in the use of the PPP approach, where appropriate in a consistent and effective manner through

1. Setting out the broad principles for pursuing a project on PPP basis
2. Providing a framework for identifying, structuring, awarding and managing PPP projects
3. Delineating the cross-sectoral institutional architecture and mechanisms for facilitating and implementing PPPs
4. Standardizing some of the vital interpretations and processes of PPP so that a clear and consistent common position is adopted in key issue.
5. Identifying the next generation issues to maintain, upscale, broaden and expedite PPPs.

The policy aims to assist the Central and State Government agencies and private investors seeking PPP opportunities in.

- i. Undertaking PPP projects through streamlined processes and principles
- ii. Ensuring that a value-for-money rationale is adopted with optimal risk allocation in project structuring with life cycle approach
- iii. Developing governance structures to facilitate competitiveness, fairness and transparency in procurement
- iv. Attaining appropriate public oversight and monitoring of PPP projects

Public Private Partnership (PPP) - Definition

Public Private Partnership means an arrangement between a government/ statutory entity/ government owned entity on one side and a private sector entity on other , for the provision of public assets and /or public services , through investments being made and/or management being undertaken by the private sector entity, for a specific period of time, where there is well defined allocation of risk between the private sector and the public entity and the private entity receives performance linked payments that conform to specified and pre-determined performance standards, measurable by the public entity or its representative.

The conditions in the definition are as under i. arrangement with private sector entity. The asset and / or service under the contractual agreement will be provided by the private sector entity to the users. An entity that has a majority non-governmental ownership ie 51% or more , is construed as a private entity. ii Private sector entity Public asset or service for public benefit. The facilities / service are provided are traditionally provided by the Government, as a sovereign function, to the people.

Public service: are those that the State is obligated to provide to the citizens or where the State has traditionally provided the services to the citizens.

Public asset: is that asset the use of which is inextricably linked to the delivery of a public service or those assets that utilize or integrate sovereign assets to deliver Public services.

Some of the points to be noted are

Investments being made by and /or management undertaken by the private sector entity:

The arrangement could provide for financial investment and / or non-financial investment by the private sector, the intent of the arrangement is to harness private sector efficiency in the delivery of quality service to the users

Operations or management for a specific period :

The arrangement can not be in perpetuity. After pre-determined time period, the arrangement with the private sector entity comes to a closure.

Risk sharing with the private sector:

Mere outsourcing contracts are not PPPs

Performance linked payments:

The central focus is on performance and not merely provision of facility or service

Conformance to performance standards

The focus is on a strong element of service delivery aspect and compliance to pre-determined and measurable standards to be specified by the sponsoring authority.

In addition to the above, some of the desirable conditions or good practices for a PPP include the following:

- a. Allocation of risks in an optimal manner to the party best suited to manage the risks.
- b. Private sector entity receives cash flows for their investments in and /or management of the PPP either through a performance linked fee payment structure from the government entity and / or through user charges from the consumers of the service provided.
- c. Generally a long term arrangement between the parties but can be short term dependent for instance on the sector or focus of PPP
- d. Incentive and penalty based structures in the arrangement so as to ensure that the private sector is benchmarked against service delivery.
- e. Outcomes of the PPP are normally pre-defined as output parameters rather than technical specifications for assets to be built through minimum technical specifications might be defined. This will leave room for innovation and technology transfer in project execution /implementation by the private sector entity.

The models where ownership of the underlying asset remains with the public entity during the contract period and project is transferred back to the public entity after the termination contract are the preferred forms of PPP models. The final decision on the form of PPP is a determinant of the value for money analysis.

Some of the commonly adopted forms of PPP include management contracts, build-operate-transfer(BOT) and its variants, build-lease-transfer(BLT), design-build-operate-transfer etc

Build-Own-Operate model is normally not the supported form of PPP in view of the finite sources of the Government and complexities in imposing penalties in the event of non-

performance and estimation of values of underlying assets in the event of early termination. Government of India does not recognize service contracts, Engineering-Procurement-Construction (EPC) contracts and divestiture of assets as forms of PPP.

PPP Models supported by the Government

User-Fee based BOT Models

Medium to large scale PPPs have been awarded mainly in the energy and transport sub-sectors (roads, ports, airports etc.) .Although there are variations in approaches, over the years the PPP model has been veering towards competitively bid concessions where cost are recovered mainly through user charges (in some cases partly through VGF from the government).

Annuity based Bot Models

In sectors /projects not amenable for sizeable cost recovery through user charges, owing to socio-political-affordability considerations, such as in rural, urban, health and education sectors, the government harnesses private sector efficiencies through contracts based on availability/performance payments. Implementing annuity model will require necessary framework conditions, such as payment guarantee mechanisms by means of making available multi-year budgetary support, a dedicated fund, letter of credit etc .Government may consider setting up a separate window of assistance for encouraging annuity-based PPP projects. A variant of this approach could be to make a larger upfront payment during the construction period.

Performance based Management / Maintenance contracts

In an environment of constrained economic resources, PPP that improves efficiency will be all the more relevant. PPP models such as performance based management/ maintenance contracts are encouraged. Sectors amenable for such models include water supply, sanitation, solid waste management, road maintenance etc.

Model Design-Build (Turnkey) Contracts:

In traditional Design-Build contract, private contractor is engaged for a fixed-fee payment on completion. The primary benefits of DB contracts include time and cost savings, efficient risk-sharing and improved quality. Government may consider a turnkey DB approach with the payments linked to achievement of tangible intermediate construction milestones and short period maintenance / repair responsibilities ,penalties /incentives for delays/early completion and performance guarantee from private partner may also be incorporated.

Subsequently as the market sentiment turns around these projects could be offered to private sector through operation-maintenance-tolling concessions.

Principles Governing implementation of PPP

For broad and sustainable growth, the Government recognizes the need to engage with the private sector in diverse sectors through PPP frameworks. They are

1. Harness private sector efficiencies in asset creation, maintenance and service delivery
2. Provide focus on life cycle approach for development of a project involving asset creation and maintenance over its life cycle.
3. Create opportunities to bring in innovation and technological improvements
4. Enable affordable and improved services to the users in a responsible and sustainable manner.

PPP Process

To make the decisions needed to plan, develop and execute successful PPPs , the process can be broadly divided into four phases viz,

1. Identification Stage
2. Development Stage
3. Procurement Stage and Contract Management
4. Monitoring Stage

Phase 1: PPP Identification

Covers activities such as Strategic Planning, Project pre-feasibility analysis, Value for Money Analysis, PPP suitability checks and internal clearances to proceed with PPP development.

Some of the critical drivers are

PPP to generate a steady pipeline of PPP Projects:

To make efficient use of existing assets and harness new investments for greater efficiency, the Government shall set out over a period, a long term vision and plan document for each sector which defines the role of public and private participation. For each financial year, based on a pre-determined and envisaged level of public services to be rendered, different agencies would set out an annual PPP plan which would identify a shelf of projects flowing from the overall vision and specify the extent of private investment for each project in the plan.

Pre- feasibility analysis would be undertaken by the project proponents to assess broad viability of every project envisioned to be procured on a PPP mode.

Value for Money

Value of Money Assessment plays a central role in decision around investment prioritization and in the selection and presentation of the choice of the procurement approach. This is particularly relevant to annuity based payment schemes, where a frame work is needed to assess whether or not it is the appropriate procurement route given the alternative of more traditional procurement approaches.

VfM analysis should be conducted for every project in order to ascertain whether the project being procured as a PPP is in a way offers good value for Money to the public sector. VfM analysis would be conducted even if no fiscal support is required, as the cost is recovered through the user charges. VfM assessment would be based on the efficiency savings that can be realized by utilizing the private sector managerial skills ,integration and synergy between the design, build, service operation, optimal risk allocation, whole of life costing, innovation, focus on outputs and a robust competitive process to elicit the best bids.

State Legislation

Before structuring a PPP project, an assessment would be carried out to ascertain whether private participation in the delivery of a public service is permissible under the present frame work. Necessary amendments shall be incorporated to facilitate PPP investments. In addition to the above, a project would be deemed suitable for PPP, only the risks could be allocated in such a manner that maximizes the stakeholder benefits and the implementing agency commits to adhere to the process of development, procurement and post award governance of the project. If a project is found not suitable after the PPP suitability assessment, the implementing agency would consider the alternate methods of taking up the project including EPC contracts, corporate sponsor ,community participation etc

Phase2 : Development Stage

Development stage covers project preparation including technical feasibility and financial viability analysis , project structuring ,preparation of contractual agreements and obtaining of project clearances and approval. During this stage, activities would be undertaken with the following objectives

- a. Articulate the scope of the project, implementing agencies requirements and set forth roles/ responsibilities of the parties
- b. Establish that the revenue model is robust and sustainable over the project life
- c. Ensure that the underlying risks are defined and appropriately allocated between the contracting parties
- d. Ensure that the contractual arrangements and documentation accurately reflect the scope of the project, roles and obligations of parties, performance standards, monitoring arrangements, penal provisions, reporting requirements , dispute resolution mechanism and termination arrangements as well as and effective post award governance mechanisms
- e. Ascertain that contractual arrangements are permissible under the policy ,legal and regulatory regime
- f. Establish stake holder buy-in and commitment is ensured throughout the process

Phase -3 : Procurement Stage and Contract Management

Procurement stage would cover procurement and project award. Transparent, accountable, non-discriminatory, competitive and timely procurement processes would be followed so as to encourage maximum participation by private sector and to imbibe public confidence in the procedure.

The bid documents used for procurement of private sector entities may comprise one or more of expressions of interest, request for qualifications and request for proposals. Technical proposals would be invited, depending on the complexity of a project, to assess the ability of the private entity of their appreciation of the desired outcomes. Financial proposal would ideally be in the form of a single objective parameter.

A web based market places, including e-tendering and auction would be promoted based on the project requirements to promote wider participation and transparency in the process. Draft contract agreement , containing provisions on the roles and obligations of the parties , performance standards and monitoring arrangements, reporting requirements, penalty conditions, force majeure conditions, dispute resolution mechanism and termination arrangements shall be provided to the prospective bidders as part of the bid documents.

Timelines to be followed during the procurement process would be indicated by the procurement entity in the bidding documents. In order to minimize delays, the procurement

entity would endeavor to obtain all necessary approvals for a project from the agencies concerned in a timely manner.

Provision for Competitive Dialogue in exceptional circumstances to bring in innovation and design flair from the private sector

Phase4: Monitoring Stage

PPP contract management and monitoring stage, covers project implementation and monitoring over the life of the PPP project. Contract management is not a passive box ticking / reporting exercise. It is an active process that involves a wide range of skills. Projects are not static, conditions change and the capability of the public authority at the interface with the private sector party is therefore crucial. The contract manager needs to be empowered to take action responsively and effectively only escalating up the chain issues that cannot be managed at the project interface. This calls for effective and efficient governance processes and people with the right mix of skills (or at time access to skills) including project management, commercial expertise and negotiation skills.

The government and the implementing agencies shall endeavor to ensure timely and smooth implementation of the project. The implementing agency shall put in place a suitable contract administration framework for monitoring project performance milestones over the contract period.

The dispute resolution mechanism would be in accordance with contract conditions and applicable legislation. The implementing agency shall endeavor to speedily resolve and dispose disputes during the contract period through appropriate mechanisms including mediation process.

Sectors identified for implementing PPP

1. Highways
2. Airports
3. Ports
4. Railways

The National highway with a total length of 65,569 is one of the largest network of roads connecting different parts of the country. The National Highway Authority of India (NHAI) the apex body for formulating the policy for developing the roads have formulated the policy to implement various projects of road development through the PPP mechanism. The road sector has been the most pro-active in attracting the participation of the private

sector through PPP's. The road sector tops the list of projects successfully implemented through the PPP's

Airport is another sector where the private sector participation is facilitated in a big way. Kerala has taken a lead in this sector by successfully developed Cochin International Airport Limited (CIAL) in Nedumbaserry. The other success stories of PPP in this sector are the two International Airports developed and implemented in Bengaluru and Hyderabad. Airport Authority of India (AAI) has formulated policy to facilitate private sector investment in the modernization of the airports through PPP. The modernization of the Indira Gandhi International Airport in New Delhi, Chhatrapati Shivaji International Airport in Mumbai. The proposed new green field airports in Navi Mumbai and Kannur are also planned through the PPP mechanism.

In case of the ports, the development of the projects through the private sector participation is at a slow pace.

Infrastructure development in railways sector is fully under the public sector. The role of the private sector is currently limited to operating on certain freight routes, setting up of tourism infrastructure like budget hotels etc.

Funding Mechanism

To facilitate the funding mechanism for the infrastructure projects through PPP, the Government of India has set up India infrastructure Finance Corporation Limited to lend funds for commercially viable projects. The Government has also introduced viability gap funding (VGF) to infrastructure projects to address the critical gaps in private sector financing of infrastructure.

The competitive private participation in infrastructure development in various sectors will further accelerate the economic growth and bring quality improvements in the service to the public.

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10

WATER MANAGEMENT AND SUSTAINABLE DEVELOPMENT

J. Rajan* & Udaya Kumar .A **

Abstract

During monsoons our streets get flooded and we blame the rain gods for working overtime and during summer our taps get dry and we blame the same rain gods for not having worked enough. As the summer peaks, newspapers promptly update us about the water levels at various reservoirs and how long we could survive with the water available. Is the erratic monsoon really responsible for our water woes? This study aims to explore the inherent principle of water management and how water management is important in sustaining the development of the nation for the present generation and also for the future generation to come. It also details the concept of sustainable development in the water sector, the only natural resources which cannot be created economically, but can be polluted or wasted easily.

Introduction

In 1972, the then Prime Minister of India, Mrs. Indira Gandhi emphasized, at the UN Conference on Human Environment at Stockholm, that the removal of poverty is an integral part of the goal of an environmental strategy for the world. The concepts of interrelatedness,

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of a shared planet, of global citizenship, and of 'spaceship earth' cannot be restricted to environmental issues alone. They apply equally to the shared and inter-linked responsibilities of environmental protection and human development.

The above extract is the echo of the developing nation for an equitable division of world rather than a concentrated development. Thus the concept of sustainable development emerged from anxieties that accompanied the triumphant rise in living standards enjoyed in developed countries during the second half of the 20th century.

Later the Brundtland Report popularised the term sustainability for human and environmental development. Formally known as the World Commission on Environment and Development (WCED), the Brundtland Commission's mission is to unite countries to pursue sustainable development together. The Chairman of the Commission, Gro Harlem Brundtland, was appointed by Javier Perez de Cuellar, former Secretary General of the United Nations, in December 1983. At the time, the UN General Assembly realised that there was a heavy deterioration of the human environment and natural resources. To rally countries to work and pursue sustainable development together, the UN decided to establish the Brundtland Commission. Gro Harlem Brundtland who was the former Prime Minister of Norway and was chosen due to her strong background in the sciences and public health.

Objectives and Scope of the Study

This study was designed to provide a preliminary investigation of the concept of sustainable water management and the study was designed to meet the following objectives:

1. To study the sustainable development and water management concepts..
2. To examine the relationship between water management on the development of a nation or region.
3. To study the various strategies to achieve sustainable water management objectives.

Methodology

The study is basically descriptive in nature. A critical analysis of the available water data and the previous research findings were also used for the study.

Data collection

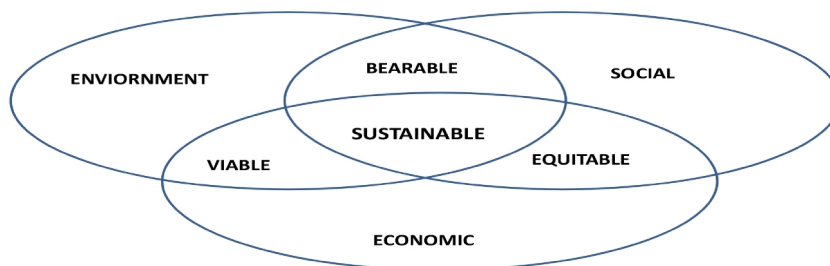
The study was carried out using secondary data collected by various international agencies like United Nations, various national agencies like water commissions and regional block of countries. These data, except for minor adjustments, were accepted at face value.

. Use of these data, however, is not without interpretation. Previous research data were used for generalisation and interpretation.

Sustainable Development

Sustainable development can be defined as “meeting the needs of the present without compromising the ability of future generations to meet their own needs”. Sustainable development is the effective use of resources for economic development while preserving the environment and ecosystem so that not only the needs of present are fulfilled but also for the future generations. Sustainable development also interlinks the development and carrying capacity of environment and ecosystem.

Human beings interact both with the social world and nature. Both, economic development and stable environment are required for the continual improvement of lifestyle and living standards. But until now, the development was human oriented and limited to rich nations. The development was achieved by damaging the environment and over exploitation of natural resources which were non renewable. That caused instability of environment and crossed the threshold limit of environmental damage.



The above figure represented three views on development

1. Environmentalist's view
2. Socialistic View
3. Planner's or Administrator's view

The environmentalist always highlights the environmental aspect of the development within a social background. They are least concerned about the economical aspect of the development. Such development can be termed as bearable development. But the socialistic view ensures equitable division of resources on the background of economical situation of the region. The development of this nature is equitable development without any exploitation of human being. But they are least concerned about the environmental exploitation. Traditional view on development was only the economical viability of the project. But the modern concept considered the environmental aspect also and the social aspect has the least

consideration. Such development activities are viable but not sustainable. So the sustainable development considered the impotents of all the aspects and gives equal weight to all. It presumes that a development activity can be sustainable for the future generations, only if it is viable on all the aspects.

Water management

Water is a unique and vital resource for which there is no substitute. It ignores political boundaries, and has multiple and conflicting demands on its use. It is no wonder, then, that water is perpetually named not only as a cause of historic armed conflict, and is the likelihood that “the wars of the next century will be over water,”

It is written in the history that over 1,831 interactions, both conflictive and cooperative, between two or more nations over water have taken place during the past fifty years. Despite the potential for dispute in international basins, the record of acute conflict over international water resources is historically overwhelmed by the record of cooperation. The last fifty years have seen only thirty-seven acute disputes, i.e. those involving violence. Among these disputes, thirty took place between Israel and one of its neighbors. But during the same period, 157 treaties were negotiated and signed.

Cooperative events related to water covered a broad spectrum, including water quantity, quality, economic development, hydropower and joint management. In contrast, almost 90 percent of the conflict-laden events related to quantity and infrastructure. As such, water acted as both an irritant and a unifier. This also leads to the realisation among the water community that despite the historic record of cooperation over shared waters, there is still definite room for improvement.

Water management, by definition, is thus a conflict management. Water, unlike other scarce, consumable resources, is used to fuel all facets of society, from biologics to economies to aesthetics to spiritual practice. Moreover, it fluctuates wildly in space and time, its management is usually fragmented and it is often subject to vague or contradictory legal principles. As such, there is no such thing as managing water for a single purpose—all water management is multi-objective and based on navigating competing interests. Within a nation, these interests include domestic users, agriculturalists, industrialists, hydropower generators, recreates and environmentalists. Any two of the interests are regularly at odds, and the complexity of finding mutually acceptable solutions increases exponentially as more stakeholders are involved.

Water management is the activity of planning, developing, distributing, managing, and optimumising the use of water resources under defined water polices and regulations. It means.

1. management of water treatment of drinking water, industrial water, sewage or wastewater
2. management of water resources
3. management of digesting protection
4. management of irrigation
5. management of the water table

Sustainable Water Management.

The term uses two important concepts with respect to water: sustainability and management. In order to understand Sustainable Water Management, it is important to define these concepts.

Sustainability

The United Nation's Bruntland Report popularised the term sustainability for human and environmental development. In the report, sustainable activities were defined as one where the needs of the present generation are met without compromising the needs of future generations. The Bruntland definition implies an equitable distribution of the resource not only spatially between users in a given location in a given time, but also between users over time. The idea is to allocate the resource equitably for all, including an adequate share for the environment without making any one group worse off, both now and in the future.

Management

There has been a shift in recent years from the traditional 'top-down' approach to a more open management system where all levels have a say in the allocation and use of the resource. If properly done, this system ensures that the needs and concerns of those most affected by the use of the resource are addressed, without losing sight of the wider issues touching the society as a whole.

Understanding the needs of the stakeholders, as well as the possibilities and limitations of the resource, is needed to manage it effectively. This requires sharing both indigenous and modern scientific knowledge. With the right information, appropriate strategies can be formulated to deal with the realities of resource management, such as distribution, access, rights, etc.

So sustainable Water Management (SWM), can be defined as the management of our water resources for the needs of present users without compromising the needs of the future users.

However, Sustainable Water Management involves much more than its name implies. It involves a whole new way of looking at how we use our precious water resources. The International Hydrological Programme, a UNESCO initiative, noted “It is recognised that water problems cannot be solved by quick technical solutions, solutions to water problems require the consideration of cultural, educational, communication and scientific aspects. Given the increasing political recognition of the importance of water, it is in the area of sustainable freshwater management that a major contribution to avoid/solve water-related problems, including future conflicts, can be found.”

Therefore, Sustainable Water Management attempts to deal with water in a holistic fashion, taking into account

- 1) The availability of water
- 2) The various sectors using water
- 3) The present and future water crisis
- 4) The political, economic, social, technological and environmental considerations.

Since the Mar del Plata Water Conference hosted by the UN in 1977, Sustainable Water Management has been high on the international agenda. The current understanding of Sustainable Water Management is based primarily upon the principles devised in Dublin during the International Conference on Water and the Environment (ICWE) in 1992, namely:

1. Freshwater is a finite and valuable resource that is essential to sustain life, the environment and development.
2. The development and management of our water resources should be based on a participatory approach, involving users, planners and policy makers at all levels.
3. Women play a central role in the provision, management and safeguarding of water resources.
4. Water has an economic value and should therefore be seen as an economic good.

These principles reflect the importance of water in our daily lives and the need for proper communication, gender equity, and economic and policy incentives to manage the resource properly.

Sustainable water management and development

Water is undeniably one of the core issues in 21st century discussions on development co-operation. Worldwide more than 1.2 billion people have no access to drinking water, and three billion have neither sanitary nor wastewater disposal facilities. Numerous development goals are based on the availability of water. So this is therefore the time to develop core proposals for sustainable water management. This includes technologies for manifold use and re-use of water. For instance two-thirds of fresh-water worldwide is currently used in agriculture – resources that literally drain away into the ground. This fresh water could be used further. The water utilized in the industrial sector could also be recycled and re-used. Further research priorities should include the management of water supply for Mega-Cities, coastal engineering and water-ecosystems.

So for sustainable development of the nation the future aim is to anchor the water-management issue in the political agenda as a priority item. Awareness about the impotence of water should be propagated among the policy-makers, public authorities and organisations. The future development plan should be formed so as to enable them to come out with plan to influence ecological, socio-economic and political changes and thus to contribute actively to the achievement of the Millennium Development Goal (MDG) “Ecological Sustainability”. So the objective of the future sustainable water management plan be oriented to

- 1) Promoting a good ecological condition of bodies of water (River, Lakes, Tanks etc)
- 2) Proper linking of economic and ecological requirements,
- 3) Implementing economic and ecological requirements by taking into account of the human use of bodies of water and the conflict of interests of different users.
- 4) Recognising the need for new organisational / administrative structures (catchment area management, River basin management etc)
- 5) Increasing the efficiency of use of water resources and the energy sector.
- 6) Ensuring that all stakeholders are involved in developing sustainable solutions to water problems

Strategies in sustainable water management

Following points are very important in formulating strategies in sustainable water management policies

- 1) Scientists can offer knowledge, information and technical tools. But this is only part of the solution.

- 2) Governments must set up frameworks for better water management, and many other stakeholders — including decision makers, managers and technical personnel must be involved to foster commitment and facilitate conflict resolution.
- 3) As water crosses natural and political boundaries, governments must consider the water needs of all sectors. Better information will help to evaluate needs and prioritise water allocations between them. But the unavoidable compromises and trade-offs should be assessed based on scientific evidence, not influenced by lobbying and pressure groups.
- 4) Water management should be integral to climate change adaptation, and vice versa. To ensure water use stays within the planet's natural limits, interdisciplinary science should be complemented by ethical water governance and management practices.
- 5) Research shows that good governance depends on having multiple centers of control, effective legal frameworks, reduced inequalities, free access to information and meaningful participation by stakeholders. In turn, good governance can help attract needed funds for clean water and sanitation.
- 6) The future should be seen through a water 'lens'. In order to develop solutions for sustainable water management, it is important to go beyond technical solutions to understand the complexities of the global water system, including the social and political dynamics, as well as human behaviours related to water use. This is a huge challenge, but it is the only way forward.

Water Management in India

Water management in India poses numerous challenges like bridging the increasing gap between demand and supply, providing enough water for production of food, balancing the uses between competing demands, meeting the growing demands of big cities, treatment of wastewater, sharing of water with the neighboring countries and among the co-basin states or inter state rivers etc. Producing food for an additional 40 crore people in India, which may be added in next 40 years (the current population is 121 crores), will be a big challenge and calls for fundamental technological and management changes in the way we have been managing our water resources. Various water uses for river basins (for example, irrigation, energy generation and environmental flows, domestic use) will compete or be in conflict with each other in future, thus creating additional management problems. In fact, this conflict can be already noticed in many areas. Severity of the problem increases many folds since water is scarce and its quality is deteriorating, as is happening in some basins such as the Ganga, Yamuna, Pennar, etc. Developers of energy or the farm sector desire to use most of the river flows for their needs, whereas proponents of the environment oppose this on the grounds that it is destroying the rivers.

Water Management for sustaining the life

For example India gets substantial rainfall most of the year to satisfy our water needs and at the same time we experience very dry drought season. The issue is improper management – both at the macro and micro levels. A good share of the rainwater we receive gets drained into the sea. Many of our aquifers are not recharged adequately as unplanned developmental activities have blocked or rendered them useless. Add to this the unaccounted quantity for distribution losses. Ultimately, only a small percentage of the rainwater is available for consumption. Careless usage and illegal connections are another bane.

Integrated water management based on the needs of environmental sustainability and economic efficiency along with equitable supply of good quality water is essential to achieve the long-term water goals of India. Our water resources are managed by the Central and State governments. However, it's imperative to get local bodies and individuals involved in conserving and managing these resources.

Macro level solutions

When there is concentrated heavy rainfall in a short period of time, floods happen. These are seasonal and natural. Floods also happen when the rainwater does not find ways to get drained into soil and nearby water bodies. Presently, there is very little open soil in our cities to absorb rainwater; drains are inadequate or blocked; and most lakes and rivers have been filled up and reclaimed as land. These changes that happened over the years are mostly irreversible. Floods and its aftermaths cannot be controlled, but can be managed to lessen its effects on people's lives. If flood management is done in a holistic way, it will moderate the intensity of floods and take care of the water needs during the drought season. Flood forecasting and flood-proofing the flood zones will minimize the losses and reduce the outlay for relief operations. De-silting rivers and canals and clearing choked drains will prevent water logging and ensure smooth flow of rainwater. Removing illegal structures and encroachments along riverbanks, preserving catchment areas of rivers, and maintaining available wetlands and tanks as well as creating more, will enable absorption of rainwater into the ground.

In areas with heavy density of buildings, installing rainwater harvesting (RWH) systems is the best way to ensure adequate recharge of groundwater. To be more effective, RWH systems should be installed in all the buildings. Hence, government intervention is required to make it mandatory for all buildings, old and new, to install these systems.

Recycling used water was a way of life until a few decades ago when there were very few apartment complexes in the cities. When open areas were lost in construction and government took over water supply and sewage, natural recycling came to an end. Little of the waste water from our bathrooms and kitchen sinks made its way back to its source. Grey water recycling gains importance in this scenario. Grey water is the water used for bathing, washing clothes and utensils, and floor cleaning. Currently, grey water, which forms 60–70% of our total usage, is drained into the same sewage system that handles black water, (the used water from toilets), making it unsuitable for human consumption even after treatment. It is a known fact that efficiency and effectiveness of our sewage treatments plants is not within acceptable standards. The treated water might still contain harmful pathogens when it is released to our water bodies. If grey water and black water are segregated at the source and treated separately, the former becomes fit for human consumption, though not potable, whereas the latter can be treated more effectively and supplied for irrigation and industrial uses.

A thorough and scientific metering of the input and output of treatment plants and distribution centers is required to measure distribution losses. The water needs of people living in illegal settlements are met through illegal connections and unauthorized usage of public water supply. Such non-revenue generating usage of water puts pressure on the system already buckling under various operating constraints. Regular maintenance of distribution lines and political will to curb illegal use are required to tackle this issue.

On a basic level, proper functioning of water meters at the end users needs to be ensured. Our mentality is to take anything free or subsidized for granted. It has been found that the poor pay more for the water than the rich because of the inequity of supply. Subsidized water tariffs should be replaced by a tariff structure with rates proportional to usage.

Micro level solutions

In urban areas, the best way to get individuals involved is the inclusion of residents' welfare associations in water management. Since we get water at the turn of a tap, we thoughtlessly use it without much care. End-user accountability is essential for judicious usage of water, which will come only with increased awareness. Welfare associations or local bodies can spread awareness about the necessity of water conservation and management at an individual level. Rainwater harvesting and grey water recycling systems can be set up for apartment complexes or even independent houses. Black water can be piped out to the sewage system and grey water can be recycled within the premises through soil bed treatment process to recharge ground water or treated properly to use for flushing of toilets.

In housing complexes where different qualities of water are available, a prerequisite for the efficient utilisation of water is two or three compartment overhead water tanks. One compartment can be used for storing potable water, the second for non-potable needs, and if a third quality of water is available, it can be stored in the third compartment for flushing of toilets. Supply lines from each compartment should be connected to the respective usage points. The system can be set up with interconnecting valves on supply lines to provide the flexibility to mix the water as and when required.

Fixing the leaking taps and flushes as early as possible, rinsing vegetables in a pan of water and running washing machine on full load are some of the simple and easy-to-implement water saving measures. Water saving devices such as low-flow flushing systems can be installed. For cistern-type flushes, water usage can be reduced by placing a brick or a plastic bottle filled with sand inside the cistern. Soapy water from washing machines can be collected and used for cleaning bathrooms, while the water from the second rinse can be used to mop floors and water plants.

These measures might look too simple to make any considerable changes. But as the saying goes, a unit saved is a unit produced. Efficient conservation, distribution, and consumption will eventually lead to self-reliance in water. Come rain or shine, we can have water and drink it too.

Conclusion

The problems of water form part of the broader challenges of sustainable development. Water is more than a sector or commodity. Water is life. Access to safe drinking water is a basic human need, essential for health and also for human dignity. Without water, there would be no food, no rainfed or irrigated agriculture. Water sustains economic productivity, human livelihoods and the integrity of the world's ecosystems. Equitable and efficient water management can go a long way to ensure that all the world's people are free from hunger and suffer less from disease and the impact of natural disasters. Good water management improves human and national security and if properly managed, water as a renewable resource can fuel sustainable development.

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11

OCCUPATIONAL STRESS A STUDY AMONG FEMALE EMPLOYEES IN KERALA

* Miss Sani.s

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ABSTRACT

Stress is an inevitable part of today's modern life style. In this fast changing world of today, no individual is free from stress and no profession is free from stress. The nature of work has gone through drastic changes over the last century and it is still changing at whirl wind speed. Stress is a part of everybody's life. Stress can cause poor work performance and lower employee morale. This paper focuses on the work related stress faced by female employees in selected sectors and their effects. The occupation that I consider more stressful for women's are police, medical, labors, professors, IT professions. The aim of this study is to identify the factors affecting stress in women employees in different sectors and to see how far the job stress affect work life.

Key Words: Occupational stress, Women employees, Family problem stress ,Working environment.

INTRODUCTION

Stress is a mental, emotional or physical reaction resulting from an individual's response to environmental pressure and similar stimuli. Stress is generally believed to have deleterious effects on health and performance. Usually it is the major sources of stress that leads to

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burnout, causing people to become unhappy and less productive in their work. Job stress can affect health and home life as well. Low levels of stress may not be noticeable; slightly higher levels can be positive and challenge us to act in creative and resourceful ways; and high levels can be harmful, contributing to chronic disease. But a minimum level of stress is necessary for effective functioning and peak performance.

Job stress can affect health and family life as well. The organization is effected by job stress in many ways like low productivity, poor quality, increased absenteeism, high labour turn over , low job satisfaction and poor interpersonal communication. Hence, there exists a need for organizations to give attention to the work and health of the employees i.e. the work environment, job roles, work load of the employees for a productive and healthy functioning of the organization.

Occupational stress is any discomfort which is felt and perceived at a personal level and triggered by instances, events or situations that are too intense and frequent in nature so as to exceed a person's coping capabilities and resources to handle them adequately (Malta, 2004).

Stress level changes according to the level of hierarchy at which one is engaged but the lower level employees experience more stress compared to upper and middle level employees.

Review of Literature

Some of the studies on stress management are :

- A. Stress is the excitement, feeling of anxiety, and/or physical tension that occur when the demands placed on an individual are thought to exceed his ability to cope. This most common view of stress is often called distress or negative stress .The physical or psychological demand from the environment that cause this condition are called stressors,(HellriegelandSolcum ,2004)
- B. HolmesandRahe, (1961) defined stress as a stimulus event that presents unusual demands.
- C. Ganster and Murphy,(2000) as a form of strain provoked in response to situational demands labeled 'stressors' which occurs when jobs are simultaneously high demands and low in control.
- D. Weihrich and koontz ,(1993) defined stress as an adaptive response, mediated by individual differences and/or psychological processes, that is, a consequences of any external (environment) action,situation,or event that places excessive psychological and/or physical demands on a person.

Miss Sani.S, Dr Manoharan Nair

- E. Leslie and Lloyd,(1977) defined stress as the mental or physical condition that results from a perceived threat of danger (physical or emotional) and the pressure to remove it.
- F. Selye, (1976) define stress as the bodily response we make to the troublesome event.
- G. Weiten, (1986) define stress as any circumstances or transactions with the environment that threaten or are perceived to threaten our well –being and thereby tax our adaptive capacities.
- H. Ivancevich, Konopaske and Matteson,(1987) define stress as an adaptive response,moderated by individual differences that is a consequence of any action, situation or event and that places special demands on a person..
- I. Auerbach et al, 2007 /Encarta, 2008, define stress as an unpleasant state of emotional and psychological arousal that people experience in situate /ions that they perceive as dangerous or threatening to their well-being.
- J. Richard Lazarus and his colleagues (HolroydandLazarus, 1982; Lazarus and Folkman, 1984) championed transactional model of stress-A theory that proposes that the experience of stress depends on one's subjective appraisal of events. Thus stress is neither a stimulus nor a response but a stimulus –response transaction.

Lazarus emphasizes that the experience of stress is highly personal and subjective, depending on how people appraise the events they encounter.

Statement of the Problem

Stress is a mental exertion when one is not able to perform the job according to her abilities. Stress is the excitement, feeling of anxiety, and/or physical tension that occur when the demands placed on an individual are thought to exceed his ability to cope. Women employees try their best to balance the work life and family life due to so many work related and family related problems The studies made in this area is profuse and it is the right time to identify and correlate the stress among women employees at the family life and at the work life and hence, the present study.

OBJECTIVES

The following objectives are set for the study:

1. To identify the causes and sources of occupational stress among women employees in Kerala.

2 To find out the relations between different stress variables and the levels of employees

HYPOTHESIS

The following hypotheses are formulated to know the level of significance between different variables and the stress levels:

1.Ho-There is no significant relation between age group and stress level of employee

H1-There is significant relation between age group and stress level of employees

2.Ho-There is no significant relation between educational qualification and stress level of employees.

H1-There is significant relation between educational qualification and stress level of employees

Scope of the Study

The study is made for knowing the causes of stress and its impact on their work . For it views are obtained from employees working in selected sectors viz , Police, Medical, Teachers, Labourers and Nurses.

DATASOURCEANDMETHODOLOGY

Both primary and secondary data were collected and used for the present study. Primary data is collected by using an interview schedule specifically developed for this purpose. Stratified random sampling technique is used for the collection of primary data. 10 female employees each from five sectors (Police, Medical, Labourers, Teachers and Nurses) making a total of 50 respondents.

Tools used for Collection of Data

An Interview Schedule specifically developed for this is used and the opinion survey method by using Likert's Five Point Scale is used for collecting information from respondents.

Tools used for Analysis of Data

The analysis is made by means of using the tests like correlation and chi-square test

Period of Study

The study period is for 2 months .

Variables Used for the Study

The following are the variables identified for the study:

- a. Job stress
- b. Family problems
- c. Relationship stress
- d. Working Environment.

Sources and Causes of Stress

The physical and mental condition of person alters while undergoing stress. Due to these changes, several symptoms arise in physical, psychological and behavioral aspects of an individual. These stresses arise from sources which are called stressors. The major source of job stress falls in to eight categories:

Control: This factor is the most closely related to job stress. Studies show that workers who perceive they have a great deal of responsibility but little control or decision-making power in their jobs are at increased risk for cardiovascular disease and other stress-related illnesses.

Career Concerns: Job insecurity and lack of opportunity for growth, advancement, or promotion; rapid changes for which workers are unprepared.

Clarity: Feeling uncertain about what your duties are, how they may be changing, or what your department's or organization's goals are can lead to stress.

Communication: Workplace tension often results from poor communication, which in turn increases job stress. An inability to express your concerns, frustrations, or other emotions can also lead to increased stress. It leads to Depression, . Withdrawal

Support: Feeling unsupported by their coworkers may make it harder to resolve other problems at work that are causing Increased blood pressure

Significance: If you don't find your job meaningful or take pride in it, you may find it stressful.

Increased responsibility: Assuming additional responsibilities in their job can lead to increased blood pressure and depressions.

Environmental condition: Unpleasant or dangerous physical conditions such as crowding, noise, air pollution, or ergonomic problems create more physical illness.

Testing of Hypotheses

Chi-square Tests

1. Ho-There is no significant relation between age group and stress level of employee
H1-There is significant relation between age group and stress level of employees

CHI-SQUARE TESTS

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	94.910 ^a	66	.011
Likelihood Ratio	99.338	66	.005
Linear-by-Linear Association	38.562	1	.000
N of Valid Cases	50		

Source: SPSS

Interpretation

There is a significant relation between occupational stress and age group among women employees.

Correlation

1. Ho- There is no significant relation between educational qualification and stress level of employees.

H1- There is a significant relation between educational qualification and stress level of employees

Symmetric Measures					
Interval by Interval	Pearson's R	.282	.125	2.037	.047 ^c
Ordinal by Ordinal	Spearman Correlation	.356	.127	2.642	.011 ^c
N of Valid Cases		50			

Source: SPSS

Interpretation

There is a positive relationship between educational qualification and stress level among employees

CONCLUSION

On the basis of the findings, it is understood that the female employees from different sectors faces more stress in their daily life and hence there is imbalance. The study reveals that, the occupational stress among women employees depend on four independent variables such as job stress, working environment, family problem stress, relationship stress. It means that these four variables which hinder the female employees in achieving success in their workplace. The test statics revealed that out of 2 hypothesis, both are rejected and accept the alternative hypotheses that there exist a significant relation exist among age stress and education stress and occupational stress . So also there exist a significant relation among environment stress, job stress and family problems and occupational stress. Therefore women employees are not able to handle occupational stress in their work place and it exist as an essential aspect which brings out the chances for improving the employees overall.

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