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Chairman, Editorial Board

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Editorial

Staying Connected During Social Distancing

We're living in unprecedented times, and are trying to catch up with new and perplexing experiences like social distancing. Habits of physical touch exist not just between our own hands and faces, but with the people with whom we are in close proximity. It is relatively easy to avoid large gatherings and not shake hands with or hug strangers. But not hugging our family members and holding our children in the lap seems unavoidable. Restraining all small and invisible touches with the close people is as difficult as not touching one's own face. We cannot ever fully protect ourselves from each other. Bodies and their collisions are the fabric of our world, and there is no avoidance from that.

Sickness reminds us that we are all each other's responsibility, but it is painful to execute those responsibilities when social distancing is first and foremost among them. Supporting people when we need to restrain physical contact with them seems next to impossible. Taking care of someone who's sick means we become a carrier. Even if we don't get sick, we could still be putting more people at risk. Our responsibility to care physically our loved ones, and our larger responsibility to limit physical contact with others, places unique onus on close relationships. In a pandemic, home is both a haven and a hot spot of transmission. The challenge is to distance ourselves physically but remain connected emotionally. Practicing more kindness and having gratitude toward others is a great way to feel closer, rather than feel farther apart.

Deep ties bind humans; make them feel connected while practicing kindness or gratitude. Being alone, makes one fear loneliness. Being by oneself really offers an opportunity for experiencing a rich array of thoughts and feelings: the reliving of shared experiences. One can easily remember the places one has been, the people one has been with, the feelings one has experienced with close ones - all the highs and lows. Whether we're together physically or virtually in these trying times? When we need to practice physical distancing, minimize *emotional* distancing and that will make you feel connected and overcome the fear of loneliness.

We have many people that we care about in our lives. Someone with whom we live and have made a long-term commitment, the current friends, old friends we're not as frequently in touch with, neighbors or acquaintances — hopefully, all of them. We even care for some people whom we have only just met. Recalling all of that can

counteract loneliness. Being able to look back and actively participate in the power of existing contacts is a source of substantial ongoing strength and stability. This may also work with others who are no more. We can recall the relations that exist with others. These days, when medical and public health advisory instructs us to practice social distancing, our natural abilities to maintain emotional intimacy can void the gap. *How to not practice emotional distancing during social distancing.*

Social distancing is an act of community, something that brings us closer because it is practiced out of compassion, even when it physically expects us to remain apart. We need to continue seeing our homes and families as a source of support rather than fear. Even if we have to avoid physical closeness, we should not let that avoidance permeate into our emotional lives. People who live alone often create outside networks of support for themselves, but accessing those is much more difficult when you have to stay home and limit social contact. The webs of habit and reliance that we take for granted are clearest when something disrupts or removes them.

The readers of AJM are requested to go through the contents of the journal and help us in improving the academic value of this publication by offering suggestions based on their critical review and constructive observations. The prospective contributors to this journal are advised to follow APA pattern (7th Edition) for presenting the references.

Dr. Upinder Dhar
Chairman
Editorial Board – AJM

Technology Engagement in Women Led Businesses: Extending the Unified Theory of Acceptance and Use of Technology

Minu Mehta and Ritu Sinha***

Abstract

Many women are turning into entrepreneurs, and their companies happen to be small-scale. There is a need for business ecosystem to be sensitive to women entrepreneurs. Currently, the business ecosystem offers greater challenges for women than for men, especially for technology adoption, acceptance and its usage. The study extends its contribution to the existing literature by exploring the role of women entrepreneurship by technology adoption and closing the gender gaps in terms of entrepreneurship in accelerating women empowerment in the country. The study has revealed that factors like age and education do not have an impact on the intention of technology adoption. However, if women entrepreneurs have already started using the technology then, even education becomes insignificant for the increased usage.

Keywords: International Finance Corporation, World Development Report, Performance Expectancy, Effort Expectancy, Facilitating Conditions

Introduction

Currently, technology defines every aspect of our life. The information and communications technology (ICT) space is rapidly expanding in India. The country is witnessing a tremendous growth in the ICT sector which is contributing to India's economic growth. According to the market monitor report, 2018, the ICT sector is expected to grow 9.1 percent. This growth is fueled by many drivers like better economic indicators, increasing disposable income, women's entry into the workforce, entry into the tier 2, tier 3 cities and rural markets. The acceptance of online and digital marketing and conducive economic, government investments in the industry and policy environment have paved the path for the e-commerce boom.

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A large number of women are stepping out of their houses; adding to the household income and creating opportunities for jobs in household care like cleaning, cooking etc. According to World Bank data, the number of women entering into the workforce is not very high. As compared to 79 percent of men, only 27 percent of Indian women were part of the workforce in 2017. Girls and young women may be doing well with their studies, but it is not getting reflected in their career trajectories. A considerable proportion of women leave their education and enter the labour market without formal or vocational qualifications. These women struggle to find good jobs or are stuck in low-wage positions with little chance for advancement. Majority of these women enter into informal economy or start up their own business ventures.

The increased number of women entering the economic wave has been a pleasant change, with its own share of struggles and challenges. Many women are turning into entrepreneurs. These women-run companies are small-scale and about 79 percent of them are self-financed. This trend of women empowerment is helping in achieving the objective of inclusive, equitable and sustainable development for women. The right opportunities and proper environment and women's active participation in decision-making can lead to positive impact on education, health, nutrition, employment and social protection.

Background

Women entrepreneurs offer important research insights from the twin perspectives of negotiations with patriarchy in gender based research and also as agents of empowerment in development economics. Thus, the role of women entrepreneurs in promoting social inclusion and enhancing worldwide economic and social wellbeing is widely accepted by researchers and policy makers. According to a study by the International Finance Corporation (2017), in India, women-owned enterprises, approximately 3.01 million, are nearly 10 percent of the total MSME sector and contribute 3.09 percent of industrial output. 78 percent of women-led businesses are found in the service sector and 98 percent are micro enterprises. According to the Sixth Economic Census of India (2016), by National Sample Survey Office (NSSO) in 2013-14, these establishments provided employment to 13.45 million persons. The statistics, thus, prove the significance of women entrepreneurs in the global economy.

There is a need for business ecosystem to be sensitive to women entrepreneurs. However, currently, the business ecosystem offers greater challenges for women than for men, especially for technology adoption, acceptance and its usage. The premise that technology adoption by women improves quality of life for women is supported

by two sources: the 2012 World Development Report by the World Bank and UNCTAD's 2011 Information Economy Report. Mayoux (2001) suggested that women faced more challenges with respect to socio-cultural, educational and technological issues than men while managing their business ventures. Orji (2010) found significant differences between men and women with regards to the access and usage of electronic mail, information retrieval, e-learning and communication technologies.

As indicated by both historical and current data, women's access to technology lags considerably behind that of men. The 2010 Report, *Women & Mobile: A Global Opportunity,* concludes that even in the mobile phone industry, there is a gender gap of 300 million fewer female than male mobile phone subscribers in low- and middle-income countries. Adoption and usage of technology refers to the readiness and actual use of technology in the matters related to business, in mainly three formats, use of computers, use of mobile phones and use of internet either through computers or mobile phones, or both. Hence, technology acceptance and usage implies engagement of both m-commerce and e-commerce for business activities. It includes any information inquiry or business transaction conducted by the use of mobile phones, internet or wireless communication network. In this context, technology acceptance and usage can be categorised into three service groups – communication services, transaction services and information services.

Rationale of the Study

This study is aimed at understanding the potential of technology in empowering women entrepreneurs. For the purpose of this study, women entrepreneurs are defined as those women who own businesses where the woman or a group of women are responsible for the strategic business decisions, irrespective of the extent of stake owned by them. This definition helps to focus on women entrepreneurs who have started their own business, or, women heirs to family businesses, who are decision makers and operate in the MSME sector.

The literature suggested that adequate research studies have not been carried out on women entrepreneurs with respect to their orientation to the information and communication technology. Thus, the current study attempts to fill the gap in investigating the factors influencing the technology acceptance and usage among women entrepreneurs in Maharashtra. This paper aims to investigate how various tools of ICT like mobile phones and computers can be used for supporting women's entrepreneurship. The study extends its contribution to the existing literature by exploring the role of women entrepreneurship by technology adoption and closing

the gender gaps in terms of entrepreneurship in accelerating women empowerment in the society.

Research Questions

The study is aimed at understanding the technology acceptance and usage among women-led MSME businesses. The study will attempt to answer the following research questions:

1. Do women perceive that technology can improve their business performance?
2. Does age play an important role in the use and acceptance of technology?
3. Does social influence impact the acceptance and usage of technology?
4. Does ease of use of technology have any association with acceptance and usage of technology?
5. Does women's education have any association with acceptance and usage of technology?

Review of Literature

Unified Theory of Acceptance and Use of Technology (UTAUT) developed by Venkatesh, Morris, Davis, and Davis (2003) is a synthesis of the previous attempts like the technology acceptance model (TAM) and models based on the theory of planned behavior (TPB) to explain and predict user acceptance and use of IT. According to UTAUT (Venkatesh, Thong and Xu, 2012), there are four key factors, namely performance expectancy, effort expectancy, social influence, and facilitating conditions that help to predict the behavioral intention to use technology and the actual use of technology in organizational contexts. Performance expectancy is the degree to which an individual believes that using the system will help him or her to attain gains in job performance. Effort expectancy is defined as the degree of ease associated with the use of the system. Facilitating conditions are defined as the degree to which an individual believes that an organizational and technical infrastructure exists to support use of the system. Social influence is defined as the degree to which an individual perceives that important others believe he or she should use the new system (Attuquayefio and Addo, 2014).

Intention and usage are moderated by the four factors of age, gender, experience, and voluntariness. Since the given study is focused on women, gender based constraint is being considered as one of the research questions. It was felt that education is an

important missing moderator predicting the acceptance and usage of technology. Therefore, the objective of this study is to understand the influence of education as moderator to predict the behavioral intention and usage of technology in women led businesses. The given study is aimed at understanding the issues surrounding the technology acceptance and usage among women entrepreneurs. It further investigates how various tools of ICT like mobile phones and computers can be used for supporting women's entrepreneurship.

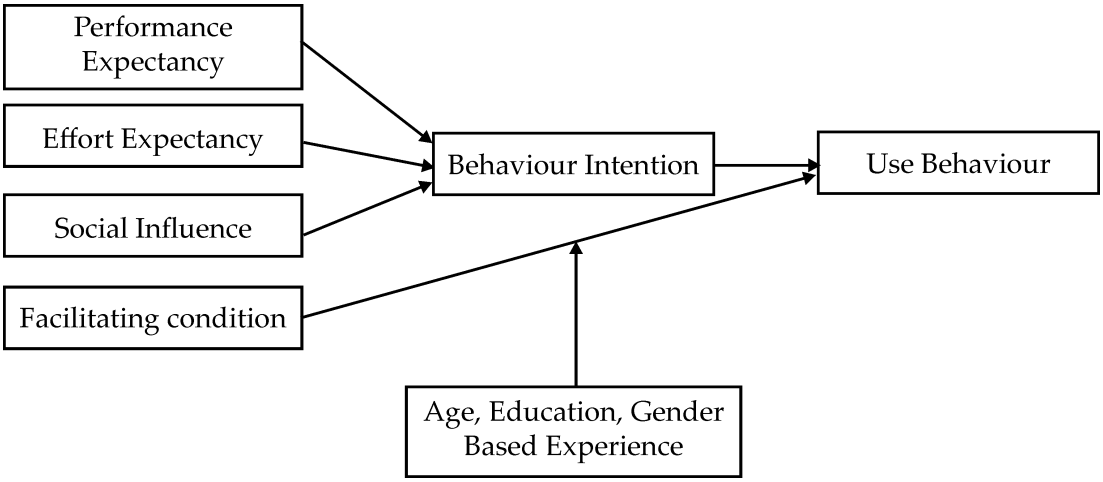

Figure 1: Proposed theoretical model
(Source: Adapted from Venkatesh et al., 2003)

Numerous theories from the field of behavioral psychology have been partially successful in explaining why individuals accept new information technology. Venkatesh et al. (2003) tested a total of 32 constructs from eight theoretical models simultaneously to determine the constructs that had the most influence on information technology use. The eight theories considered were: The Theory of Reasoned Action (Fishbein and Ajzen, 1975), TAM (Davis, 1989; Venkatesh, 2000), the Motivational Model (Davis et al., 1992), the Theory of Planned Behavior (Ajzen, 1991), a model combining TAM and the Theory of Planned Behavior (Taylor and Todd, 1995), the Model of PC Utilization (Thompson et al., 1991), the Social Cognitive Theory (Bandura, 1986), and the Innovation Diffusion Theory (Rogers, 1995). The researchers identified the level of influence that the constructs of each of the eight theories had on technology adoption. The authors then used the most influential constructs for a new model, UTAUT, with four core determinants of usage and intention, and up to four moderators of key relationships.

Definitions

Performance Expectancy refers to the degree to which the user expects that using the system will help him or her attain gains in job performance (Venkatesh et al., 2003). Five constructs from the eight behavioral theories contribute to performance expectancy. These include: extrinsic motivation from the Motivational Model, relative advantage from the Innovation Diffusion Theory, perceived usefulness from TAM/ Extended TAM and combined TAM/Theory of Planned Behavior, job fit from the Model of PC Utilization, and outcome expectations from the Social Cognitive Theory.

Effort Expectancy refers to the degree of ease associated with the use of the system (Venkatesh et al., 2003). Three constructs from the theories reviewed measure some dimension of effort expectancy. These are: perceived ease of use from TAM/the Extended TAM, complexity from the Model of PC Utilization, and ease of use from the Innovation Diffusion Theory.

Social Influence refers to the degree to which an individual perceives that important others believe he or she should use the new system (Venkatesh et al., 2003). Three constructs from the individual models capture the concept of social influence. These are: subjective norms from the Theory of Reasoned Action, the Extended TAM, the Theory of Planned Behavior, and the Combined TAM/Theory of Planned Behavior, social factors in the Model of PC Utilization, and image in the Innovation Diffusion Theory. UTAUT proposes two influences on information technology use: intention, and a new construct, called facilitating conditions which is defined as follows:

Facilitating Conditions refer to the degree to which an individual believes that an organizational and technical infrastructure exists to support the use of the system (Venkatesh et al., 2003). Three constructs from earlier theories have attempted to measure facilitating conditions. They include: facilitating conditions from the Model of PC Utilization, perceived behavioral control from the Theory of Planned Behavior and the Combined TAM/Theory of Planned Behavior, and compatibility from the Innovation Diffusion Theory. Two empirical tests of UTAUT suggest that gender, age, prior experience, and voluntariness of system use moderate influence of the main constructs on intention and the use of information technology. First, effort expectancy inversely affects intention and was stronger for older workers, women, and those with limited experience. Second, performance expectancy directly affects intention and was stronger for younger workers and men. Third, facilitating conditions inversely affect actual use and were stronger for those with more experience and older workers. And finally, the effect of social influence on intention was stronger for older workers,

women, those using the system under mandatory conditions, and those with limited experience.

The research is built from the behavioral literature, women entrepreneurs, technology adoption, and micro businesses. The review of this array of literature is important because it forms a basis to assist in rebuilding technology acceptance theories that can more accurately predict women entrepreneurs' behavioral intention to use technology. Even though the current technology acceptance models have failed to accurately predict women entrepreneurs' technology acceptance, the research that uses different methodological approaches to try to explain this void is absent from the literature. Using this different methodological approach, ICT acceptance will be viewed in an entirely different way.

Research Method

The evolving information communication technology, especially mobile phones, computers, and internet have become facilitator tools for business operations. Traditionally, women entrepreneurs and their businesses are more likely to be informal, micro, generate less revenue, and employ fewer staff. They often face constraints due to limited access to finance, time paucity due to household responsibilities, physical mobility, and access to education, skills and training. But ICT can help them to overcome some of the issues and help them in reaching out to customers and building their businesses. But there is a scarcity of data regarding the women entrepreneurs and their adoption and usage of ICT for their businesses. The study was an attempt to investigate the experiences of the women leading businesses in Maharashtra with respect to technology acceptance and usage.

The sampling unit was constituted of the women who were at least 25 years old, working for their own business, getting financially compensated for the work and the businesses were in MSME and had an average age of 5 years. Responses were obtained through purposive and snowball sampling where leads for the respondents could be generated through contacts from the participants. A mixed research design having qualitative and quantitative components were planned for this study. Qualitative analysis made use of in-depth interviews using narrative analysis to understand the perceptions of women towards the technology acceptance and usage. The study included semi-structured interviews with 20 successful women led businesses to develop a deeper understanding of the research problem and contextual realities.

The study used formal methods like surveys for obtaining quantitative information with the help of structured questionnaire which were subjected to statistical tests of significance. This was followed by a survey of women stakeholders of 1200 business firms led by women and having their operation in Maharashtra. The study was conducted at six prominent places of Maharashtra: Mumbai (500), Pune (200), Nagpur (150), Nashik (150), Aurangabad (100) and Kolhapur (100) with a total sample size of 1200 respondents. Key variables from the review of literature were elaborately combined with the information from interviewing with the aim of developing an effective questionnaire to be used in this survey.

The data was collected from 1200 women entrepreneurs who were involved in the business of beauty parlour, tiffin service, apparel manufacturing, financial services, pickle making and selling, fish sellers, dieticians, fashion designers, apparel e-tailors, handcrafted jewellery and many more.The items used to measure behavior intention and usage behavior of women entrepreneurs were drawn from the literature, interviews and discussion with the owners and subject experts. The extracted scale items from the literature were modified according to their applicability in the service sector. The research instrument was finalized after pre-testing, using both qualitative and quantitative approaches.

Results and Discussion

The break-up of the sample being: 41.7 percent of women entrepreneurs from Mumbai, 16.7 percent from Pune, 12.5 percent from Nagpur, 12.5 percent from Nashik, 8.3 percent of women entrepreneurs from Aurangabad and 8.3 percent of women entrepreneurs from Kolhapur. This spread is representative of the demographic density of the cities. Mumbai being the financial capital of the country is host to the more women led businesses in the city. 47.1 percent of respondents belonged to micro businesses, 39.1 percent belonged to small businesses and 13.8 percent belonged to medium businesses. Interestingly, many respondents said that they were not keen to scale up their businesses from micro to small level. Operational issues, lack of manpower, family support, and easy availability of funds were the commonly cited reasons.

Most of the respondents were from the age bracket of 25-45 years. 33.5 percent of women entrepreneurs belonged to the age group of 25-35 years and 32.3 percent belonged to the age group of 35-45 years. In the higher and lower age categories, the number of women entrepreneurs dwindled. It fell to 15.8 percent for above 45 years and 18.4 percent of women entrepreneurs belonged to the very young age group of

less than 25 years. Coming to education, close to half of the sample i.e., 47.7 percent of women entrepreneurs were graduates. 20.8 percent of the respondents had completed their Intermediate level of education, 16.3 percent were postgraduates and 11.8 percent had completed their high school level studies and only 3.6 percent were school drop-outs or matriculates.

Majority of the respondents in the study were married. 68.6 percent entrepreneurs were married and 31.4 percent of women were single. Of these, 3.0 percent were divorced, 12.4 percent were widows and 15.0 percent were spinsters. Interestingly, most of the divorced and widowed entrepreneurs reported starting their business after the separation or loss of their spouses while most of the spinsters said that their spinsterhood was a result of their single-minded devotion to their business responsibilities. Coming to married respondents, most of them said that they started taking interest in the business of their spouses post marriage and evolved to become integral members of the core team entrusted with decision making related to raising of funds, product diversification, and technology updation and so on. Most of the respondents i.e., 39.1 percent of women entrepreneurs had two children followed by 29.8 percent had more than 2 children, 25.6 percent had one child and 5.6 percent had no children. Most of the respondents reported becoming active in their family business or starting their business once their children entered schools.

The 36.7 percent of the women entrepreneurs sometimes made use of the internet for business activities, whereas 32.1 percent very often made use of internet for business activities, 20.8 percent always made use of the internet for business activities, 8.3 percent rarely made use of internet for business activities and 2.2 percent never made use of internet for business activities. Thus, an overwhelming 89.6 percent of the respondents reported using the internet always, very often or sometimes for their business related work. The respondents who reported never using internet for business activities were found to be operating vegetable selling, basket weaving, petty trading and other such very small businesses with very low technology integration, and were by and large from outside Mumbai. However, many of these women owned smart phones and were using them for business, even if they did not use the smart features i.e., internet. Only 8.3 percent of the respondents said that they rarely or never used their smart phones for business. 47.3 percent that is almost half of the sample used their mobile phones very often or always for managing business related work. This shows a very high dependence on smart phones and a very high integration of smart phone technology with the regular business activities. The use of internet was spread

across the sample with 100 percent respondents reporting access to and use of internet, even if only for personal use.

The majority of the respondents i.e., 45.9 percent used mobile based internet and only 12.1 percent accessed internet through computers only. 42.0 percent of the sample used both their smart phones and computers to access internet. The preference for accessing internet through mobile phones can be understood with the concept of Performance Expectancy which is the perceived utility associated with the given technology. ICT, especially mobile internet empowers users with temporal and spatial efficiency as it provides them information or other services as per their convenience (Idemudia, 2014). In accordance with this finding, 45.9 percent of the participants in the current study reported that internet was useful for their business and acknowledged greater perceived expectancy from mobile internet vis-a-vis computer internet. Mobile phones were extensively used for contacting vendors and suppliers, contacting buyers, tracking delivery and receipt of orders, receiving feedback like complaints related to breakages and quality issues and tracking payments. Computers were used for generating bills, maintaining files, accounts and databases.

The high usage of smart phones and computers, with or without internet, is obvious as an overwhelming 82.2 percent of the respondents self-reported their computer knowledge as very good, good or moderate. This shows comfort with technology and confidence in their ability to use technology. Further, 83.9 percent of the respondents said that their internet knowledge was very good, good or moderate. Thus, most of the women in the study had the skills to access internet and understand how to use it.

Today technology is accessed through devices like phones, computers, laptops and iPads to name a few. The most common way to access the internet is through computers. Many people find it easy to work on internet, whereas others find it very difficult and do not use the internet. There are many factors which are responsible for Internet non-adoption. The most prominent are demographic variables, including age, educational attainment, household income and community type. The present study suggested that women entrepreneurs described their internet knowledge as moderate (37%), good (26.7%), very good (19.8%), very poor (11.8%) and poor (4.3%).Coming to the period of usage, 56.2 percent of women entrepreneurs were using the Internet for more than 3 years, 25.8 percent were using the Internet for 1-3 years, 11.7 percent were using the Internet for less than 1 year and 6.4 percent did not use internet at all. 39.0 percent of women entrepreneurs used the Internet per day for more than 3 hours, 24.9 percent used the Internet per day for 2-3 hours, 23.9 percent used the Internet per

day for 1-2 hours, 9.5 percent used the Internet per day for less than one hour and 2.7 percent did not use the Internet at all.

When respondents were asked on the use of computer, it was observed that 35.8 percent of women entrepreneurs used computers for maintaining accounts, 23.7 percent used computers for other purposes, 19.5 percent used computers for maintaining the customer details, 12.4 percent used computers for printing bills and 8.7 percent used computers for maintaining inventory.

Coming to use of mobile phones, 68.8 percent of women entrepreneurs said that they used the mobile phone for communicating with family members, 10.8 percent used the mobile phone for business related activities, 8.8 percent used the mobile phone for games, 5.8 percent used the mobile phone for social networking, 3.5 percent used the mobile phone for entertainment, whereas 2.3 percent used the mobile phone for other purposes like watching movies, storing photos etc. 47.8 percent of women entrepreneurs reported using the Internet for taking orders, 19.7 percent used the Internet for marketing and advertising products, 17.5 percent used the Internet for bill making, 8.3 percent used the Internet for making payment and 6.7 percent of women entrepreneurs used the Internet for providing customer support.

On probing deeper into technology integration, it was found that 82.9 percent of women entrepreneurs did not have website for their businesses and only 17.1 percent had website for their businesses. This shows a failure on the part of the respondents to understand the importance of websites in giving wide visibility to their businesses. A similar trend is visible for usage of internet based applications. 74.4 percent of women entrepreneurs reported the use of WhatsApp as online medium for the business and a mere 10.9 percent used Facebook. WhatsApp being predominantly a smart phone based application does not have as wide reach as Facebook. In the same vein, it was found that only 4.8 percent of women entrepreneurs used Instagram and 4.2 percent used Snapchat which are platforms based on high visual appeal. The statistics thus point to the urgent need for women entrepreneurs to understand and start using the easily available and mostly free internet based applications which can help them in business development, networking and access to technology savvy buyer segments.

It was found that women led businesses are not using the full potential of internet. When asked how internet has benefitted their business, 63.4 percent of women entrepreneurs said that they got more enquiries by virtue of internet and only 16.7 percent reported getting more orders thanks to the use of internet. 6.0 percent of the women entrepreneurs said that internet helped them with new ideas and a miniscule

3.7 percent of the respondents believed that their business benefitted through use of internet by finding new markets, 3.6 percent found new vendors due to internet, 2.1 percent believed that their business benefitted through use of internet by getting into social media networks and only 0.6 percent agreed that they opted for speedy transfer of funds through internet. Thus, the use of internet is sub-optimal in the areas where substantial benefit could easily be taken, like getting more orders, accessing more markets and seamless fund transfer.

When asked about the disadvantages of the use of internet for their businesses, 26.2 percent of the respondents felt that increased penetration of technology is creating a distraction among people where they are spending long hours glued to computers or smart phones. This observation, they candidly admitted, applied to them i.e., women entrepreneurs and also to other stakeholders like their customers and vendors. Buyers, the women reported, are spoilt for choice and so tend to spend very little time in understanding their products and services. They flip over to other options within seconds and take impulsive decisions of rejecting one product for another. 16.2 percent of the respondents said they found it difficult to use the internet and this put them on a disadvantage compared to other businesses where the entrepreneurs were more tech savvy. 13.9 percent of women entrepreneurs believed that the internet is expensive and this prevents them from extensive use for business activities. A significant 11.7 percent of women entrepreneurs reported suffering due to online frauds. Interestingly, a significant 32.0 percent of women entrepreneurs felt that many reasons like reduced physical interactions, negative reviews, potentially lower profit margins are harming businesses due to online exposure.

Despite this, more than half i.e., 53.6 percent (28.4+25.2) of the respondents agreed or strongly agreed that technology was useful for their business. 28.2 percent of the sample reported being unsure of the benefits of technology. It is this demography, mainly coming from Tier 2 and Tier 3 towns, which needs to be counseled and mentored to start viewing technology as an enabler. The 18.2 percent of the sample which disagreed or strongly disagreed that technology was useful for their businesses require more help in terms of counseling as well as capacity augmentation which can convince them about the potential of technology to positively impact their businesses.

Further, women entrepreneurs were asked to respond to the statement about technology enabling them to accomplish their tasks more quickly. Here, 55.1 percent of the sample agreed or strongly agreed saying that technology has actually added speed to their task execution. However, this also implies that close to half of the sample

either disagrees, strongly disagrees or is unsure about technology adding speed to their tasks. This shows that these respondents do not have positive experiences to recollect about technology and their task execution. This again shows an area where policy intervention in terms of awareness and skill building can offer help. Coming to specific trends revealed by the data, 54.7 percent (33.8+20.9) of the sample accepted that technology has increased their productivity. In other words, an overwhelming 45.3 percent (25.9+14+5.4) of the sample had women who were either not sure or disagreed or strongly disagreed about technology improving their productivity. This makes it obvious that technology has not yet made substantial inroads in both, their businesses as well as their mind-sets, as a factor that is capable of enhancing their productivity.

The study also suggested that there is a significant difference in the perception of women entrepreneurs when it comes to learning the new technology. The respondents were asked to state their perception regarding the ease to learn new technology. An analysis of variance showed that there is a significant difference in the perception of learning new technology [F (5,1194) = 5.078, p = .000]. Post hoc analyses using the Bonferroni post hoc criterion for significance indicated that perception about learning new technology is higher in women entrepreneurs from Mumbai (M = 3.60, SD = 1.143) and Pune (M = 3.50, SD = 1.244), whereas it is less in women entrepreneurs from Nagpur (M = 3.22, SD = 1.236), Nashik (M = 3.42, SD = 1.125), Augrangabad (M = 3.30, SD = 1.159), and Kolhapur (M = 3.30, SD = 1.115).

Perception towards the Usage of Technology

The main purpose of this research phase was to examine the appropriateness of the items and the internal structure of the constructs that the instrument measures. For these reasons, the exploratory factor analysis was first conducted on the 21 items with a varimax rotation using SPSS. Exploratory factor analysis is a statistical method employed to increase the reliability of the scale by identifying inappropriate items that can be removed and the dimensionality of constructs by examining the existence of relationships between items and factors when the information of the dimensionality is limited (Netemeyer, Bearden, & Sharma, 2003). In this study, the five factors (i.e., Performance Expectancy, Social Influence, Effort Expectancy, Use Behavior and Behavioral Intention and Facilitating Conditions) were used to determine the pattern of the structure in the 21-item perception towards the usage of technology instrument and were used to create a scree plot (Thompson, 2004).

An initial analysis was run to obtain eigenvalues for each factor in the data. The Kaiser-Meyer-Olkin (KMO) Measure verified the sampling adequacy for the analysis; KMO=.914 which is above Kaiser's recommended threshold of 0.6 (Kaiser, 1974). Bartlett's Test of Sphericity, ÷2 (91) = 5117.95, p < .000, indicated that correlations between items were sufficiently large for EFA. Five factors had eigenvalues greater than one.

The 21-item structure explained 66.14 percent of the variance in the pattern of relationships among the items. The percentages explained by each factor were 36.835 percent (Performance Expectancy), 10.057 percent (Social Influence), 6.868 percent (Effort Expectancy), 6.558 percent (Behavioral Intention and Use Behavour) and 5.828 percent (Facilitating Conditions), respectively.

After deleting two items which cross-loaded on two factors, the final four-factor structure in this study was composed of 21 items. Four items of factor 1 represent performance expectancy, three items of factor 2 represent social influence, three items of factor 3 represent effort expectancy, three items of factor 4 represent behavioral intention and use behavior, and one item in the factor 5 represents facilitating conditions.

Finally, this 21-item structure was found to explain 66.14 percent of the variance in the pattern of relationships among the items. The percentages explained by each factor were 36.835 percent (performance expectancy), 10.057 percent (social influence), 6.868 percent (effort expectancy), 6.558 percent (behavioral intention and use behavour) and 5.828 percent (facilitating conditions), respectively. The factor correlation between factor 1 (performance expectancy) and factor 2 (social influence) was .708; the correlation between factor 2 and factor 3 (effort expectancy) was .351; the correlation between factor 3 and factor 4 (facilitating conditions) was .412; the correlation between factor 1 and factor 3 was .369; the correlation between factor 2 and factor 4 was .582; and the correlation between factor 1 and factor 5 was .115.

Factor 1: Performance Expectancy

1	Technology increases my chances of increasing business.	.763
2	I find technology useful to my business.	.751
3	Technology increases my productivity.	.719
4	Technology enables me to accomplish tasks more quickly.	.716

Factor 2: Social Influence

1	I know people who help me with my difficulty in technology usage.	.776
2	People around me help me in the use of technology.	.751
3	People around me think that I should use technology.	.621

Factor 3: Effort Expectancy

1	It is easy for me to learn new technology	.778
2	I have the knowledge for the use technology.	.643
3	I find it easy to use technology	.613

Factor 4: Behavioral Intention and Use Behaviour

1	I spend considerable time on technology for my business during one day.	.782
2	I frequently use technology in business.	.667
3	I intend to use technology in my business processes.	.486

Factor 5: Facilitating Conditions

1	I find it difficult to use technology with my existing business setup.	.966

As a result of exploratory factor analysis (EFA), five-factor structure of the instrument of student readiness in online learning explained 66.14 percent of the variance in the pattern of relationships among the items. All the four factors had high reliabilities (all

Cronbach's $\alpha > .723$). Twenty-one items remained in the final questionnaire after deleting two items, which cross-loaded on multiple factors. As a result, the five-factor structure of the perception towards the usage of technology instrument was confirmed through this study.

Regression Analysis

The main purpose of this analysis is to know to what extent is the intention of technology adoption influenced by the six independent variables and what are those measures that should be taken based on the results obtained by using SPSS - Statistical Package for Social Sciences. The table below provides the data needed to perform the multiple regression analysis. The model summary table suggested that the set of independent variables has moderate correlation (0.6) with dependent variable and is able to explain 57.7 percent of variation of the dependent variables.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1 .	621[a]	.577	.173	.977	.177	42.537	6	1183	.000

a. Predictors: (Constant), Facilitating Conditions, Effort Expectancy, Social Influence, Performance Expectancy, Education Level, and Age

b. Dependent Variable: Intention to use technology in the business processes.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	3.631	.131		27.755	.000		
	Age	-.016	.031	-.015	-.519	.604	.883	1.132
	Education Level	.065	.031	.059	2.124	.034	.887	1.127
	Performance Expectancy	.346	.029	.322	12.093	.000	.980	1.021
	Social Influence	.215	.028	.200	7.568	.000	.991	1.009
	Effort Expectancy	.149	.030	.139	5.040	.000	.912	1.096
	Facilitating Conditions	-.029	.029	-.027	-1.005	.315	.978	1.022

a. Dependent Variable: Intention to use technology in the business processes.

An important step in a multiple regression analysis is to ensure that the assumption of no multi-collinearity has been met. Multi-collinearity is a statistical phenomenon in which two or more predictor variables in a multiple regression model are highly correlated (Wikipedia, 2011). Pearson correlations were calculated among the six predictive variables and none of the correlations reached the .80 threshold; the analysis shows that no two variables are closely related. A tolerance value close to 1 means you are very safe, whereas a value close to 0 shows that you run the risk of multi-collinearity. In the present study, both the values are below the threshold levels, hence there is no trouble with the data.

Based on the non-standard coefficients, the regression equation is obtained as:

Y = 3.631 – 0.016 (Age) + .065 (Education Level) + 0.346 (Performance Expectancy) + 0.215 (Social Influence) + 0.149 (Effort Expectancy) -0.029 (Facilitating Conditions)

In the above equation, the independent variables, education level and facilitating conditions are not statistically significant. Hence, the above equation gets reduced to:

Y = 3.631 + 0.065 (Education Level) + 0.346 (Performance Expectancy) + 0.215 (Social Influence) + 0.149 (Effort Expectancy)

Hence, it can be inferred from the study that the intention of technology adoption by women entrepreneurs for their business gets influenced by education level, performance expectancy, social influence and effort expectancy. Out of these variables, performance expectancy is the top most criterion that influences the intention of technology adoption by women entrepreneurs for their business followed by social influence, effort expectancy and education level.

The other objective of the study was to know to what extent is the usage of technology influenced by the six independent variables. The model summary table suggested that the set of independent variables has strong correlation (0.7) with dependent variable and is able to explain 53.6 percent of variation of the dependent variables.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1.	.732[a]	.536	.534	.784	.536	228.122	6	1183	.000

a. Predictors: (Constant), Facilitating Conditions, Effort Expectancy, Social Influence, Performance Expectancy, Education Level, and Age

b. Dependent Variable: Frequent use of technology in business.

From the below regression table, the following model can be proposed to explain the usage of technology for the business. Based on the non-standard coefficients, the regression equation is obtained as:

Y = 3.631 – 0.043 (Age) + .046 (Education Level) + 0.734 (Performance Expectancy) + 0.086 (Social Influence) + 0.279 (Effort Expectancy) -0.231 (Facilitating Conditions)

In the above equation, the independent variables, age and education level are not statistically significant. Hence, the above equation gets reduced to:

Y = 3.631+ 0.734 (Performance Expectancy) + 0.086 (Social Influence) + 0.279 (Effort Expectancy) -0.231 (Facilitating Conditions)

Hence, it can be inferred that if women entrepreneurs started using technology for their business, then age and education are not important for the usage of the same.

But the facilitating conditions become very important as they may require help in case of facing difficulty with respect to the technology usage.

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	3.629	.105		34.530	.000		
	Age	-.043	.025	-.036	-1.703	.089	.883	1.132
	Education Level	.046	.025	.039	1.867	.062	.887	1.127
	Performance Expectancy	.734	.023	.638	31.921	.000	.980	1.021
	Social Influence	.086	.023	.075	3.773	.000	.991	1.009
	Effort Expectancy	.279	.024	.242	11.692	.000	.912	1.096
	Facilitating Conditions	-.231	.023	-.201	-10.040	.000	.978	1.022

a. Dependent Variable: Frequent use of technology in business.

Conclusion

The present study pointed out that women entrepreneurs perceive that integration of technology into the business process can improve their business performance. The prevalence and availability of the affordable internet makes selling on WhatsApp by women entrepreneurs easy for both products and services.This gets further strengthened by expanding business in national and international markets. The study suggested that social influence greatly impacts the intention and usage of technology for the business processes. The factors like age and education do not have an impact on the intention of technology adoption. But if they have already started using the technology, then even education becomes insignificant for the increased usage.

The use of information technology by women entrepreneurs is comparatively lower with low income and low education level than the women entrepreneurs with high income or high education.The most promising finding for the future is that the women entrepreneurs are mostly happy with the technology once they have started using it.

Once the technology is being used by peer group, it motivates others to have high intention of technology adoption and usage by social influence. This may justify that technologies can be accepted well by women entrepreneurs if there is perceived ease of usage and delivery of desired results.

Recommendations

The e-commerce appeals are gaining acceptance among women entrepreneurs. The reason for such trend is the ease and low expenses associated with it. However, operating an e-commerce business successfully still demands all of the marketing, planning, and management skills that other types of business require. The study also emphasized on the need for policy interventions to strengthen women entrepreneurs by improving their access to technology and helping them to adopt technology. They have shown strong intention to adopt technology for their business processes. Hence, there is a need for initiatives like incubation facility, enrolling for training programs for fundraising, connecting with mentors, participating in one-on-one investor meets and conducting market surveys. Enhanced engagement of women entrepreneurs with these programmes would allow them to expand their businesses and integrate technology in their businesses through capacity building workshops and training programs.

It is recommended that wide publicity be given to programmes teaching basic skills like opening an email account, using video calling with Skype and messenger, creating Facebook pages and using messaging apps like WhatsApp for business promotion. In addition, the technology skill building centres can offer women entrepreneurs opportunities to pick up skills like designing a business flyer, making presentations for their products, creating small promotional videos and uploading them on social media sites like YouTube. Many women entrepreneurs reported having benefited from becoming active on portals like Snapchat, Instagram and Facebook. However, the use of ICT by women entrepreneurs needs to be pushed further.

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References

Ajzen, I. (1991). The theory and planned behavior. *Organ. Behavior and Human Decision Processes, 50*(2), 179-211.

Attuquayefio, S., & Addo, H. (2014). Using the UTAUT model to analyze students' ICT adoption. *International Journal of Education and Development using ICT, 10*(3).

Bandura, A. (1986). *Social Foundations of Thought and Action: A Social Cognitive Theory.* Englewood Cliffs, NJ: Prentice-Hall.

Davis, F.D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of Information Technology, *MIS Quarterly, 13*(3), 319-340.

Davis, F.D., Bagozzi, R.P., & Warshaw, P.R. (1992). Extrinsic and intrinsic motivation to use computers in the workplace. *J. Appl. Soc. Psych, 22*(14), 1111-1132.

Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research.* Reading, MA: Addison-Wesley.

Idemudia, Efosa C. (2014).The influence of cognitive trust and familiarity on adoption and continued use of smartphones: An empirical analysis. *Journal of International Technology and Information Management, 23(*2).

International Finance Corporation (2017). Investing in Women: New Evidence for the Business Case. *www.ifc.org*

Kaiser, H.F. (1974). An index of factorial simplicity. *Psychometrika, 39,* 31-36.

Mayoux, Linda (2001). Tackling the down side: Social capital, women's empowerment and micro-finance in Camero*on. Development and Change, 32*(3), 435-464.

National Sample Survey Office (2013-14). *Annual Report.* Government of India, Ministry of Statistics and Programme Implementation, New Delhi. *www.mospi.gov.in*

Netemeyer, Richard G., Bearden, William O., & Sharma, Subhash (2003). *Scaling Procedures: Issues and Applications.* New York: Sage Publications.

Orji, R. (2010). Impact of gender and nationality on acceptance of a Digital Library: An empirical validation of nationality based UTAUT using SEM. *Journal of Emerging Trends in Computing and Information Sciences, 1,* 68-79.

Rogers, E.M. (1995). *Diffusion of Innovations.* 4th Edition. New York: The Free Press.

Sixth Economic Census (2016). *All India Report.* Government of India, Ministry of Statistics & Programme Implementation, New Delhi. *https://msme.gov.in*

Taylor, S. & Todd, P.A. (1995). Understanding information technology usage: A test of competing models. *Inform. Systems Res. 6*(2), 144-176.

Thompson, B. (2004). *Exploratory and Confirmatory Factor Analysis: Understanding Concepts and Applications.*Washington, DC: American Psychological Association.

Thompson, R.L., Higgins, C.A. & Howell, J.M. (1991). Personal computing: Toward a conceptual model of utilization. *MIS Quart. 15*(1), 124-143.

Venkatesh, V. (2000). Determinants of perceived ease of use: Integrating control, intrinsic motivation, and emotion into the technology acceptance model. *Information Systems Research, 11*(4), 342-365

Venkatesh, V.; Morris, Michael G.; Davis, Gordon B.; and Davis, Fred D. (2003). User acceptance of Information Technology: Toward a unified view. *MIS Quarterly, 27*(3).

Venkatesh, V., Thong, J. Y., & Xu, X. (2012). Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. *MIS Quarterly,* 157-178.

Women & Mobile: A Global Opportunity (2010). *A Study on the Mobile Phone Gender Gap in Low and Middle-Income Countries.* Cherie Blair Foundation for Women. *https://cherieblairfoundation.org*

Criticality for E-Learning Ecosystem: An Empirical Study

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Abstract

Revolution in Information Communication Technology (ICT) has facilitated the wider availability of variety of data in big volumes. Such innovations in technologies are becoming boon for the education sector globally by adoption and execution of ICT based learning system. However, integration of e-learning system into existing educational system has major challenges due to changes required in curriculum, infrastructure, faculty development, and examination schemes. Present study has been carried out to identify critical factors for e-learning adoption and implementation. Findings of the study revealed four critical factors: Service Readiness, Service Staff, Service (Learners) Response and Service Delivery for e-learning system adoption and implementation. Further, factor analysis with structural equation modeling revealed significant correlation among identified factors. Findings of the study also revealed that Service Readiness, Service Staff and Service (Learner) Response were perceived significantly different by male and female groups, when considered as critical factors for e-learning system adoption and implementation.

Keywords: Critical Factors, e-Learning, Gender Difference, Services, Validity.

Introduction

Revolution in Information Communication Technology (ICT) has facilitated the wider availability of a variety of data in big volumes at higher speed and at low cost. Such innovations in technologies are becoming boon for the education sector globally by adoption and execution of e-learning system. Thus, facilitating the higher education system in terms of quality and accessibility to poorest of the poor ones, who are willing to be benefitted by this IT enabled revolution. ICT based or e-learning system is a set of tools letting learners to learn via internet and covers a wide set of applications and processes such as virtual classrooms, computer and web-based learning systems.

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E-learning represents a cost-reducing, quality rich education technology for educational service providers and learners, both. American Society for Training and Development (ASTD) defines e-learning as "Anything delivered, enabled, or mediated by electronic technology for the explicit purpose of learning". It also refers to the technology and services that help create, deliver, and manage those activities (Rao, 2011; Sekhon and Hartley, 2014).

Higher education has numerous advantages of offering e-learning system such as mass customization to suit the likes of each learner through MOOCs (Massive Online Open Courses), innovation in implementation of learner centric CBCS (Choice Based Credit System) course delivery system, more effective communication at lower costs, and quicker response to market driven content delivery and required adoption of skill updating opportunities. Benefits for the learners are numerous as well and include convenience of the learning resources availability (any time of the day and globally accessible resources), lower cost and opportunity to avail customized services as per requirement among others.

Educational institutes are exploring the ways to integrate e-learning programs into existing teaching-learning pedagogies for significant improvement in teaching quality and delivery of course contents, which should be flexible enough to impart industry driven skills. However, integration of e-learning system into present system has some major challenges due to long term commitments and changes required in curriculum, infrastructure, faculty development, and in examination schemes. E-learning system necessitates overall transformation of classroom teaching methodologies and role change of teacher and students. The teacher can not only depend on "Chalk and Talk", but should take advantage of e-learning tools and opportunities for ensuring maximum participation of students in classroom learning process.

Review of Literature

Online learning has broadened the scope of education in India surpassing the classroom boundaries. E-learning platforms are bringing a measurable difference in students' engagement, learning and performance. (The Economic Times, 2019) Digital technology is playing a vital role in all the sectors of economy including education. It contributes significantly in terms of providing benefit to a learner and a teacher, both. E-learning eco system consists of teaching-learning community, contents, teaching pedagogy and learning resources management. It is complimentary to traditional education (Basak, et al., 2018). Ahmad et al. (2018) observed that it has been a widely adopted mode of transforming knowledge due to certain factors such as user-friendliness, richness of

resources and modern technology. The importance of e-learning as education system is increasing across the globe as it is free from time and place constraints.

Pham et al. (2019) observed that instructor & course material quality, quality of administrative support and e-learning system quality are the three basic constructs of e-learning service quality associated with students' satisfaction. This positively influences e-learning students' loyalty. Today's students are customers of educational institutions and universities. Thus, Universities must provide the best e-learning service quality to their students. Sridharan et al. (2010) identified three critical components of e-learning ecosystem namely principles and methods, processes and systems and substance and contents including certain barriers such as lack of technical understanding and insufficiency of learning management system.

Cheriyan (2018) observed five critical success factors of e-learning system as technical support, learning resources, support and training and student and instructors' characteristics. Ahmad et al. (2018) suggested that certain parameters were required to be focused such as organizational readiness in terms of infrastructure, course flexibility, relevancy of modules and its contents in organized manner, security and user friendliness to enhance the user performance. Still the process needs to be comprehensive and effectively planned, executed and maintained. Learning environment and infrastructure, competency of educator, delivery of course contents were identified as factors to be considered to implement e-learning successfully (Yew and Jambulingam, 2015).

E-learning is not just implementing technology but it is a multi-dimensional interdisciplinary procedure. It includes the module for preparation of competitive and professional exams, skills enhancement courses along with other academic subjects. Learners' experience is influenced by support system, social presence, learning policy, learner-instructor interaction, course content and design. Al-Samarraie (2017) and others identified information quality, technology-task fit, system quality, utility value and usefulness are the key factors creating impact on e-learning satisfaction. Students' learning experience which is a determinant of their satisfaction is also affected with course design, interaction with the instructor, and interaction with peer students.

Goh et al. (2017) and Ordonez (2014) revealed that for e-learners, more resources were available than they could actually handle. In India several key drivers to growth of e-learning are digital penetration, low cost of online education, government support and demand among professionals and working class. Insufficiency of digital infrastructure, lack of standardization, credibility and poor learning engagement are

some of the factors still challenging to the growth of e-learning. The significance of e-learning system is that they offer learning opportunities beyond the constraints of time and place. They also support to have experiments in teaching-learning by having new approaches to teaching and learning. Cherian (2018) carried out the study to identify critical factors attributing to the success of e-learning in higher education sector from students' perspective. It has been observed that the technological support being the critical most factor of e-learning followed by e-learning resources, e-learning support and training, characteristics of student, and characteristics of instructor.

Soong et al. (2011) observed that technology, ease of access navigation, level of interaction & interface design, instructor's technical competence, attitudes towards students, classroom interaction and use of technology from a student's perspective are some factors of critical success of e-learning system. Apart from these, especially in Indian context, e-learning critical success factors are: human factors, technical competency of both instructor and student, level of collaboration, e-learning mindset of both instructor and student, and perceived information technology infrastructure (Puri, 2012). Findings of the study also raised consideration of these factors in holistic manner by adopters of e-learning.

Osman et al. (2018) had studied e-learning as a collaborator of human and technological factor. Learner's perspective, instructor's attitudes, computer literacy, teaching method, service quality, and content quality are the critical factors for application of appropriate e-learning platform. Dallas (2010) matched the context of learning with four identified learning styles (Auditory learners, Visual learners, Kinesthetic learners, read/write learners) of students for effective use of e-learning resources and revealed that the variety of learning experiences increases the versatility of online learners.

E-learning is an emerging technology today in developing countries. Numerous technologies are available in India now-a-days to enable e-learning. Numbers of factors like ease of use, time saving, availability of resource material etc. influence the adoption of e-learning mechanism (Reshma et al., 2017). Computer literacy and teaching method were other elements creating significant effect on effectiveness of e-learning (Mayerova and Rosicka, 2015). Longstreet and Longstreet and Winkley (2011), explored impact of e-learning on employee engagement and found online accessibility of e-learning resources at any convenient time of the day increases employee engagement for e-learning system. It facilitates on the job customized learning need of employees in greater efficiency and effective manner. Success of e-learning system can be measured by understanding the quality of system, contents, service and attitude of instructor

from learners' perspective. Low complexity and authenticity of course along with technical support are some of the useful predictors for usage intention and satisfaction of e-learning (Fleming et al., 2016). Based on the above reviews, the study has been conducted with the following objectives.

Objectives of the Study

- To find the factors critical for e-learning system adoption and implementation.
- To study the effect of gender on adoption and implementation of e-learning system.
- To reveal the underlying relationship among critical factors identified for e-learning system adoption and implementation.

Method

- *Sampling Procedure:* Purposive sampling was used for the study.
- *Sample Size:* Initially, sample size was bigger but 176 responses were found suitable for analysis.
- *Reliability and Validity:* The validity of scale was tested with the help of subject experts in the field. Reliability of scale was found to be 0.77. Further, validity of the scale was tested with the help of Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM).
- *Tools for Data Collection:* Primary and secondary sources were used for data collection. Extensive review of literature provided the base for extracting items for the scale. The primary data was collected by using the scale, which had nineteen statements.
- *Tools for Data Analysis:* Factor analysis, Structural Equation Modeling (SEM), Independent sample t - test.

Hypotheses

Following hypotheses were formulated and tested at 5 percent level of significance.

- $\mathbf{H_0}$: Gender-wise, there is no significant difference in criticality of factors for e- learning adoption and implementation.

- **H_1**: Gender-wise, there is a significant difference in criticality of factors for e-learning adoption and implementation based on Service Readiness
- **H_2**: Gender-wise, there is a significant difference in criticality of factors for e-learning adoption and implementation based on Service Staff
- **H_3**: Gender-wise, there is a significant difference in criticality of factors for e-learning adoption and implementation based on Service Response
- **H_4**: Gender-wise, there is a significant difference in criticality of factors for e-learning adoption and implementation based on Service Delivery

Results and Discussion

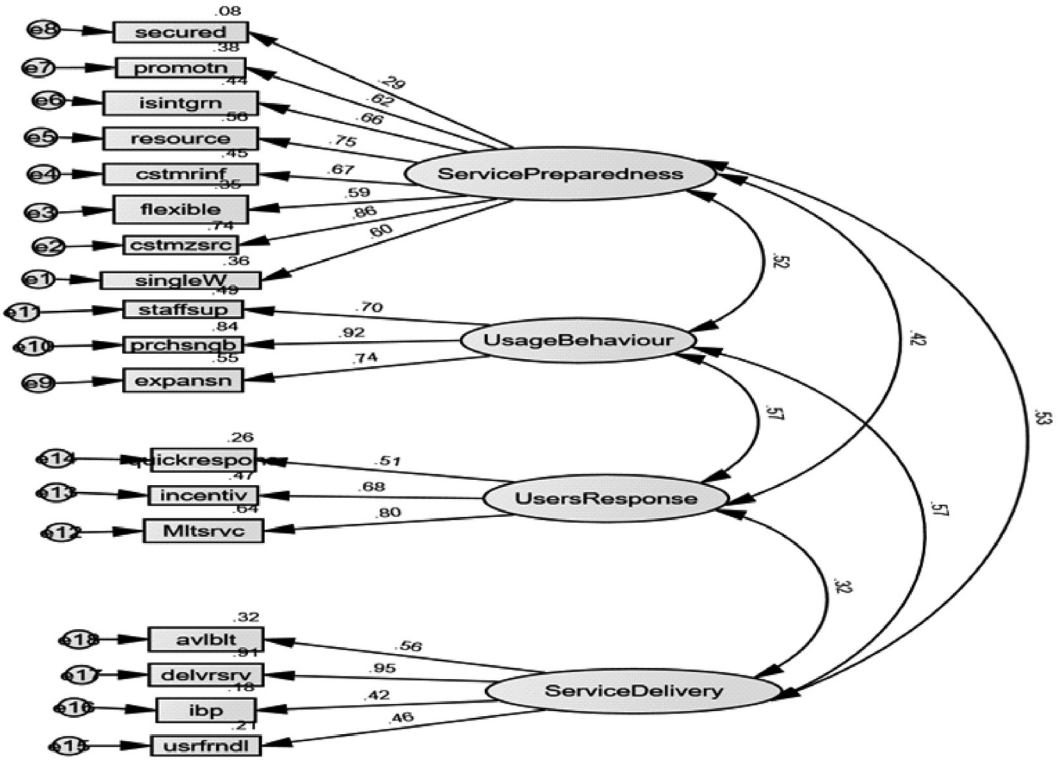
KMO and Bartlett's test of sphericity values were checked and found satisfactory (0.689). Exploratory Factor analysis was performed using a Principal Component Analysis (PCA) and the Varimax with Kaiser Normalization rotation method. Total 71.21% of variances were explained by four factors, named as: Service Readiness, Service Staff, Service Response and Service Delivery. Service Readiness includes promotion of e-learning systems among users in the organization, flexibility in e-learning resources availability, customized resources for learners, internet service integration and single window solutions for adoption and implementation of e-learning systems. Service Staff included support from institutions / instructors, timely availability of learning resources, information about learners' e-learning usage behavior, expansion of e-learning resources and integrated service processes for adoption and implementation of e-learning services.

Service Response included user-friendly websites/resources, all time availability of resources, incentives for usage of e-learning systems and multi-resource solutions for adoption and implementation of e-learning services as observed by Ahmad et al. (2018). Service Delivery includes user friendliness of system, service person delivery and availability. These extracted dimensions were tested using reliability analyses to calculate their Cronbach's Alpha, results of which are given in Table 1. All of these factors had a score of more than 0.6 in the Cronbach's á reliability test; hence, internal consistency of these factors is strong and reliable for critical analysis.

Confirmatory Factor Analysis: Notes for the model indicated that Number of distinct sample moments were 28; Number of distinct parameters to be estimated 17 and Degrees of freedom (28 - 17):11. Thus, the model was an over-identified model as the number of data points was more than the number of parameters to be estimated and technical requirement for model fit was established. Further, the minimum was

achieved with no errors. Confirmatory factor analysis (CFA) of constructs produced relatively good fit as indicated by the goodness of fit indices. Goodness index GFI is more than 0.90 (model value is .959), CFI= 0.954, which indicate that the model employed in the study is a good fit to the data.

Figure A



Secured item was deleted from Service Readiness construct due to low factor loading (0.21). Similarly integrated service processing item was deleted from construct of Service Delivery and quick response from Service Response factors at confirmatory factor analysis stage as loadings were found below 0.5 (Fig A). Factor loadings of all constructs were above 0.55 and were significant. Covariance of variables is depicted in SEM figure (Fig. B). Covariance of all factors, i.e., Service Response, Service Delivery, Service Staff, and Service Readiness were found significant.

Figure B

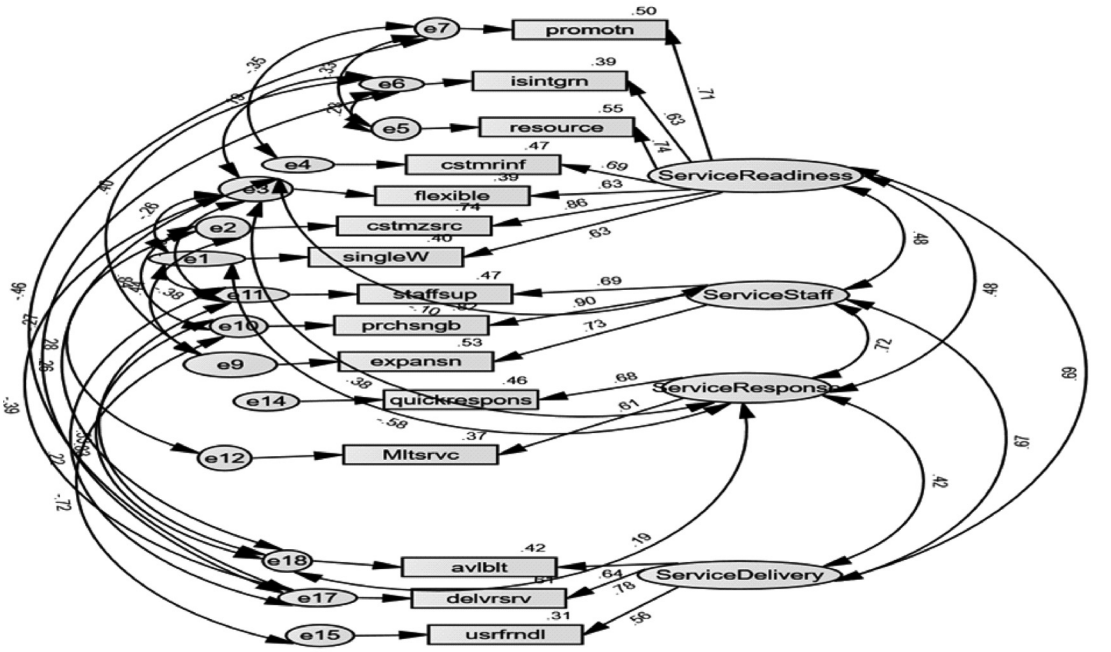


Table 3 exhibits Gender-wise significant difference in criticality of Service Readiness, Service Staff and Service Response factors for e- learning adoption and implementation. So null hypothesis was rejected for the above three factors but not rejected for Service Delivery. For Service Response factor, the on-time response, all time availability of e-resource services and incentives for learners play an important role for females but for male group it had a moderate effect (Adamus et al., 2009; Gracia et al., 2010). Males perceived Service Readiness as an important critical factor for adoption and implementation of e-learning system, whereas females have shown relatively less consideration to this factor to be considered an important factor (Table 2). Thus, hypotheses H_1 H_2, and H_3 were not rejected. The findings support the study conducted by Cherian (2018) with respect to e-learning resources as critical success factor. However, gender-wise, there was no significant difference in criticality of factors for e- learning adoption and implementation based on Service Delivery.

Conclusion

Findings of the study revealed four critical factors: Service Readiness, Service Staff, Service Response and Service Delivery for e- learning system adoption and implementation. Further, confirmatory factor analysis with structural equation modeling revealed significant correlation between Service Readiness and Service Delivery; Service Delivery and Service Response. Findings of the study also revealed that Service Readiness, Service Staff and Service Response in terms of criticality of factors for e-learning adoption and implementation were perceived differently by male and female learners. Quick response, all time availability of e-learning resources and incentives for learners can delight female group of e-learning users but for male group this effect got diluted. This could have occurred due to variable exposure and awareness level towards e-learning uses of both groups. However Females were more agreed and consistent in their opinion that service delivery by staff could play a very important role in adoption and implementation of e-learning system.

References

Adamus, T., Kerres, M., Getto, B., & Engelhardt, N. (2009). Gender and E-Tutoring – A Concept for Gender Sensitive E-Tutor Training Programs, 5th European Symposium on Gender and ICT Digital Cultures: Participation - Empowerment – Diversity, March 5-7, 2009 - University of Bremen. Available at: http://www.informatik.uni-bremen.de/soteg/gict2009/proceedings/GICT2009_Adamus.pdf

Agrawal, V., Agrawal, A., & Agarwal, S. (2016). Assessment of Factors for E-learning: An Empirical Investigation, *Industrial and Commercial Training*, *48*(8), 409-415.

Ahmad, N., Quadri, N. Qureshi, M., & Alam, M. (2018). Relationship Modeling of Critical Success Factors for Enhancing Sustainability and Performance in E-Learning, *Sustainability*, *10*(12), 4776.

Al-Samarraie, H., Teng, K. B., Alzahrani, I. A., & Alalwan, N. (2017). E-learning Continuance Satisfaction in Higher Education: A Unified Perspective from Instructors, *Studies in Higher Education*, *8*(March), 1–17. https://doi.org/10.1080/03075079.2017.1298088.

ASTD Research (2014). State of the Industry Report, The American Society for Training and Development in Sekhon M., & Hartley, D. (2014). *Basics of E-learning Revisited*, *31*(1404), April, 1.

Basak, S., Wotto, M., & Belanger, P. (2018). E-learning, M-learning and D-learning: Conceptual Definition and Comparative Analysis, *E-learning and Digital Media*, *15*(4), 191-216.

Cheriyan, N. (2018). Critical Success Factors for E-learning: An Indian Perspective, Presented at International Conference on Culture Technology (ICCT 2018), At Zhijiang College of Zhejiang University of Technology, Shaoxing, China.

Dallas, A. Z. (2010). Learning Styles and Online Education, *Campus Wide Information Systems*, *23*(5), 325 – 335.

E-learning Platforms Slowly Changing Indian Education Landscape (2019, April 12) Economic Times, New Delhi Ed. https://economictimes.indiatimes.com/industry/services/education/e-learning-platforms-slowly-changing-indian-education-landscape/articleshow/68850167.cms?from=mdr

Fleming, J., Becker, B., & Newton, C. (2016). Factors for Successful E-learning: Does Age Matter? *Education + Training*, *59*(1), 76-89

Goh, F. C., Leong, M. C., Kasmin, K., Hii, K. P., & Tan, K. O. (2017). Students' Experiences, Learning Outcomes and Satisfaction in E-learning, *Journal of E-learning and Knowledge Society*, *13*(2), 117–128 https://doi.org/10.20368/1971-8829/1298.

Gracia, M., Molina, M., & Pons, J. (2010). Are there gender differences in e-learning use and assessment? Evidence from an interuniversity online project in Europe, *Procedia Social and Behavioral Sciences, 2*, 367–371

Longstreet, C., & Winkley, M. (2011). E-Learning and the Impact on Employee Engagement, Retrieved from http://www. trainingindustry.com/learning-technologies/articles/elearning-and-the-impact-on-employee-engagement.aspx

Mayerova, S. H., & Rosicka, Z. (2015). E-Learning Pros and Cons: Active Learning Culture? *Social and Behavioral Sciences*, 191, 958 – 962.

Ordonez, A. (2014). Predicting International Critical Success Factors in E-Learning: A Comparison of Four Universities from China, Mexico, Spain and USA, Ph.D. Thesis, Barcelona, Spain, 2014.

Osman, Md A., Khalid, A.W., & Zakaria, A. (2018). Assessment of Factors Affecting E-learning: Preliminary Investigation, paper presented in 1st International Conference

on Open Library to Open Society, At Sukhotai Thammatirat Open University, Nonthaburi, Thailand, https://www.researchgate.net/publication/327666987_Assessment_of_Factors_Affecting_E-learning_Preliminary_Investigation

Pham, L., Limbu, Y., Nguyen, H., & Pham, H. (2019). Does E-learning Service Quality Influence E-learning Student Satisfaction and Loyalty? Evidence from Vietnam, *International Journal of Educational Technology in Higher Education*, *16*, https://educationaltechnologyjournal.springeropen.com/articles/10.1186/s41239-019-0136-3

Puri, G. (2012). Critical Success Factors In E-Learning – An Empirical Study, Zenith *International Journal of Multidisciplinary Research*, *2*(1), 149-161.

Rao, S. (2011). Global e-learning: A Phenomenological Study, Dissertation, 1-145. http://docplayer.net/59438069-Dissertation-global-e-learning-a-phenomenological-study-submitted-by-sudendra-r-rao-school-of-education.html

Reshma, S., Soumya, E., & Juli, A.D.(2017). Awareness of E-Learning among Rural People of Kerala, *International Journal of Education & Applied Sciences Research*, *4*(1), 01-08.

Soong, B., Chan, M., Chua, H., & Fong Loh, K. (2011). Critical Success Factors for On-Line Course Resources, *Computers & Education*, *36*(2), 101-120

Sridharan, B., Deng, H., & Corbitt, B. (2010). Critical Success Factors in E-learning Ecosystems: A Qualitative Study, *Journal of Systems and IT*, *12*, 263-288.

Yew, O., & Jambulingam, M. (2015). Critical Success Factors of E-learning Implementation at Educational Institutions, *Journal of Interdisciplinary Research Education*, *5*, 17–24.

Table 1: Factor Loadings and Cronbach Alpha Values for the Extracted Factors

	FAC 1 Service Readiness	FAC 2 Service Staff	FAC 3 Service (Learners) Response	FAC 4 Service Delivery
User Friendly	.349			**.473**
Secured	**.505**	-.321		
Staff Support		**.659**	.427	
Quick Response			**.633**	.384
Promotion	**.637**	.405		
Availability				**.684**
Delivery		.564		**.605**
Connected				**.766**
User Behaviour		**.829**		
Expansion		**.774**		.307
Integration	**.705**			
Resources	**.796**			
Need of students	**.680**			
Incentives			**.690**	
Flexible	**.623**		.372	.357
Customized Service	**.683**	.518		
Multiple Service			**.786**	
Single Window	**.624**	.357	-.447	
Cronbach's Álpha	**0.847**	0.810	0.604	0.704

Table 2: Gender-wise Mean and Standard Deviation for Extracted Factor

	Gender	Mean	Std. Deviation
Service Readiness	Male Female	3.9760 3.7195	.54626 .73608
Service Staff	Male Female	3.6403 3.9818	.87646 .54714
Service Response	Male Female	3.7723 4.1545	.78589 .74114
Service Delivery	Male Female	4.3399 4.1848	.53951 .63789

Table 3: Gender-wise t Test for Extracted Factors

		t	df	Sig. (2-tailed)
Service Readiness	Equal variances assumed	2.854	209	.005
	Equal variances not assumed	2.889	200.390	.004
Service Staff	Equal variances assumed	-3.425	209	.001
	Equal variances not assumed	-3.361	164.987	.001
Service Response	Equal variances assumed	-3.636	209	.000
	Equal variances not assumed	-3.627	204.745	.000
Service Delivery	Equal variances assumed	1.898	209	.059
	Equal variances not assumed	1.912	207.631	.057

Performance of the MSME Sector in India: An Overview

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Abstract

Performance of Micro, Small & Medium Enterprises (MSMEs) in India can be assessed based on various sources of information. Databank is the one-stop source of information of MSMEs of India, including their requirement in terms of credit, technology, raw material, and marketing. MSME Development Rules have made it compulsory for MSMEs to give the required information while availing the benefits of grant or subsidy. As per National Sample Survey 2015-16, there were 633.88 lakh unincorporated non-agriculture MSMEs in the country engaged in different economic activities. There has been overwhelming predominance of male owners in proprietary MSMEs. Thus, for proprietary MSMEs as a whole, males owned 79.63% of enterprises. There was no significant deviation in this pattern in urban and rural areas although the dominance of male owned enterprises was slightly more pronounced in urban areas as compared to rural areas. There were 11.13 crore workers engaged in unincorporated non-agricultural enterprises (excluding construction) in the country. Among the workers, 55% were in urban areas, and 45% in rural areas.

Keywords: Gross Value Added, Gross Value of Output, MSME Data Bank, District Industries Centres, High Morale of Entrepreneurs

Role of MSMEs in Indian Economy

The Micro, Small & Medium Enterprises (MSMEs) have been contributing significantly to the expansion of entrepreneurial endeavours through business innovations. The MSMEs are widening their domain across sectors of the economy, producing diverse range of products and services to meet demands of domestic as well as global markets. As per the data available with Central Statistics Office (CSO), Ministry of Statistics & Programme Implementation, the contribution of MSME Sector in the country's Gross Value Added (GVA) and Gross Domestic Product (GDP) at current prices for the last five years is given in Table 1.

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Table 1: Contribution of MSMEs in Indian Economy at Current Prices
(Figures in Rs. billion adjusted for FISIM at current prices)

Year end-March	MSME GVA	Growth (%)	Total GVA	Share of MSME in Total GVA (%)	Total GDP	Share of MSME GVA in GDP (%)
1	2	3	4	5	6	7
2012	25832.63	…	81069.46	31.86	87363.29	29.57
2013	29776.23	15.27	92026.92	32.36	99440.13	29.94
2014	33430.09	12.27	103631.53	32.26	112335.22	29.76
2015	36581.96	9.43	114817.94	31.86	124451.28	29.39
2016	39367.88	7.62	124586.42	31.60	136820.35	28.77

Source: *Central Statistics Office (CSO), Ministry of Statistics and Programme Implementation*

1. *Gross Value Added (GVA):* It may be noted that estimates of GVA had been prepared at factor cost in the earlier series (base year 2004-05), while these are being prepared at basic prices in the new series (2011-12). GVA estimated by production approach (GVA= Output-Material Inputs), and GVA estimated by income approach: (GVA= Compensation of Employees + Operating Surplus + CFC).
2. *Gross Domestic Product (GDP):* GDP is derived by adding taxes on products, net of subsidies on products, to GVA at basic prices.
3. *FISIM stands for Financial Intermediation Services Indirectly Measured.* In the System of National Accounts, it is an estimate of the value of the services provided by financial intermediaries, such as banks, for which no explicit charges are made; instead these services are paid for as part of the margin between rates applied to savers and borrowers. The assumption is that savers would receive a lower interest rate and borrowers would pay a higher interest rate if all financial services had explicit charges.

Sources: (i) Ministry of MSME, GoI (2018), *Annual Report 2017-18,* New Delhi; Chapter 2 (ii) Ministry of Statistics and Programme Implementation, GoI, National Sample Survey (NSS) Office (June 2017); NSS 73rd Round (July 2015-June 2016) – *Key Indicators of Unincorporated Non-Agricultural Enterprises (excluding Construction) in India,* New Delhi.

4. *Gross Value of Output (GVO):* Manufacturing Output is defined to include the ex-factory value (i.e., exclusive of taxes, duties, etc. on sale, and inclusive of subsidies, etc., if any) of products and by-products manufactured during the accounting year, and the net value of the semi-finished goods, work-in-process, and also the receipts for industrial and non-industrial services rendered to others, value of semi-finished goods of last year sold in the current year, sale value of goods sold in the same condition as purchased, and value of electricity generated and sold.

The contribution of Manufacturing MSMEs in the country's total Manufacturing GVO (Gross Value of Output) at current prices has also remained consistent at about 33% i.e., one-third, during the last five years.

Performance of the MSME Sector

Performance of Micro, Small & Medium Enterprises (MSME) Sector in India can be assessed mainly by the information from the following sources:

Analysing the findings of the NSS (National Sample Survey), 73rd Round on Unincorporated Non-Agricultural Enterprises in Manufacturing, Trade and Other Services Sector (excluding Construction), with reference year as 2015-16. This also gives the latest and most comprehensive account of the performance of the MSME Sector as of the estimated number of 633.92 lakh enterprises; only 4,000 enterprises were large, and thereby out of the MSME Sector. The Report on Key Indicators of the Survey is available at www.mospi.gov.in

Studying the report of the Economic Census conducted by the Central Statistics Office (Report of 6th Economic Census, 2013) available at www.mospi.gov.in, and also at www.msme.gov.in CSO started Economic Censuses for preparing a frame of establishments, particularly the 'area frame' which could be used for various surveys for collection of detailed data, mainly on non-agricultural sector of the economy. Six Economic Censuses have been conducted so far in 1977, 1980, 1990, 1998, 2005, and 2013-14. As per the Sixth Economic Census (2013), 58.5 million establishments were found to be in operation. Among them, 34.8 million establishments (59.48%) were found in rural areas, and nearly 23.7 million establishments (40.52%) were found to be located in urban areas.

Studying the results of the periodic All India Census of the MSME Sector, three All India censuses of Small Scale Industries (SSIs) were held for the reference years, 1972-

73, 1987-88, and 2001-02. The latest Census conducted by the Office of Development Commissioner (MSME) on Micro, Small, and Medium Enterprises (MSMEs) is the Fourth All India Census of MSMEs held in 2008-09, with reference period as 2006-07. The final reports of the Fourth All India Census of MSMEs covering both Registered and Unregistered Sectors, are available on the website of Office of DC (MSME) at the following link http://dcmsme.gov.in/data-stat.htm.

Collecting information on new registration of Enterprises, previously done through Entrepreneur Memorandum Part-II (EM-II), filed at District Industries Centres (DICs) till September 2015, has subsequently been replaced by self-declared online filing system under Udyog Aadhaar Memorandum (UAM) at *udyogaadhaar.gov.in.* A summary of the results based on UAM registration data till December 31, 2017 has been given later in this text.

Analysing the information available in MSME Data Bank at http://www.msmedatabank.in for which, detailed data has been provided by the enterprises on receipt of benefit under various schemes. The objective of the databank is to have one-stop source of information of MSMEs of India, including their requirement in terms of credit, technology, raw material, and marketing. The MIS dashboard of the databank provides real time information on various types of the MSMEs registered on the databank which is used for public procurement purposes by PSUs (public Sector Units) for procuring from MSMEs. MSME Development (Furnishing of Information) Rules, 2016 have been notified making it compulsory for MSMEs to give the required information while availing the benefits of grant or subsidy.

Key Results of NSS 73rd Round Survey (2015-16) on Micro, Small and Medium Enterprises

Estimated Number of MSMEs in the country

As per the National Sample Survey (NSS) 73rd round, conducted by National Sample Survey Office, Ministry of Statistics & Programme Implementation during the period 2015-16, there were 633.88 lakh unincorporated non-agriculture MSMEs in the country engaged in different economic activities (196.65 lakh in Manufacturing, 230.35 lakh in Trade, and 206.85 lakh in Other Services, and 0.03 lakh in non-captive Electricity Generation and Transmission). This list excludes the MSMEs registered under (a) Section 2m (i) and 2m (ii) of the factories Act, 1948, (b) Companies Act, 1956, and (c) Construction activities falling under Section F of National Industrial Classification (NIC) 2008. Table 2 (given at the end of the paper) shows the distribution of MSMEs, activity category-wise, and also between rural and urban areas.

As per the Survey, it is seen that 31% of MSMEs were found to be engaged in Manufacturing activities, while 36.3% were in Trade, and 32.6% in Other Services. Again out of 633.92 lakh estimated number of MSMEs, it is established that 324.9 lakh MSMEs (51.25%) were in rural areas, and 309 lakh MSMEs (48.75%) were in urban areas.

The micro sector with 630.52 lakh estimated enterprises accounted for more than 99% of total estimated number of MSMEs. Small sector with 3.31 lakh, and Medium sector with 0.05 lakh estimated MSMEs accounted for 0.52% and 0.01% of total estimated MSMEs, respectively. Own account enterprises (OAEs) (i.e., enterprises that do not employ any hired workers on a fairly regular basis) had a dominant share in the unincorporated non-agricultural enterprises (excluding construction). At the all India level, 84.2% of the estimated number of enterprises under coverage was OAEs. The share of OAEs was 91.4% in rural areas, and 76.6% in urban areas (Table 2). Other establishments accounted for 15.8% - 8.6% in rural areas, and 23.4% in urban areas.

Table 3 depicts the distribution of different categories of MSMEs in rural and urban areas. State-wise estimated number of MSMEs is given at Appendix-I.

Table 3: Distribution of Enterprises in Rural and Urban Areas (in lakhs)

Sector	Micro	Small	Medium	Total MSMEs
1	**2**	**3**	**4**	**5**
Rural	324.09(51.4)	0.78(23.6)	0.01(20.0)	324.88(51.3)
Urban	306.43(48.6)	2.53(76.4)	0.04(80.0)	309.00(48.7)
Total	**630.52(100)**	**3.31(100)**	**0.05(100)**	**633.88(100)**

Note: Figures in parentheses indicate percentage share in the respective column totals.

Type of Ownership of Enterprises

Male/ Female Ownership

Out of 633.88 lakh MSMEs, 608.41 lakh (95.98%) MSMEs were proprietary enterprises. There has been overwhelming predominance of male owners in proprietary MSMEs. Thus, for proprietary MSMEs as a whole, males owned 79.63% of enterprises as compared to 20.37% owned by females. There was no significant deviation in this pattern in urban and rural areas although the dominance of male owned enterprises

was slightly more pronounced in urban areas as compared to rural areas (81.58% as compared to 77.76%).

Further male dominance in ownership has been more pronounced for small and medium enterprises with 95% or more enterprises being owned by them, as compared to micro enterprises where 79.56% were owned by males (Table 4).

Table 4: Distribution of Enterprises by Male / Female Ownership (%age).

Category	Male	Female	All
1	**2**	**3**	**4**
Micro	79.56	20.44	100
Small	94.74	5.26	100
Medium	97.33	2.67	100
All	**79.63**	**20.37**	**100**

Ownership of Enterprises: Social Category-wise

The socially backward groups owned almost 66.27% of MSMEs, though bulk of that can be attributed to OBCs owning 49.72%. The representation of SC and ST owners in MSME sector was low at 12.45% and 4.10%, respectively (Table 5). In rural areas, almost 73.67% of MSMEs were owned by socially backward groups, of which 51.59% belonged to the OBCs. In urban areas, almost 58.68% belong to the socially backward groups, of which 47.80% belonged to the OBCs.

The analysis of enterprises owned by socially backward groups in each of the three segments of MSMEs reveals that the Micro sector had 66.42% of enterprises owned by socially backward groups, whereas Small and Medium sector had 36.80% and 24.94% of enterprises owned by socially backward groups, respectively.

Table 5: Social Category-wise Distribution of MSMEs (%age).

Sector	SC	ST	OBC	Others	Not known	All
1	**2**	**3**	**4**	**5**	**6**	**7**
Micro	12.48	4.11	49.83	32.79	0.79	100
Small	5.50	1.65	29.64	62.82	0.39	100
Medium	0.00	1.09	23.85	70.80	4.27	100
All	**12.45**	**4.10**	**49.72**	**32.95**	**0.79**	**100**

Employment

As per the National Sample Survey (NSS) 73rd round conducted during the period 2015-16, the definition given to a worker is as follows: A worker is understood as a person working within the premises of the enterprise. This definition includes working owners, persons who are in the payroll of the enterprise, unpaid family members who help in the entrepreneurial activities, and other helpers and apprentices. However, in case of Self Help Groups (SHGs), active members of SHGs were not considered as workers for the survey. Entrepreneurs of the enterprises and SHG active members associated with the enterprises are considered as owners of the units.

As per the survey, there were 11.13 crore workers engaged in unincorporated non-agricultural enterprises (excluding construction) in the country. Among the workers, 55% were in urban areas, and 45% in rural areas. MSME sector has been creating 11.13 crore jobs (360.41 lakh in Manufacturing, 387.38 lakh in Trade, and 364.85 lakh in Other Services, and 0.07 lakh in Non-captive Electricity Generation and Transmission in rural and the urban areas across the country. Table 6 (given at the end of the paper) shows the distribution of employees category-wise.

The own account enterprises (OAEs) accounted for 62.1% of the work force in the unincorporated non-agricultural sector (excluding construction) in the country. At the All India level, workers in OAEs outnumbered those engaged in establishments in all the broad activity categories. Similar pattern is noticed in rural areas as well. However, in urban areas, in all broad categories, other than trading, establishments had a higher share of workers.

The Micro Sector with 630.52 lakh estimated enterprises provides employment to 1076.19 lakh persons, which accounts for 97% of total employment in the MSME

sector. Small sector with 3.31 lakh, and Medium sector with 0.05 lakh estimated MSMEs provide employment to 31.95 lakh (2.88%), and 1.75 lakh (0.16%) persons of total employment in the MSME sector, respectively. State-wise distribution of employment is given in Appendix-II.

Out of 1109.89 lakh employees in MSME sector, 844.68 lakh (76%) are male employees, and the remaining 264.92 lakh (24%) are females.

State-wise Distribution of Estimated MSMEs

The State of Uttar Pradesh had the largest number of estimated MSMEs with a share of 14.20% of MSMEs in the country. West Bengal comes a close second with about 14% again. The top 10 states together accounted for a share of 74.05% of the total estimated number of MSMEs in the country. Table 7 (given at the end of the paper) shows the distribution of estimated enterprises in the top ten states, along with percentage share in the country.

Table 8: Growth of MSMEs during 2006-07 and 2015-16 – All India (figures in lakhs)

Parameter	NSS 73rd Round (2015-16)	4th All India Census of MSMEs (2006-07)	Compound annual growth rate (%)
1	**2**	**3**	**4**
No. of MSMEs (total)	**633.88**	**361.76**	**6.43**
Manufacturing	196.65	115.00	6.14
Services	437.23	246.76	6.56
Employment (total)	**1109.89**	**805.24**	**3.63**
Manufacturing	360.42	320.03	1.33
Services	749.47	485.21	4.95

Comparative Analysis between the 4th All India MSME Census (2006-07), and the NSS 73rd Round (2015-16)

Comprehensive information on the MSME sector can be obtained from both 4th All India MSME Census held in 2006-07 and the NSS 73rd Round (2015-16). As these

Censuses were held in a gap of almost ten years, a comparison of the two sets of results can capture the growth of the basic parameters of the MSME sector over a decade. The top 10 states together accounted for 74.0% in the latest year compared to 72.2% in the earlier period. Uttar Pradesh, West Bengal, and Tamil Nadu formed the first three states in that sequence.

There has been growth of MSME sector during the period 2006-07 and 2015-16 (9 years) in terms of number of enterprises at a CAGR of 6.43%, with 6.14% in manufacturing, and 6.56% for services. In terms of employment through MSMEs during this period, CAGR is 3.63% for total MSMEs, with 1.33% in manufacturing, and 4.95% in services (Table 8). In terms of number of enterprises and employment, numerically and growth rate-wise, service sector's contribution has been higher compared to manufacturing. State-wise picture as given in Table 9 (given at the end of the paper) shows that among the top ten states, UP and West Bengal are at the top as number one and two, respectively, with approximately similar proportions in both the periods. Next in sequence are Tamil Nadu, Maharashtra, and Karnataka. Nearly the same ranking is noticed in most of the top ten states in both the periods.

Registration of New MSMEs

One of the critical indicators to assess the successful development of MSME sector in an economy is the data on establishment of new MSMEs. It depicts the conducive environment for opening and growth of such units in an economy as well as show the high morale of entrepreneurs in the macro-economy of the country.

Before the MSMED Act, 2006 became operational, there was a system of registration by small scale industrial units with the DICs. Subsequently, as per the provisions of the MSMED Act 2006, MSMEs used to file Entrepreneurs Memorandum (Part I) at District Industries Centres (DICs) before starting the unit. After commencement of production, the entrepreneurs concerned used to file Entrepreneurs Memorandum (Part II)/ (EM II). A total of 21,96,902 EM II filings had taken place between 2007 and 2015. Analysis of information from EM II filings is provided at http://www.dcmsme.gov.in/publications//EMII-2014-15.pdf. *Since September 2015, in view of promoting ease of business, an online filing system under Udyog Aadhaar Memorandum (UAM) based on self-declared information has been put in place***.** Till the end of December 2017, 38.99 lakh MSMEs have already registered on UAM; detailed information on which is available at: http://udyogaadhaar.gov.in/UA/UdyogAadhaar-New.aspx. An analysis of UAM filings also provides the break-up of manufacturing and services MSMEs. It may be noted that the services MSMEs comprise a larger proportion of UAM filings

than those in manufacturing. The break-up is provided as 55% in services, and 45% in manufacturing.

Analysis of MSMEs segment-wise within the total number of UAM filings reveals as follows: Micro enterprises who have filed UAMs since September 2015, constitute the vast majority (90%), while the remaining are mostly small enterprises (10%), with medium enterprises constituting less than 0.5%. Social category-wise ownership of enterprises of UAM filings reveals as follows: SC 11.9%, ST 3.7%, OBC 35.4%, and others 49%. SC, ST, and OBCs together constitute 51% of total filings. Another direction of analysis of UAM filings is geographical spread of UAMs, which conveys it is uneven. Geographical spread of filings across states and UTs reveals the unevenness. Encouraging more equitable growth within the MSME sector also remains an important challenge. Various steps are being taken by the Centre and the States/UTs to correct the situation.

State-wise position of registration of UAMs reveals as follows: The top ten states cover 87.3% of enterprises filed out of a total of 38.99 lakh - In the descending order, the picture is as given here: Bihar 7.27 lakh (18.7%), UP 5.33 lakh (13.7%), Tamil Nadu 4.59 lakh (11.8%), Gujarat 3.87 lakh (9.9%),and Maharashtra 3.5 lakh (9.0%). The other states in the top ten are Madhya Pradesh, Rajasthan, Andhra Pradesh, West Bengal, and Telangana.

References

Banerjee, Abhijit V., & Duflo, Esther (2014). Do Firms Want to Borrow More? Testing Credit Constraints Using a Directed Lending Program. *The Review of Economic Studies, 81(*2), 572–607.

Dangi, N. (2014). Women Entrepreneurship and Growth and Performance of MSMEs in India. *International Journal, 2*(4) 174-182.

Hwang, W.G. (2007). Changing Business Environment of SMEs in the Era of Globalization, http://www.apec-meic.org/newsletter/newsletter_read.jsp?SEQ=506.

IFCI, Access to Finance - *SME Banking Knowledge Guide*, 2010.

Jaswal, S. S. (2014). Problems and Prospects of Micro, Small & Medium Enterprises (MSMEs) in India. *International Journal of Innovative Research & Studies, 3*(5), 140-161.

Kumar, N. K., & Sardar, G. (2011). Competitive Performance of Micro, Small and Medium Enterprises in India. *Asia Pacific Journal of Social Sciences, 3*(1), 128-46.

Li Yong, Chief (2019). United Nations Industrial Development Organization (UNIDO), *The Business Line, 23rd August.*

Llanto, Gilberto M. (2015). Innovation and SME Financing in Selected Asian Economies. Asian Productivity Organization, Tokyo, Japan.

Patra, S., & Chaubey, D.S. (2014). Factors Influencing Industrial Performance: An Empirical Study with Special reference to The MSMEs of Uttarakhand State. *IMJT, (22),* 12-28.

Pathak, P., & Agarwal, M. (2017). Evaluation of Growth and Performance of Micro, Small and Medium Enterprises: A Study of Uttarakhand Region, India. *IJAR, 4*(6) 554-562.

RBI Report on Micro, Small and Medium Enterprises (MSME) sector – Restructuring of Advances (February 2020)

Savrul, Mesut; Incekara, Ahmet; & Sener, Sefer (2014). The Potential of E-commerce for SMEs in a Globalizing Business Environment, *Procedia - Social and Behavioral Sciences,150 (1),* 35-45.

Shiralashetti, A. S. (2012). Prospects and Problems of MSMEs in India—A Study. *International Journal of Multidisciplinary and Academic Research,1*(2), 1-7.

The Economic Times (ET RISE).(2018). Alternate Lending Platforms are Fixing India's Financial Inclusion Problem Becoming Enablers for SME Funding, 11th July.

Electronic Sources

[1] www.msme.gov.in.

[2] http://en.m.wikipedia.org/wiki

[3] www.dcmsme.gov.in.ssindia/definationmsme.htm

[4] www.mass.gov/renting-in-massachusetts

[5] www.smeventure.com/impact-of-government-policieson-sme-sector

[6] www.rbi.org.in/commomperson/english/scripts/faqs.aspx

[7] http://dcmsme.gov.in/ssindia/msme_in.htm

[8] http://www.smeventure.com/highlights-msme-policyuttarakhand/

[9] http://doiuk.org.mysite/newsandevents

[10] http://msms.gov.in/all-schemes

[11] www.smeventure.com/familiar-10-major-initiativestaken-towards-msme-indian-governemnt

[12] http://pib.nic.in/newsite

[13] www.phdcci.in: Study on The Emerging Contours in the MSME Sector of Uttarakhand- A Survey based empirical study undertaken by PHD Research Bureau of PHD Chamber of Commerce & Industry in 2014

[14] http://m.economictimes.com/defaultinterstitial.cms

[15] http://udyogaadhaar.gov.in/UA/UAM_registration.aps

[16] https://nimsme.org/ranzo/uploads/articles/MSME_e-Newsletter

Table 2: Estimated Number of MSMEs (Activity-wise)

Activity category	Estimated number of Enterprises (in lakhs)								
	Rural			Urban			Total		
	All	OAE	Estt.	All	OAE	Estt.	All	OAE	Estt.
1	2	3	4	5	6	7	8	9	10
Manufac-turing	114.14 (35.1)	104.98	9.17	82.50 (26.7)	63.16	19.34	196.65 (31.0)	168.14	28.51
Trade	108.71 (33.5)	101.87	6.84	121.64 (39.4)	92.83	28.82	230.35 (36.3)	194.70	35.66
Other services	102.00 (31.4)	90.08	11.93	104.85 (33.9)	80.64	24.23	206.85 (32.6)	170.72	36.16
Electri -city*	0.03 —	—	—	0.01 —	—	—	0.03 —	—	—
All	**324.90 (100)**	**296.96**	**27.94**	**309.02 (100)**	**236.63**	**72.39**	**633.92 (100)**	**533.59**	**100.33**

- Non-captive electricity generation, transmission, and distribution by units not registered with the Central Electricity Authority (CEA)
- Figures in parentheses indicate percentage share in the respective column totals.

Table 6: Estimated Employment in MSME Sector in Rural and Urban Areas (Broad Activity Category-wise)

Activity category	Employment (in lakhs)								
	Rural			Urban			Total		
	All	OAE	Estt.	All	OAE	Estt.	All	OAE	Estt.
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Manufacturing	186.56 (37.6)	141.54	45.01	173.86 (28.3)	85.15	88.70	360.41 (32.4)	226.70	133.72
Trade	160.64 (32.2)	141.14	19.50	226.73 (36.9)	127.97	98.77	387.38 (34.8)	269.11	118.27
Other services	151.42 (30.4)	98.53	52.89	213.43 (34.8)	96.47	116.96	364.85 (32.8)	195.00	169.85
Electricity*	0.06 (0.01)	0.03	0.02	0.02 —	—	0.01	0.07 (0.01)	0.04	0.03
All	**498.67 (100)**	**381.25**	**117.42**	**614.04 (100)**	**309.59**	**304.45**	**1112.71 (100)**	**690.84**	**421.87**

*non-captive electricity generation and transmission

Note: Figures in parentheses indicate percentage share in the respective column totals.

Table 7: Distribution of Enterprises in Ten Leading States (2015-16)

Sl.No.	State/UT	Estimated no. of MSMEs	
		Number (in lakhs)	Share in col.3(%)
1	**2**	**3**	**4**
1	Uttar Pradesh	89.99	14.2
2	West Bengal	88.67	14.0
3	Tamil Nadu	49.48	7.8
4	Maharashtra	47.78	7.5
5	Karnataka	38.34	6.0
6	Bihar	34.46	5.4
7	Andhra Pradesh	33.87	5.3
8	Gujarat	33.16	5.2
9	Rajasthan	26.87	4.2
10	Madhya Pradesh	26.74	4.2
11	**Sub-total of Ten States**	**469.36**	**74.0**
12	Other States/UTs	164.52	26.0
13	**All India**	**633.88**	**100**

Table 9: Distribution of MSMEs in Ten Leading States between 2015-16 & 2006-07

Sl.no.	State/UT	NSS 73rd Round (2015-16)		4th All India Census of MSMEs (2006-07)	
		Number (in lakhs)	Share in col.3(%)	Number (in lakhs)	Share in col.5(%)
1	**2**	**3**	**4**	**5**	**6**
1	Uttar Pradesh	89.99	14.2	44.03	12.2
2	West Bengal	88.67	14.0	34.64	9.6
3	Tamil Nadu	49.48	7.8	33.13	9.2
4	Maharashtra	47.78	7.5	30.63	8.5
5	Karnataka	38.34	6.0	20.19	5.6
6	Bihar	34.46	5.4	14.70	4.1
7	Andhra Pradesh*	33.87	5.3	25.96	7.2
8	Gujarat	33.16	5.2	21.78	6.0
9	Rajasthan	26.87	4.2	16.64	4.6
10	Madhya Pradesh	26.74	4.2	19.33	5.3
11	**Sub-total of Ten States**	469.4	74.0	261.04	72.2
12	Other States/UTs	164.5	26.0	100.72	27.8
13	**All India**	**633.88**	**100**	**361.76**	**100**

- Including Telangana in 4th All India Census of MSMEs

Appendix-I: State-wise Distribution of Estimated Number of MSMEs (NSS 73rd Round)

Sl.no.	State/UT	Estimated No. of Enterprises (in lakhs) (2015-16)			
		Micro	Small	Medium	MSMEs
1	2	3	4	5	6
1	Andhra Pradesh	33.74	0.13	-	33.87
2	Arunachal Pradesh	0.22	-	-	0.23
3	Assam	12.10	0.04	-	12.14
4	Bihar	34.41	0.04	-	34.46
5	Chhattisgarh	8.45	0.03	-	8.48
6	Delhi	9.25	0.11	-	9.36
7	Goa	0.70	-	-	0.70
8	Gujarat	32.67	0.50	-	33.16
9	Haryana	9.53	0.17	-	9.70
10	Himachal Pradesh	3.86	0.06	-	3.92
11	Jammu & Kashmir	7.06	0.03	-	7.09
12	Jharkhand	15.78	0.10	-	15.88
13	Karnataka	38.25	0.09	-	38.34
14	Kerala	23.58	0.21	-	23.79
15	Madhya Pradesh	26.42	0.31	0.01	26.74
16	Maharashtra	47.60	0.17	-	47.78
17	Manipur	1.80	-	-	1.80
18	Meghalaya	1.12	-	-	1.12
19	Mizoram	0.35	-	-	0.35
20	Nagaland	0.91	-	-	0.91
21	Odisha	19.80	0.04	-	19.84
22	Punjab	14.56	0.09	-	14.65

23	Rajasthan	26.66	0.20	0.01	26.87
24	Sikkim	0.26	-	-	0.26
25	Tamil Nadu	49.27	0.21	-	49.48
26	Telangana	25.94	0.10	0.01	26.05
27	Tripura	2.10	0.01	-	2.11
28	Uttar Pradesh	89.64	0.36	-	89.99
29	Uttarakhand	4.14	0.02	-	4.17
30	West Bengal	88.41	0.26	0.01	88.67
31	A & N Islands	0.19	-	-	0.19
32	Chandigarh	0.56	-	-	0.56
33	Dadra & Nagar Haveli	0.15	0.01	-	0.16
34	Daman & Diu	0.08	-	-	0.08
35	Lakshadweep	0.02	-	-	0.02
36	Puducherry	0.96	-	-	0.96
	All India	**630.52**	**3.31**	**0-.05**	**633.88**

- denotes nil or negligible

Appendix-II: State-wise Estimated Employment in MSMEs in 2015-16 (NSS 73rd Round)

Sl. No.	State/UT	Employment in MSMEs (2015-16) (in lakhs)		
		Female	Male	Total
1	2	3	4	5
1	Andhra Pradesh	21.01	34.98	55.99
2	Arunachal Pradesh	0.11	0.29	0.41
3	Assam	1.78	16.37	18.15
4	Bihar	4.79	48.26	53.07
5	Chhattisgarh	4.07	12.79	16.86
6	Delhi	2.41	20.59	23.00
7	Goa	0.41	1.20	1.60
8	Gujarat	13.71	47.44	61.16
9	Haryana	2.78	16.27	19.06
10	Himachal Pradesh	1.13	5.29	6.43
11	Jammu & Kashmir	1.50	9.37	10.88
12	Jharkhand	5.57	19.34	24.91
13	Karnataka	19.73	51.11	70.84
14	Kerala	13.77	30.86	44.64
15	Madhya Pradesh	10.13	38.61	48.80
16	Maharashtra	17.97	72.77	90.77
17	Manipur	1.40	1.52	2.92
18	Meghalaya	0.72	1.19	1.91
19	Mizoram	0.28	0.34	0.62
20	Nagaland	0.59	1.18	1.77
21	Odisha	8.37	24.87	33.26
22	Punjab	4.24	20.55	24.80

23	Rajasthan	8.01	38.31	46.33
24	Sikkim	0.14	0.31	0.45
25	Tamil Nadu	32.27	64.45	96.73
26	Telangana	15.24	24.91	40.16
27	Tripura	0.44	2.51	2.95
28	Uttar Pradesh	27.27	137.92	165.26
29	Uttarakhand	0.69	5.91	6.60
30	West Bengal	43.51	91.95	135.52
31	A & N Islands	0.10	0.29	0.39
32	Chandigarh	0.12	1.17	1.29
33	Dadra & Nagar Haveli	0.07	0.29	0.36
34	Daman & Diu	0.02	0.12	0.14
35	Lakshadweep	0.01	0.02	0.03
36	Puducherry	0.57	1.27	1.84
	All India	**264.92**	**844.68**	**1109.89**

Ease of Doing Business – 2017 Survey Reveals
Top three States are Andhra Pradesh, Telangana and Haryana

Andhra Pradesh has topped the 'Ease of Doing Business' in the country - an annual ranking of States and Union Territories - in the 2017 Survey prepared by the Department of Industrial Policy and Promotion (DIPP), Ministry of Commerce and Industry, Government of India in collaboration with the World Bank. This is the third year for conducting this survey, the earlier years being 2015 and 2016. Telangana and Haryana come in a close second and third, respectively, with less than half a percentage point separating them from Andhra Pradesh. The Survey results were released on 10 July 2018 at New Delhi. (*Sources: The Hindu Business Line and The Hindu, both dated 11 July 2018, and YouTube)*

Andhra Pradesh has topped the third edition of the Government's 'Ease of Doing Business Index for States,' with a final score of 98.42%. This is the second time in a

row that Andhra Pradesh achieved the first rank. AP which was given second rank in 2015, outperformed other States and Union Territories by maintaining its leadership position through implementation of 99.73% reforms. The State Government adopted the motto of 'People First, Industry First.' The Government reached out to the investors to understand the gaps in the existing implementation of reforms and re-engineered the processes.

Interestingly, Telangana and Jharkhand trailed behind AP though they scored 100% in reform evidence score. AP got 99.73% score in reform evidence, and 86.5% in feedback score. While Telangana stood second in the final score, Haryana bagged the third position. AP and Telangana jointly occupied the first slot in fiscal 2015-16. Gujarat was ranked number one in 2014-15, while AP got second rank. In the latest rankings, Gujarat is pushed to the fifth position with a score of 97.96%.

Ranking of States & Union Territories on
Ease of Doing Business, 2017 – Survey Results

Rank State/UT Score (%) Rank State/UT Score (%)

Top Five States

(1)Andhra Pradesh 98.42, (2) Telangana 98.33, (3) Haryana 98.07, (4) Jharkhand 97.99, (5) Gujarat 97.96.

Bottom Five States

(36) Meghalaya 0, (35) Arunachal Pradesh 0, (34) Sikkim 0.13, (33) Manipur 0.27, (32) Mizoram3.63.

A few other States/UTs: (6) Chhattisgarh 97.36, (7) Madhya Pradesh 97.31, (8) Karnataka 96.40, (9) Rajasthan 95.68, (10) West Bengal 94.70, (11) Uttarakhand 94.21, (12) Uttar Pradesh 92.87, (13) Maharashtra 92.71, (14) Odisha 92.09, (15) Tamil Nadu 90.68, (16) Himachal Pradesh 87.90, (!7) Assam 84.75, (18) Bihar 81.91. 23 out of 36 States/ Union Territories are presented here with rank and score.

The rankings are part of the business reform action plan (BRAP) 2017, which has been expanded to 372 action points and includes areas such as labour, environmental clearances, registering property, single-window system, construction permits and inspections.

AP and Telangana were joint toppers of the 2016 rankings. This year, unlike the previous two occasions, a feedback component has been introduced. "This was to ensure that the reforms have actually reached the ground level, and are not limited to the paper they are written on. As many as 78 reforms of 372 [action points] were identified for the feedback survey and have been marked also on the basis of the feedback received," said Ramesh Abhishek, Secretary, DIPP. For the points on which feedback was sought, a score of 0.5 was assigned for evidence of reform implementation, while the other 0.5 score was based on the feedback given by the respondents on whether reforms claimed by the state were palpable when the service was availed.

"We plan to further increase the weight given to feedback in the next ranking exercise," Abhishek said. A large number of states have made significant progress in reforms suggested in BRAP 2017, as per the report. "Seventeen states have achieved a reform evidence score of more than 90 percent, and 15 states have achieved a combined score of 90 per cent and more. The states that have achieved 80 percent or more reforms evidence score represent 84 per cent of the country's area, 90 per cent of the country's population, and 79 per cent of India's GDP'', it said. The DIPP which launched the ranking exercise for states in 2015, wants it to help improve the delivery of various government regulatory functions and services in an effective and transparent manner.

India retains top IT exporter spot, slips in ease of doing business: GII ranking

India slightly improved its rank in an index of the world's most innovative economies, maintaining its position as the top exporter of IT services, but was still lagging in parameters of ease of starting a business, political stability and safety, and female employees with advanced degrees in the workforce.

The global innovation index (GII) rankings, published annually by Cornell University, INSEAD and the UN World Intellectual Property Organisation (WIPO) and GII Knowledge Partners, ranked India at the 57th spot this year (2018), a slight improvement from the 60th position in 2017.

India maintained its top place in the Central and Southern Asia region. However, it is noteworthy that while India is the top exporter of IT services, the use and access of information and communication technologies within the country is poor. India ranked 105th on IT access and 110th on IT use.

Among lower middle-income economies, India moved up to the fifth position in GII rankings. It has also outperformed on innovation relative to its GDP per capita for eight years in a row. India ranks well on a number of important indicators - productivity growth, and exports of information and communication technology and services.

Service Quality of Research Labs with Special Reference to Gujarat State

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Abstract

Service Quality is the difference between customers' expectations for service performance prior to the service encounter and their perceptions of the service received. It is necessary for a researcher to study quality of their services. Companies are becoming more customer centric. Customer satisfaction is the main aspect through which a company can survive for longer period of time. For the customer satisfaction, service quality of the company plays an important role. This study is focused on measuring the effect of service quality dimensions on the clients' perception and satisfaction. It aims at finding out the impact of demographic variables on the client satisfaction as well as dimensions of the service quality. The study concludes that service quality dimensions (Tangible, Reliability, Assurance, Empathy, Staff, Accessibility and Communication) have positive impact on the overall satisfaction of the clients.

It has also been found that occupational background of the clients affects their satisfaction. Public sector employees are most satisfied and businessmen/women are least satisfied. Income of the clients has no significant role in the perception creation towards satisfaction and service quality dimensions. Service quality dimensions have positive impact on the client satisfaction.

Keywords: Client Perception, Client Satisfaction, Research Laboratories, Service Quality.

Introduction

The Pharmaceutical industry is related to the manufacture and sale of pharmaceuticals. It involves the discovery, development, and manufacture of drugs and medications by public and private organizations. A drug is any chemical agent that affects the function of living objects. Historically, physicians prepared medicines. Today, drug development relies on the collaboration and effort of highly trained scientists at

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universities and private companies. In the last 10 years, Gujarat has witnessed a speedy economic growth and owing to extensive industrialization, the state's economy grew by an average of 10 pc every year between 2009 to 2019, which is above Indian average of around 8.25 percent. Gujarat is now distinguished amongst the booming states in India and aims at becoming a model state on all fronts of human development. At the same time, with substantial advances in science and technology, the research-based pharmaceutical industry has been entering an exciting new era in medicines development.

Over the years, Gujarat's pharmaceutical sector and research Laboratories have become innovation-driven, currently providing employment to around 85,000 people, with an aim to attract global opportunities and become a global pharmaceutical hub. The industry offers huge investment opportunities in the manufacturing of recombinant DNA-based products, intermediates, fine chemicals, medical devices, active pharmaceutical ingredients (APIs), oncology products, biopharmaceuticals, ayurvedic and homeopathic preparations and cosmetic products, along with investment possibilities in retail and pharmacy chains as well.

Review of Literature

Customer satisfaction is the key to marketing and service activities (Farooq et al., 2019). Services can be defined as a set of benefits delivered from a service provider to the service consumer (Mersha and Adlakha, 1992). The service firm provides benefits due to competency, skills, knowledge and experience to the customers for the sake of reward like fees, salary and wages. Services may be consultancy, labs, hospitals, hotels and other modes to facilitate the customers (Hoffman and Bateson, 2002). Services are different from goods because they are intangible as they cannot be seen, touched or felt; perishable as we are unable to store them; inseparable because they are attached with a service provider, and insubstantial due to heterogeneity (Parasuraman et al., 1985). Quality means the degree of excellence in service performance. The service quality shows the organization's ability to meet customers' desires and needs; so, organization must improve their services to meet the customers' wants and requirements (Hanson, 2000). It has been found that customers' perception about service quality is very important for managers to compete in the market.

Quality is an ability of any product to meet customers' expectations and requirements. It is a set of features, characteristics or attributes that is required or expected by the customers. Service Quality can be defined as the difference between customers' expectations about service performance prior to the service encounter and their

perceptions of the service received (Asubonteng, 1996). Service quality is the subjective comparison that customers make between the qualities of the services that they actually get (Gefen, 2002). In simple words, service quality is an assessment of how well a delivered service conforms to the clients' expectations. It is defined as customers' perception of how well a service meets or exceeds their expectations (Czepiel, 1990).

Service quality gives the labs the competitive advantage (Moore, 1987). Service quality is considered a very important indicator towards customer satisfaction (Spreng and Mackoy, 1996). Service quality helps labs to maintain long-term relationship with customers (Zeithaml, 2000). The customers judge quality as "low" if perception does not meet their expectations and quality as "high" when perception exceeds expectations (Oliver, 1980). According to Ennew and Brinks (1996), service quality is related to customer relationship and customer loyalty. In addition to that they also found that positive customer perception leads to customer retention and higher profitability.

The literature on service quality has given various models around the world. Cronin et al., (2000) commented that the literature on evaluating service quality, satisfaction and value is conflicting and confusing. The inter-relationships between quality, value and satisfaction have recently drawn the focus of researchers to explain how they relate to each other and how they drive consumer behavior. Consensus seems to be growing around the opinion that positive perceptions of service quality lead to increased customer satisfaction and acknowledgement of value. Past research indicates that the value of service was primarily measured by consumer perception of quality. The significant role that service quality plays in achieving customer satisfaction and importance of satisfying customers to gain loyalty and increase profitability indicates that focus on service quality is beneficial to organizations. Over the years, significant progress has been noted in the measurement of the perceptions of external service quality (Cronin and Taylor, 1992; Zeithaml and Bitner, 1996).

The perceived quality of given service is the outcome of an evaluation process where consumers compare their expectations with service they get (Gronroos, 1984). Perceived quality is a form of attitude, and long-run overall evaluation where satisfaction is a transaction-specific measure. It is the gap between consumers' expectations and consumers' perceptions regarding the service (Parasuraman et al., 1985, 1988, 1991). Perceived quality is the consumer's evaluative judgment about an entity's overall excellence or superiority in providing desired benefits. The quality of service both technical and functional is a key ingredient in the success of service organizations

(Gronroos, 1984; Sohail, 2003). Employees always have the maximum interaction with the customers, and customers are required to be satisfied. The staff is required to be courteous enough as well as cooperative and humble for customer retention.

Just like products, the effective marketing of service is very desirable. Unlike products, service is highly intangible. So, it becomes all the more crucial that a desirable image is created (Onkvisit and Shaw, 1989). The tangible aspect of labs such as visual tools do not have any impact on customer satisfaction and the customer is more satisfied if the perception of customers matches with service delivery (Jamal and Khattak, 2003). Lack of product knowledge leads to deterioration of the performance of a lab. Safety is a vital element especially in the case of labs. Employee attitude in terms of the way of talking, problem solving ability and need satisfaction influence the services directly. The customer perceptions are required to be positive (Dean, 2004). The organizational culture, organizational policies and work environment are helpful in serving the customers efficiently (Gelade and Young, 2005).

The perceptions of the customers differs from customers to customers and the perceptions often depend on the different elements such as time, interaction of employees with customers, technological upgradation and the employees knowledge and communication skills of employees. The empathy is related to gender of the employees, and customer perceptions especially in the case of empathy often differ on the basis of gender. The lab working hours as well as the lab surroundings create a direct impact on client's perception about the lab. The lab which provides more comfort to clients as well as latest technological upgradation such as quick accessibility to website, suitable location etc will be having more satisfied clients (Festus and Maxwell, 2006).

Internal marketing, with special reference to employees, refers to any form of marketing within an organization which focuses staff attention on the internal activities that need to be changed for implementation of the marketing plans. There are two key aspects to this. One involves the notion of the internal customer. That is, every person working within an organization is both a supplier and a customer. What can be done to improve customer service and quality at an individual 'exchange' level. Employee training and understanding has a significant impact on service quality. It makes staff courteous as well as prompt and improves the level of communication (Yoo and Park, 2007).

One of the most unexamined assumptions marketing firms have made in recent years is that satisfaction alone guarantees customer loyalty. The quality of service is having

two dimensions – a technical or outcome dimension and a functional or process related dimension. Thus, service quality is defined from different perspectives by various researchers due to its subjectivity and situational characteristics (Gronroos, 1990). Researchers suggest that service quality is positively associated with customer satisfaction. Companies understand that service quality will have its impact on customer satisfaction (Lee, Lee and Yoo, 2000).

Customers' quality perceptions have an undisputed effect on selecting labs. Customers are concerned about healthcare providers' ability to cure their disease, while upholding the best interest at the lowest possible cost (Ramsaran, 2005). Researchers argue that private healthcare sector growth is the direct consequence of customer's negative perception about the quality offered by public healthcare institutions. Therefore, it is important for private healthcare providers to understand how the country's general population perceives health service quality (Lafond, 1995).

Understanding service quality is indispensable for service providers aspiring to attract and retain customers. Crosby (1979) defined quality as zero defects, Juran (1980) measured it as conformance to requirement, and others measured quality by counting internal and external failures (Garvin, 1983). However, these definitions tend to be better interpreted in manufacturing sector. Quality of goods measured objectively by indicators such as durability, defects, reliability, etc. is difficult to be replicated in service environments (Parasuraman et al., 1988).

In the service industry, quality definitions tend to focus on meeting customer requirements and how well service providers meet their expectations (Lewis and Booms, 1983), usually by an encounter between customer and service contact person. Service quality is defined as a global judgment or attitude related to the overall excellence or superiority of the service (Parasuraman et al., 1988). One common way is to conceptualize service quality as a customer's overall service quality evaluation by applying a disconfirmation model – the gap between service expectations and performance (Parasuraman et al., 1991; Cronin and Taylor, 1992; Potter et al., 1994). In view of the review of literature, the present study was carried out with the following objectives:

1. To identify the variables that affect customer perception towards service quality.
2. To study the perception of clients towards service quality of Research Laboratories.
3. To understand the managerial implications in order to improve the performance standard of service providing laboratories.

4. To explore the correlation between socio-demographic variables and customer perception in order to make amendments so as to satisfy most of the clients.
5. To measure the impact of service quality dimensions on the client's satisfaction.

Method

The present exploratory study is conclusive as well as descriptive in nature based on quantitative analysis to test the specific hypotheses. The study is an attempt to explore the concept of service quality and describe its features on a representative sample. Personal survey was conducted to collect primary data from the target population of the clients availing the services of various Research Laboratories.

The Sample

A sample of 136 respondents was chosen by using simple random sampling technique across Gujarat State. The information was also collected from the published material, such as books, magazines, journals, research papers, newspapers, and reports. Online databases (computerized full text databases such as Proquest, Emerald, Google Scholar and various websites) were used to collect secondary data.

The scope of the study is limited to Gujarat, and focused at assessing the perceptions of clients towards the service quality of Research Laboratories. The socio-demographic variables like age, gender, marital status, educational qualification, occupation, and income have been included in the study.

The Tools for Data Analysis

The Statistical Package for Social Sciences (SPSS 22) was used for analysis of the data. The descriptive statistics like screening, coding, decoding, tabulation and bar charts were used, besides inferential statistics like Cronbach's Alpha (to check reliability), Independent Samples t test, One way ANOVA , and Multiple Regression.

Results

Table 1 highlights the Socio-demographic features of respondents which were considered important for assessing the perception of clients. There were 44.1% and 55.9% male and female respondents, respectively. Most of the respondents out of the sample of 136 belonged to the age groups of 31-40 years (41.9%) and 21-30 years (39.7%), whereas 66.2% of the respondents were married and 89.7% were graduates and postgraduates. Majority of the respondents were working in private sector (48.5%) or

owned business (20.6%), whereas 33.1% belonged to the income group of Rs. 20001-40000.

Reliability (Chronbach's Alpha Analysis)

Reliability was measured through Cronbach's alpha. Nunnally (1978) states that an alpha greater than 0.70 is a good indicator of internal consistency. All the construct alpha values were found higher than the standard values. The alpha values were found to lie in the range of 0.923 to 0.968. Thus, all the variables had the alpha values greater than 0.9 indicating very high reliability of the variables.

Variables	Tangible	Reliability	Assurance	Empathy	Staff	Accessibility	Communication
Reliability	0.966	0.968	0.935	0.946	0.923	0.930	0.938

Hypothesis testing- Independent Samples t-test

(A) Marital Status

H_0 - There is no significant difference in the mean scores of service quality dimensions of married and unmarried respondents.

H_1 - There is significant difference in the mean scores of service quality dimensions of married and unmarried respondents.

Two service quality dimensions, Staff and Communication, have the p value less than 0.05 with the t values of 2.123 and 2.052, respectively (Table 2). The null hypothesis stands rejected. Thus, married and unmarried respondents were significantly different in terms of Staff and Communication dimensions of service quality.

Hypothesis testing - One way ANOVA

(B) Age

H_0 - There is no significant difference in the mean scores of service quality dimensions of various age groups.

H_1 - There is significant difference in the mean scores of service quality dimensions of various age groups.

F-values of the service quality dimensions (Tangible, Reliability, Assurance, Empathy, Staff, Accessibility and Communication) were found to fall between 3.161 and 5.668 with p value less than 0.05 (Table 3). The null hypothesis is rejected at 5% level of

significance. Thus, there is significant difference in the mean scores of service quality dimensions of various age groups.

F-value of satisfaction between various age groups was 4.421, which indicates that the average scores of satisfaction were statistically different for various levels of age (p value 0.005).

Mean scores of the service quality dimensions were found to be the highest in the age group of 50 years & above and lowest in the age group of 21-30 years.

(C) Occupation

H_0 - There is no significant difference in the mean scores of service quality dimensions of various occupations.

H_1 - There is significant difference in the mean scores of service quality dimensions of various occupations.

F-values for the service quality dimensions (Tangible, Reliability, Assurance, Empathy, Staff, Accessibility and Communication) were found to fall between 5.181 and 7.853 with p value less than 0.05 (Table 4). The null hypothesis is rejected at 5% level of significance. Thus, there is significant difference in the mean scores of service quality dimensions of various occupations.

One way ANOVA of satisfaction between various occupations indicated that the average scores of satisfaction were statistically different for various occupations, as the p value (0.000) was less than the significant level (0.005) with F-value of 8.059.

The various occupational groups possessed different mean scores of all the service quality dimensions and satisfaction. Highest mean score was observed in the Public Sector Employees and lowest in the Businessmen/women.

Multiple Regression

In the Multiple Regression, average score of all the dimensions of the service quality was inserted as independent variable and satisfaction was inserted as dependent variable to know the impact of the service quality dimensions on the overall satisfaction of the clients.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.967[a]	.935	.931	.31188

a. Predictors: (Constant), Communication, Accessibility, Staff, Assurance, Tangible, Empathy, Reliability

The model summary of customer satisfaction and all the seven factors of service quality showed the coefficient of determination (R^2) of model 0.935. Thus, all the seven factors explained 93.5 percent of the variations in customer satisfaction.

ANOVA						
Model		Sum of Squares	df	Mean Square	F	P
1	Regression	177.895	7	25.414	261.274	.000[b]
	Residual	12.450	128	.097		
	Total	190.346	135			

a. Dependent Variable: Satisfaction

b. Predictors: (Constant), Communication, Accessibility, Staff, Assurance, Tangible, Empathy, Reliability

The ANOVA Table is used to assess the overall significance of the regression model. F-value of 261.274 was found to have the p-value of 0.000. Model is significant as p-value less than 0.05 at á = 0.05 level provides enough evidence for the significance of the model.

The Table of coefficients shows that all the service quality dimensions had positive impact on the overall satisfaction of the client. Impact of Reliability, Assurance and Communication was not significant on the overall satisfaction as there were p-values of .369, .079 and .142, which were not statistically significant at 5% level of significance. Impact of Tangible, Empathy, Staff and Accessibility was significant on the overall

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.036	.092		-.388	.698
	Tangible	.155	.071	.158	2.188	.030
	Reliability	.083	.092	.082	.902	.369
	Assurance	.126	.071	.126	1.770	.079
	Empathy	.169	.080	.170	2.113	.037
	Staff	.164	.056	.172	2.933	.004
	Accessibility	.213	.051	.219	4.190	.000
	Communication	.089	.060	.088	1.476	.142
a. Dependent Variable: Satisfaction						

satisfaction as there were p-values of .030, .037, 0.004 and .000, which were statistically significant at 5% level of significance. Accessibility had the higher effect on satisfaction with the standardized beta weight of 0.219, followed by Staff (standardized beta weight = 0.172), Empathy (standardized beta weight = 0.170), and Tangible (standardized beta weight = 0.158).

Conclusion

The study concludes that service quality dimensions (Tangible, Reliability, Assurance, Empathy, Staff, Accessibility and Communication) have positive impact on the overall satisfaction of the clients. All the variables have very high reliability and internal consistency. Marital status affects the Staff and Communication dimensions. Age has emerged as one of the important factors which influences the Satisfaction and Service quality dimensions. A positive relationship has been found between age and Satisfaction. That is, Satisfaction increases with age. The occupational background of the client also affects the Satisfaction. Public sector employees are the most satisfied and businessmen/women, the least.

Income of the client has no significant role in creating the perception and satisfaction towards service quality dimensions. In line with the existing literature, this study also concludes that service quality dimensions have positive impact on the client's satisfaction. Further, Assurance, Staff, Empathy and Tangibility have significant impact on the consumer perception and satisfaction of the clients.

Managerial Implications

1. The results of the study will be useful to companies as well as marketers, as they can pay more attention to the service quality dimensions (Tangible, Reliability, Assurance, Empathy, Staff, Accessibility and Communication).

2. Assurance, Staff, Empathy and Tangibility are the main service quality dimensions which have shown greater influence on the customer satisfaction. The companies can use this finding accordingly.

3. The companies should consider the age and occupational background of the clients while providing service to them.

4. The study has made value addition to the existing literature which will be useful to the academicians and researchers in future.

5. Findings of the study will be useful to the Research Labs in understanding the impact of service quality dimensions on the customer satisfaction, particularly in Gujarat.

References

Asubonteng, P., McCleary, K.J., & Swan, J.E. (1996). SERVQUAL Revisited: A Critical Review of Service Quality, *Journal of Services Marketing, 10*(6), 62-81.

Cronin, J.J., Jr., & Taylor, S.A. (1992). Measuring Service Quality: A Re-examination and Extensions, *Journal of Marketing, 56*(July), 55–68.

Cronin, J.J., Jr., Brady, M.K., & Hult, G.T.M. (2000). Assessing the Effects of Quality, Value, and Satisfaction on Consumer Behavior Intentions in Service Environments. *Journal of Retailing, 76*(2), 193–218.

Crosby, Philip B. (1979). *Quality is Free.* New York: McGraw Hill.

CzepieI, J. A. (1990). Service Encounters and Service Relationships: Implications for Research, *Journal of Business Research, 20,* 13-21.

Dean, A. M. (2004). Links Between Organizational and Customer Variables in Service Delivery: Evidence, Contradictions and Challenges. *International Journal of Service Industry Management, 15*(4), 332-350.

Ennew, T. C., & Brinks, M. R. (1996). The Impact of Service Quality and Service Characteristics on Customer Retention: Small Businesses and their Banks in the UK. *British Journal of Managemeny, 7*(3), 215-250.

Farooq, Muhammad; Muhammad, S., Raju, V., Kalimuthu, K. R., & Qadir, A. (2019). Measuring and Comparing the Desired and Actual Service Quality. *The Journal of Social Sciences Research, 52,* 484–490.

Festus, O., & Maxwell, K. H. (2006). A Typology Analysis of Service Quality, Customer Satisfaction and Behavioral Intensions in Mass Services. *Journal of Service Theory and Practice, 16*(2), 106-123.

Garvin, D. (1983). Quality on the Line. *Harvard Business Review, 61*, 64-75.

Gefen, David (2002). Customer Loyalty in E-Commerce, *Journal of the Association for Information Systems, 3*(1), 27-51.

Gelade, G.A., & Young, S. (2005). Test of a Service Profit Chain Model in the Retail Banking Sector. J*ournal of Occupational and Organizational Psychology, 78*, 1–23.

Gronroos, C. (1984). A Service Quality Model and its Marketing Implications. *European Journal of Marketing, 18*(4), 36–64.

Gronroos, C. (1990). *Service Management and Marketing.* Lexington, MA: Lexington Books.

Hanson, W. (2000). *Principles of Internet Marketing.* Cincinnati, Ohio: South-Western College Publishing.

Hoffman, K.D., & Bateson, J.E.G. (2002). *Essentials of Services Marketing: Concepts, Strategies and Cases.* 2nd Edition. Fort Worth: Harcourt College Publishers.

Jamal, A., & Khattak, N. (2003). Factors influencing Customer Satisfaction in Retail Banking Sector in Pakistan. *International Journal of Commerce and Management, 13(*2), 29-53.

Juran, J.M. (1980). *Quality Planning and Analysis: From Product Development Through Use.* 3rd Edition. New York: McGraw-Hill.

Lafond, A.K. (1995). Improving the Quality of Investment in Health: Lessons on Sustainability. *Health Policy and Planning, 10*, 63-76.

Lee, H., Lee, Y., & Yoo, D. (2000). The Determinants of Perceived Service Quality and its Relationship with Satisfaction. *Journal of Services Marketing, 14*(3), 217-231.

Lewis, R.C., & Booms, B.H. (1983). The Marketing Aspect of Service Quality. In L. Berry, G. Shostack, and G. Upah (Eds.), *Emerging Perspective on Service Marketing,* American Marketing Association, Chicago, IL.

Mersha, T., & Adlakha, V. (1992). Attributes of Service Quality: The Consumers' Perspective, *International Journal of Service Industry Management, 3*(3), 34-45.

Moore, C.D. (1987). Outclass the Competition with Service Distinction, *Mortgage Banking, 47(*11), 24-32.

Nunnally, J.C. (1978). Psychometric Theory. Second Edition. New York: McGraw-Hill.

Oliver, Richard L. (1980). A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions, *Journal of Marketing Research, 17* (November), 460-69.

Onkvisit, S., & Shaw, J. (1989). Service Marketing Image, Branding, and Competition. *Business Horizon, 32*(1), 13-20.

Parasuraman, A., Zeithaml, V.A., & Berry, L.L. (1985). A Conceptual Model of Service Quality and its Implications for Future Research, *Journal of Marketing, 49,* 41-50.

Parasuraman, A., Zeithaml, V.A., & Berry, L.L. (1988). SERVQUAL: A Multiple Item Scale for Measuring Consumer Perceptions of Service Quality, *Journal of Retailing, 64(*1), 12-40.

Parasuraman, A., Zeithaml, V.A., & Berry, L.L. (1991). Understanding Customer Expectations of Service, *Sloan Management Review, 32(*3), 39-48.

Potter, C., Morgan, P., & Thompson, A. (1994). Continuous Quality Improvement in an Acute Hospital: A Report of an Action Research Project in Three Hospital Departments. *International Journal of Health Care Quality Assurance, 7(*1), 4-29.

Ramsaran, R.R. (2005). Identifying Health Care Quality Attributes. *Journal of Health and Human Services Administration, 27*(4), 428-43.

Sohail, M. Sadiq (2003). Service Quality in Hospitals: More Favorable than you might Think. *Managing Service Quality, 13*(3), 197–206.

Spreng, R.A., & Mackoy, R.D. (1996). An Empirical Examination of a Model of Perceived Service Quality and Satisfaction, *Journal of Retailing, 72*(2), 201-14.

Yoo, K., & Park, J. A. (2007). Perceived Service Quality, Analyzing Relationships Among Employees, Customers and Financial Performance. *International Journal of Quality & Reliability Management, 24*(9), 908-926.

Zeithaml, V. A. (2000). Service Quality, Profitability and the Economic Worth of Customers: What We Know and What We Need to Learn. *Journal of the Academy of Marketing Science, 28*(1), 67–85.

Zeithaml, V.A., & Bitner, M. J. (1996). *Services Marketing.* Singapore: McGraw Hill.

Table 1: Profile of the Respondents

	Variables	Categories	Frequency (Total-136)	Percentage (Total-100)
1	Gender	Male	60	44.1
		Female	76	55.9
2	Age (in years)	21-30	54	39.7
		31-40	57	41.9
		41-50	19	14.0
		51 & Above	6	4.4
3	Marital Status	Married	90	66.2
		Unmarried	46	33.8
4	Education	No formal education	1	0.7
		Upto higher secondary	5	3.7
		Diploma	8	5.9
		Graduation	68	50
		Post graduation	54	39.7
5	Occupation	Public sector Employees	14	10.3
		Private sector Employees	66	48.5
		Professionals	19	14.0
		Businessmen/women	28	20.6
		Others	9	6.6
6	Income	Below 20000	15	11.0
		20001 – 40000	45	33.1
		40001 – 60000	18	13.2
		60001- 80000	18	13.2
		80001 – 100000	16	11.8
		100001 and above	24	17.6

Table 2: Independent Samples Test

	t-test for Equality of Means		
	T	Df	Level of Significance (2-tailed)
Tangible	1.322	134	0.188
Reliability	1.778	134	0.078
Assurance	1.947	134	0.054
Empathy	1.752	134	0.082
Staff	2.123	134	0.036
Accessibility	1.412	134	0.16
Communication	2.052	134	0.042
Satisfaction	1.39	134	0.167

Table 3: ANOVA – Summary (Age)

		Sum of Squares	df	Mean Square	F	Sig.
Tangible	Between Groups	13.312	3	4.437	3.161	.027
	Within Groups	185.281	132	1.404		
	Total	198.593	135			
Reliability	Between Groups	17.548	3	5.849	4.548	.005
	Within Groups	169.769	132	1.286		
	Total	187.317	135			
Assurance	Between Groups	18.176	3	6.059	4.659	.004
	Within Groups	171.653	132	1.300		
	Total	189.829	135			
Empathy	Between Groups	20.708	3	6.903	5.277	.002
	Within Groups	172.674	132	1.308		
	Total	193.382	135			
Staff	Between Groups	23.981	3	7.994	5.668	.001
	Within Groups	186.151	132	1.410		
	Total	210.132	135			
Accessibility	Between Groups	17.855	3	5.952	4.262	.007
	Within Groups	184.342	132	1.397		
	Total	202.197	135			
Communication	Between Groups	19.227	3	6.409	5.026	.002
	Within Groups	168.339	132	1.275		
	Total	187.566	135			
Satisfaction	Between Groups	17.379	3	5.793	4.421	.005
	Within Groups	172.967	132	1.310		
	Total	190.346	135			

Table 4: ANOVA – Summary (Occupation)

		Sum of Squares	df	Mean Square	F	Sig.
Tangible	Between Groups	33.771	4	8.443	6.710	.000
	Within Groups	164.822	131	1.258		
	Total	198.593	135			
Reliability	Between Groups	33.408	4	8.352	7.109	.000
	Within Groups	153.909	131	1.175		
	Total	187.317	135			
Assurance	Between Groups	33.029	4	8.257	6.899	.000
	Within Groups	156.801	131	1.197		
	Total	189.829	135			
Empathy	Between Groups	37.401	4	9.350	7.853	.000
	Within Groups	155.981	131	1.191		
	Total	193.382	135			
Staff	Between Groups	28.702	4	7.176	5.181	.001
	Within Groups	181.430	131	1.385		
	Total	210.132	135			
Accessibility	Between Groups	38.810	4	9.702	7.779	.000
	Within Groups	163.387	131	1.247		
	Total	202.197	135			
Communication	Between Groups	29.129	4	7.282	6.021	.000
	Within Groups	158.437	131	1.209		
	Total	187.566	135			
Satisfaction	Between Groups	37.589	4	9.397	8.059	.000
	Within Groups	152.756	131	1.166		
	Total	190.346	135			

Innocence Revisited: A Study of Future Workforce

Saroj Rathore, Upinder Dhar***

Abstract

Innocence is most appealing in children. It is not simply their physical beauty, but openness to loving and being loved, their playfulness, and innate humour. Children are beautiful because they possess something that adults have lost – the quality of innocence. Innocence is an intrinsic characteristic in children. It is a general perception that this characteristic of innocence gradually reduces with the chronological growth of the child. This paper is an attempt to explore the individual differences on various attributes of innocence viz., emotionality, faithfulness, kindness, happiness, purity, vulnerability, simplicity, transparency, lovability and honesty in the future workforce represented by adolescent males and females. A story based tool was developed to assess the level of innocence in the respondents. The study has revealed that the level of innocence on these attributes varies between males and females adolescents.

Keywords: Innocence, kindness, happiness, purity and honesty.

Introduction

All human beings possess innocence in the early years of life. Innocence remains integral in some, while some other traits gain importance in others. It is difficult throughout one's life to retain this quality. As age increases, the innocence reaches at the maturity at a particular stage. It is rather easier to capitulate to malicious qualities and raise antagonism. To sustain this virtue, it requires exceptional mental ability and perception to be able to do so. Further, the stability of a virtuous character depends on for many other attributes. The concept of 'innocence' refers to simplicity of children, their ignorance towards worldly affairs and their purity not washed away or maligned. Innocence is in a way a promise of regeneration. At all times innocence has been attributed to childhood by adults but considerable variation over time and context has been shown by social purpose of such assessments and the evaluation is never common among contemporaries. In earlier times, innocence was used as a religious notion.

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The idea of childhood innocence was reported to be interrelated with sexuality in 1990s. Researchers, while assessing the social aspect of innocence in childhood at different times and in different contemporary contexts, have dealt with childhood innocence rather tacitly. According to Macdonald (1996), the term innocence is synonymous with harmlessness: blamelessness, guilelessness, simplicity, and freedom from guilt. It is derived from Latin 'innocens'. The epithet 'innocent' is a derivation of 'nocere' meaning to harm. The concept of Innocent's Day came into being from the reference to *Holy Innocents massacred by Herod*. The term is further defined as integrity, goodness, purity, virtue, righteousness etc. (Macdonald, 1996). It also signifies the quality or state of being innocent specifically. According to Merriam Webster (1996), innocence is defined as freedom from guilt or sin by being unacquainted with evil, chastity, freedom from legal guilt of a particular crime and lack of knowledge.

On the other hand, adolescence is a period of life when one spends more time with friends and is less family centered. The span of time spent with the peers of same sex increases between childhood innocence and adolescence innocence. They are influenced by their peers in decision making. It has been seen that when children cross their later childhood age, they are less likely to engage in risky behavior as they have reached the adolescence innocence where they can think about the pros and cons of events. The various facets of innocence are to be taken into consideration for age and gender by adopting multi-dimensional approach. The two demographic attributes, age and gender, affect the state of innocence. The backdrop of innocence is formed by purity, fraternal bonding, gullibility, mother-child bonding, ignorance of gender constructs and an eco-friendly mode of living.

With the advancement of age, the character grows and loses childlike things, such as ignorance. The person takes new responsibilities as he or she approaches adolescence entering into a new phase of knowledge and learning new competencies or skills. The journey from childhood innocence to adolescent knowledge involves a new understanding and potential for good or evil. The transformation of childhood innocence wanes when children grow towards the phase of knowledge or understanding. There are various essential characteristics of adolescence as given below:

- Character begins its journey.
- As age increases, children understand the point of view of the authority. They understand their own values better and gain better sense of identity.

The property of innocence has been widely used in well known poetries, stories, articles and other art works of poets like Blake and Wordsworth. Blake (1789) advocates for the endurance and transformative power of innocence as it helps in overcoming the harshness of life which comes with bad experiences. Radical innocence overcomes the propensities and appetites of freedom of movement, familial belonging, natural compassion and desire including sexual desire. Blake's poetry of childhood, links the 'contrary states' of Innocence and Experience, whereby explaining the gradual reduction in innocence due to experience. Wordsworth (1798) has considered innocence as a privilege over philosophical mind. Swaminathan (1998) examined the problem of child labor in western India. The children are easily available to do monotonous low skilled jobs. Since these work activities do not require high level of knowledge and skills, the wages for these activities are extremely low. Such low payments and long working hours expose the children to drudgery and they become vulnerable to exploitation.

This laborious work hinders the education for most children in India. Swaminathan argued that having high economic growth is good for the country, but, it should not happen at the cost of childhood innocence. Kaushik (2014) identified that the child population in India is almost 19 percent of the world. Indian legislative framework shows concern for upbringing of children in secure, safe and healthy manner. Nevertheless, children below the poverty line become victim of malnutrition and die. Children become vulnerable to crimes. However, due to poverty or under threat of mafia children start begging at early lives. The study was conducted in three broad groups of beggars: boys, girls and children with mothers. Such children have family and peer acceptability, support and motivation for begging. Such children are deprived from education and are susceptible to abuse. This study also found that there are more boys than girls in the profession of begging. Girls are exposed to prostitution due to human trafficking. Such children fake their physical health and conditions to earn more money. These children lose their innocence and work like professionals and it's the duty of the government to safeguard their rights.

Orgeta (2009) in his cross-sectional research propounds that young ones and adults do differ in acceptance and awareness of emotional responses, younger ones scored higher compared to adults, showing greater emotion regulation difficulties. Adults reported greater ability to participate in the goal-directed behavior and abstain from spontaneous emotional responses. Growing age is connected with superior entrance to emotion regulation strategies and better precision of emotions. Lin (2000) recommended translation norms for faithfulness, expressiveness and elegance, which

can be interpreted as faithfulness which means that, one should be honest to the original work, which implies, translated version should provide true sense of original work. It is difficult to achieve 'faithfulness', but 'faithfulness' achieved without 'expressiveness' cannot make an acceptable translation. Thus, expressiveness should also be valued. This means that faithfulness is being honest at the level of form and content.

Salahi (1998) narrated that Islam utilizes the Arabic word birr in relation with children's attitude towards their parents and vice versa. The term encompasses kindness, sympathy, generosity and almost every facet of good and liberal behavior of others. Kindness is one of the Allah's own quality that is derived from this origin. God/ Allah is the Barr, which means that his kindness, empathy, elegance and generosity never fail. During the early age it's the duty of parents to be kind and compassionate with their children and in the older age of parents it's the duty of the children to be kind and compassionate to their parents. Uusitalo-Malmivaara (2014), in her research in Finland, found that both global and school-related happiness decreased in respondents post later childhood. Particularly in females, the decline was remarkable. The decline in happiness was mostly due to peer problems and to a slighter level, stress at school. The factor most desired to increase happiness was more accomplishment at school followed by the want for extra money, more free time and a girlfriend or boyfriend. Girls with a high grade-point average were happier than other girls, globally and at school. Among boys, no such differences appeared.

Douglas (2002) had tried to identify the apprehension for purity as a prominent theme at the center of every society. In vigorous and logical writing style, she had explained significance of purity for every individual by revealing its enormous impact on the attitude to society, values, cosmology and knowledge. She had explained why people behave in the way they do and what is the undercurrent that guides their behavior? The author from an anthropological perspective summarized the performance of particular purity rituals in various cultures. Danger of obsolete rituals continues to challenge and question purity of individuals in the new century. Elgin (2010) advocated that simplicity, purposefulness and intentions support a superior quality of life. Simplicity provides a more pleasant affiliation with the earth - the land, air, and water.

Simplicity promotes justice and impartiality among the citizens of the earth. Simplicity cuts through unnecessary busyness, mess and complications. Simplicity increases living with stability - inner and outer, work and family, family and society. It discloses the exquisiteness and intellect of nature's designs and enhances the assets available for future generations. It assists saving animal and plant variety from extinction and

reacts to worldwide shortages of oil, water, and other fundamental resources. Hays and Carver (2014) experimented with parents who told lies to their children. They found that the effects of telling lies to the children were critical. The criticality increased with age of the child. In this experiment, pre-school children were more honest and open in comparison to grown up children. This supported the notion that honesty reduces with age.

Holder and Hawkins (2007) stated that the illusion of transparency is a state when one overvalues the ability of others to discriminate one's internal states, including emotions. They experimented with male and female tasters who tried to conceal their expressions on an unpleasant drink. Male and female spectators rated tasters' expressions and tried to recognize the disgusting drink based on the tasters' facial expressions. Results confirmed the illusion of transparency and recommended that the illusion was partly because of the failure of people to hide their own knowledge when allowing for the perception of others who do not share this fact. Females were less successful than males at hiding their hatred but there was no sex difference in the weakness to the illusion.

Smith (2015) found that hundreds of people anxiously search for a partner who will make them feel lovable. Those with a painful family history and inconsistent attachment in childhood may start this search very early in life in the belief that having a romantic partner is proof that they are worthy of love. When they are alone they feel insufficient and unwanted until they find love again. In an ideal world, child feels comfortable in the arms of a loving parent for survival and well-being. Unfortunately, in the real world other things can obstruct that relationship. Children have the capability to widen creative ways to try to get the necessary comfort and attention from their parents. They are dependent, physically and emotionally, and their tools are limited to smallness and cute smiles with natural lovability. In some cases, parents are consistent in their responses and provide secure attachment which helps children to know that they are loved. If attachment bonds are insecure and inconsistent, children begin to develop doubts about their worth and lovability and in adolescence and adulthood begin to search for someone who would validate their worth.

Rationale of the Study

In relation to the changing ideas about innocence over the time, there are several points of discussion that arise. It needs to be examined that how the concept of innocence has changed over the period of time. The gender may further reveal the underpinnings of the nature of innocence in the contemporary times.

Objectives of the Study

The objectives of the present study are as follows:

1. To understand the difference in innocence between the adolescent males and adolescent females, who represent the future workforce.
2. To understand the difference in the attributes of innocence between the adolescent males and adolescent females, who represent the future workforce.

Method

The Study

The present study is an attempt to identify the attributes of innocence in adolescent males and females. The study is exploratory in nature and an attempt to differentiate between male and female future workforce.

The Sample

A final sample of 150 adolescents was drawn from various schools of Indore. The students were from the age group of 15-17 years. The sample was constituted of equal number of male and female adolescents (male adolescents = 75, female adolescents = 75).

The Tool for Data Collection

A tool was developed for data collection after thorough review of literature on innocence. Initially, 123 attributes of innocence were identified. These attributes were shown to thirty judges for validation. The judges had varied background with at least ten years of work experience after post graduate degree. Based on the responses of judges, ten attributes were finalized because they had acceptance of at least 75% judges. The final ten attributes were emotionality, faithfulness, kindness, happiness, purity, vulnerability, simplicity, transparency, lovability and honesty. Ten stories were developed to depict these ten attributes. A set of five questions was formulated at the end of each story to extract the perception of respondents of the study about the importance of these attributes. The stories were further validated by a different set of thirty judges. All the judges gave more than 75% acceptance to each story. The instrument was then administered on 150 adolescents. The coefficients of correlation (r) between the scores of each attribute and total scores of attributes were computed to assess the extent to which each attribute correlated to the variable of innocence. The value of r in all correlations was more than 0.72 which was significant.

Reliability of instrument: The concept of reliability suggests both stability and consistency of measurement. The reliability of the instrument was determined by the Cronbach's alpha which was found to be 0.781.

Validity: When a psychometric instrument is developed and no other standardized instrument is available, then the reliability index based on reliability coefficient can be taken as equivalent to validity of the instrument (Garrett, 1971). The reliability index of the instrument was found to be 0.884. Thus, validity of the instrument is high.

The Tools for Data Analysis

Simple correlation and Z-test were administered to arrive at the results.

Results

The mean scores of innocence and its attributes were calculated for male and female adolescents. Z test was applied to compare the mean scores of the respondents. The table with mean scores, standard deviation and z values is given below:

Attribute	Mean score of Males	Std. Dev. Males	Mean score of Females	Std. Dev. Females	Z Value
Emotionality	3.80	0.90	4.69	0.52	7.86*
Faithfulness	3.77	0.80	4.47	0.60	6.43*
Kindness	3.40	0.59	4.27	0.57	9.63*
Happiness	4.09	0.84	4.49	0.60	3.77*
Purity	3.76	0.68	4.57	0.59	8.26*
Vulnerability	4.20	0.79	4.37	0.59	1.95
Simplicity	3.92	0.61	4.43	0.60	5.64*
Transparency	3.77	0.76	4.52	0.59	7.17*
Lovability	3.96	0.66	4.33	0.66	3.91*
Honesty	3.63	0.79	4.41	0.55	7.55*
Innocence	38.31	3.68	44.46	3.64	10.56*

* Significant at 0.05 level s

There is a significant difference in the mean scores of male and female respondents in Innocence and attributes like Emotionality, Faithfulness, Kindness, Happiness, Purity, Simplicity, Transparency, Lovability and Honesty. The female respondents have shown a significantly higher level of innocence and its attributes than male respondents.

The results reveal that vulnerability attribute of innocence is insignificant between male and female adolescents. However, the mean score in both the cases is high on the five point scale.

The details of significant results are as under:

H0.1: Male adolescents do not differ from female adolescents in terms of Emotionality attribute of innocence.

The null hypothesis is rejected. Male and female adolescents differ in Emotionality attribute of innocence. Females scored higher in comparison to males.

H0.2: Male adolescents do not differ from female adolescents in terms of Faithfulness attribute of innocence.

The null hypothesis is rejected. Male and female adolescents differ in Faithfulness attribute of innocence. Females scored higher in comparison to males.

H0.3: Male adolescents do not differ from female adolescents in terms of Kindness attribute of innocence.

The null hypothesis is rejected. Male and female adolescents differ in Kindness attribute of innocence. Females scored higher in comparison to males.

H0.4: Male adolescents do not differ from female adolescents in terms of Happiness attribute of innocence.

The null hypothesis is rejected. Male and female adolescents differ in Happiness attribute of innocence. Females scored higher in comparison to males.

H0.5: Male adolescents do not differ from female adolescents in terms of Purity attribute of innocence.

The null hypothesis is rejected. Male and female adolescents differ in Purity attribute of innocence. Females scored higher in comparison to males.

H0.6: Male adolescents do not differ from female adolescents in terms of Vulnerability attribute of innocence.

The null hypothesis is accepted.

H0.7: Male adolescents do not differ from female adolescents in terms of Simplicity attribute of innocence.

The null hypothesis is rejected. Male and female adolescents differ in Simplicity attribute of innocence. Females scored higher in comparison to males.

H0.8: Male adolescents do not differ from female adolescents in terms of Transparency attribute of innocence.

The null hypothesis is rejected. Male and female adolescents differ in Transparency attribute of innocence. Females scored higher in comparison to males.

H0.9: Male adolescents do not differ from female adolescents in terms of Lovability attribute of innocence.

The null hypothesis is rejected. Male and female adolescents differ in Lovability attribute of innocence. Females scored higher in comparison to males.

H0.10: Male adolescents do not differ from female adolescents in terms of Honesty attribute of innocence.

The null hypothesis is rejected. Male and female adolescents differ in Honesty attribute of innocence. Females scored higher in comparison to males.

H0.11: Male adolescents do not differ from female adolescents in terms of Innocence.

The null hypothesis is rejected. Male and female adolescents differ in Innocence. Females scored higher in comparison to males.

Discussion

The findings of the study are discussed in the light of available literature to highlight the understanding about the impact of gender on innocence. Hatfield and Rapson (1994) had observed that emotional contagion refers to the phenomenon of a person's emotions becoming similar to those of surrounding people. Women have been reported to be more responsive to emotions in comparison to males. Briscoe (2005) observed

that women were more faithful than men. Author had created a plot where a female character accidently conceived a child. She highlighted that how male characters portray their urge and how lead female character was composed and controlled. Dalai Lama (2013) had stated in the book His Holiness: The 14th Dalai Lama that biologically females have more potential to be kind. Females have more sensitivity about others' wellbeing. Dalai Lama's father was very short tempered and scolded him, while his mother was wonderfully compassionate.

Hagey (2007) studied happiness based on gender, tracking traditional happiness data by asking people how satisfied they are with their lives. Results revealed that women, who in the early 1970s reported being slightly happier than men, are now slightly less happy. Peplau (2003) identified that men have less tendency of being pure in comparison to women. This is going beyond generalizations; statistics support the idea that men commit sin more often than women. Geary (2007) explained that the primitive theories of male naturalists focused on vulnerabilities of males and overlooked the same in females. While both the genders are susceptible to threats and have sex-specific vulnerabilities. Not only are male physical traits vulnerable, but social traits too and these are different to qualities that are vulnerable in females.

Fazl-E-Haider (2013) discussed the mission of Malala Yousafzai against the Talibanis in Pakistan. Malala was a 14-year-old school girl and was shot by the Taliban for supporting educational prospects for girls. There is an increase in the number of Taliban members who are against the girl child education and the girls who want to study become vulnerable to these militants. Pakistan needs to have a policy for safeguarding the girls' innocence and right to education. Bjerregaard and Smith (1993) tried to recognize the emotionality among female adolescents who participated in gang crimes. There were multiple emotions which motivated adolescents to participate in gang crimes. The emotional suffering due to poverty, domestic abuse, peer pressure and lack of success in school forced them to contribute in crime. The males were unable to take stress and had more tendencies towards crime in comparison to females. Girls had greater control over their negative thoughts and were less revengeful than boys. Still both the genders had more tendencies to participate in gang crimes.

Shahimi and Mazhar (2014) examined the teenager's preferences and choice behavior towards branded and unbranded products in Pakistan. They identified that female teenagers were more socially influenced over-choice as compared to males. Males relied on media and were brand conscious customers. Thus, females followed the simple social norms while boys believed in showing off through brands. Seligman

and Duckworth (2005) identified that school girls outperformed boys in overall self-discipline. Females got better grades across all subjects. They observed that girls are more adept at reading test instructions before proceeding to the questions. Hence, have more clarity and transparency. Waldrop, Bell and Goering (1976) observed that boys have stronger peer relationship than girls. They show more affinity and love for group play while girls tend to be comfortable with one or two friends. Girls' social relations are stronger in comparison to boys. Girls, thus, have more lovability than boys.

Swamy et al. (2001) observed that lower levels of corruption come along with more women in senior positions in public administration and higher shares of women in the labour force. The resulting policy recommendation by the World Bank in 2001 affirmed that increasing women participation in the public domain would reduce corruption, as women are honest in comparison to men. Hurlock (2016) discussed the traits of innocence between the two genders and highlighted that adolescent boys express the sex appropriate emotions, while girls experience fear and are more emotional than boys. Girls display more happiness and love in comparison to boys. The boys exhibit more aggression and curiosity than girls. The girls are happy to stay at home and play with their siblings, while boys want to be with their peers in a gang.

Conclusion

The research findings show that male and female future workforce represented by adolescents significantly differ in the level of innocence and its attributes, namely Emotionality, Faithfulness, Kindness, Happiness, Purity, Simplicity, Transparency, Lovability and Honesty. The female respondents have shown a significantly higher level of innocence and its attributes than male respondents. Vulnerability was not found significantly different between male and female adolescents. However, the mean score in both the genders were found higher. It can thus be derived that all adolescents, irrespective of gender, are vulnerable.

Implications

The study can be replicated with other independent variables, such as various levels of age, type of school, social and working status of parents and geographical background of respondents in terms of rural and urban area. The study is based on a sample of 150 respondents only. It is suggested that findings may be re-validated on a larger sample. There may be different set of observations if the research is done in other parts of the country, particularly metropolitan cities. Research can also be

conducted on the innocence of transgenders, as they are an important part of the society, but are generally neglected. The study has implications in terms of understanding the child ego state of individuals at various stages of life. The present study has revealed that innocence and its attributes are higher in female adolescents. It will be interesting to conduct an in-depth study to explore the reason for such a phenomenon. The policy makers of schools should facilitate in sustaining the innocence among adolescents through extra-curricular activities. The findings of the study can also be used by human resource professionals while designing rhe management development programs for the young graduates entering the industry. Efforts can be made to nurture the attributes of innocence in such workforce.

References

Bjerregaard, B., & Smith, C. (1993). Gender differences in gang participation, delinquency, and substance use. *Journal of Quantitative Criminology, 9*(4), 329-355.

Blake, William (1789). Songs of Innocence and of Experience. *W. Blake. http://www.blakearchive.org/*

Briscoe, Joanna (2005). *Sleep With Me*. London, UK: Bloomsbury Publishing.

Dalai Lama (2013). *His Holiness:The 14th Dalai Lama. https://www.dalailama.com*

Douglas, Mary (2002). *Purity and Danger: An Analysis of Concepts of Pollution and Taboo. Routledge Classics*. Hammondsworth, UK: Penguin Books.

Duckworth, Angela L., & Seligman, Martin E.P. (2005). Self-Discipline outdoes IQ in predicting academic performance of adolescents. *Psychological Science, 16*(12), 1. *https://doi.org/10.1111/j.1467-9280.2005.01641.x*

Elgin, Duane (2010). *Voluntary Simplicity - Toward a Way of Life That Is Outwardly Simple, Inwardly Rich.* New York: HarperCollins.

Fazl-E-Haider, Syed (2013). Malala versus Extremism. *Harvard International Review, 34*(4), 73-76.

Garrett, Henry E. (1971). *Statistics in Psychology and Education. Indian edition*. Bombay: Vakils, Feffer and Simons, 349-356.

Geary, David (2007). *Evolution of Vulnerability - Implications for Sex Differences in Health and Development, 33rd Edition*. NY: Academic Press.

Hagey, Keach (2007). *Men Are Now Happier Than Women. https://www.cbsnews.com/news/men-are-now-happier-than-women* (retrieved on March 1, 2018).

Hatfield, E., Cacioppo, J.T., & Rapson, R.L. (1994). *Emotional Contagion*. New York: Cambridge University Press.

Hays, Chelsea & Carver, Leslie, J. (2014). Follow the liar: the effects of adult lies on children's honesty. *Developmental Science, 17*(6), 977-983.

Holder, Mark D., & Hawkins, Christine (2007). The illusion of transparency: Assessment of sex differences in showing and hiding disgust. *Basic and Applied Social Psychology*, *29*(3), 235-243, *DOI: 10.1080/01973530701503101*

Hurlock, Elizabeth B. (2016). *Developmental Psychology- A Life Span Approach. Fifth Edition*. Noida: McGraw Hill Education (India) Pvt. Ltd.

Kaushik, Anupma (2014). Rights of children: A case study of child beggars at public places in India. *Journal of Social Welfare and Human Rights, 2*(1), 1–16.

Lin, Zhang (2000). On Yanfu's faithfulness, expressiveness and elegance. *Chinese Science and Technology Translators Journal*, *13*(4), 1-3.

MacDonald, William (1996). *Be Holy: The Forgotten Command*. London: John Ritchie Publications.

Orgeta, V. (2009). Specificity of age differences in emotion regulation. *Aging and Mental Health*, *13*(6), 818-826.

Peplau, L.A. (2003). Human sexuality: How do men and women differ? *Current Direction*, *12*(2), 37-38.

Salahi, Adil (1998). What is Kindness to Parents? *Islamic Voice*, *12*(7), 139. *http://www.islamicvoice.com/july.98/hadith.htm* extracted on March 21, 2018.

Shahimi, Mohtar & Mazhar, Abbas (2014). Teenager's preferences and choice behavior towards branded or unbranded products. *IOSR Journal of Business and Management (IOSRJBM), 16*(7). 98-103.

Smith, Ann (2015). *Love and Love-Ability - We each have the ability to be lovable*. Sussex: Psychology Today. Sussex Publishers, LLC

Swaminathan, Madhura. (1998). Economic growth and the persistence of child labor: Evidence from an Indian city. *World Development, 26*, 1513-1528. *10.1016/S0305-750X(98)00063-1*.

Swamy, Anand; Knack, Stephen; Lee, Young & Azfar, Omar (2000). *Gender and Corruption. https://web.williams.edu/Economics/wp/Swamy_gender.pdf* (World Bank report)

Uusitalo-Malmivaara, L. (2014). Happiness Decreases during Early Adolescence - A Study on 12- and 15-Year-Old Finnish Students. *Psychology, 5*, 541-555.

Waldrop, M. F., Bell, R. Q., & Goering, J. D. (1976). Minor physical anomalies and inhibited behavior in elementary school girls. *Child Psychology and Psychiatry and Allied Disciplines, 17*(2), 113–122. *https://doi.org/10.1111/j.1469-7610.1976.tb00383.x*

Wordsworth, William (1798). *Ode Intimations of Immortality from Recollections of Early Childhood*. The Longman Anthology of English Literature: The Romantics and their Contemporaries. David Damrosch and Kevin J.H. Dettmar. Boston: Pearson,.

Revisiting Empowerment of Women in India: An Overview

Soumendra Kumar Patra, Durga Madhab Mahapatra***

Abstract

German Socialist and Feminist, Clare Zetkin suggested in the 2nd International conference of socialist women at Copenhagen in 1910 that women's day be celebrated each year. Following Zetkin's proposal, International women's day was observed in a few European Countries on March 19, commemorating the 1848 Revolutions in Prussia when a people's uprising had forced the king to promise women the right to vote, which he later failed to keep. But the day became truly revolutionary only later. In Russia, protests erupted on March 8, 1917 against world war-I and brought down the Tsarist Empire. The new government gave the women the right to vote. The United Nations decided to observe the International women's day from 1975 onwards. In India, the women's movement gained pace slowly in terms of fighting against dowry deaths, domestic violence, sexual abuse, and also struggle of Dalit and Basujan women. According to International Labor Organisation Report 2017, global sample survey established that 70 percent of women were eager to be in paid employment outside their home. Further, across the world, over 44 percent of women managers hold an advanced degree, as compared to 38.30 percent among male counterparts.

Keywords: Poor and Vulnerable, Physical and Mental Health, Caregivers and Caretakers, Downward Trend, Sexual Harassment Complaints

Introduction

The role of girls and connected issues have attracted the attention of the academicians, political thinkers and social scientists in every developing as well as developed country, partially due to the observance of The United Nations Decade for Women (1975-85) and partially due to the widely accepted truth that a society designed on the distinction of men and women involves wastage of human resources that no country can afford. With increasing literature on authorization of girls and with voluminous amount of public expenditure on girls' authorisation schemes, it has become imperative to know

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the thought of authorization of girls and have a much better understanding of its policy implications.

During the independence movement, women were visible and active as nationalists, and as symbols of "Mother India". Gandhi, in particular, was instrumental in creating space for women through his non-violence (and some would argue feminized) mode of protest. Gandhi's legendary salt march initially excluded women, but due to demand from women nationalists he later realized the power of women organizers at the local level. His inclusion of women, however, was not located within a gender equality framework, but was a means to achieve a stronger and unified Indian state. The inclusion of women in the nationalist movement was also to debunk the British colonial assertion of "needing to save the poor and vulnerable women" of pre-independence India.

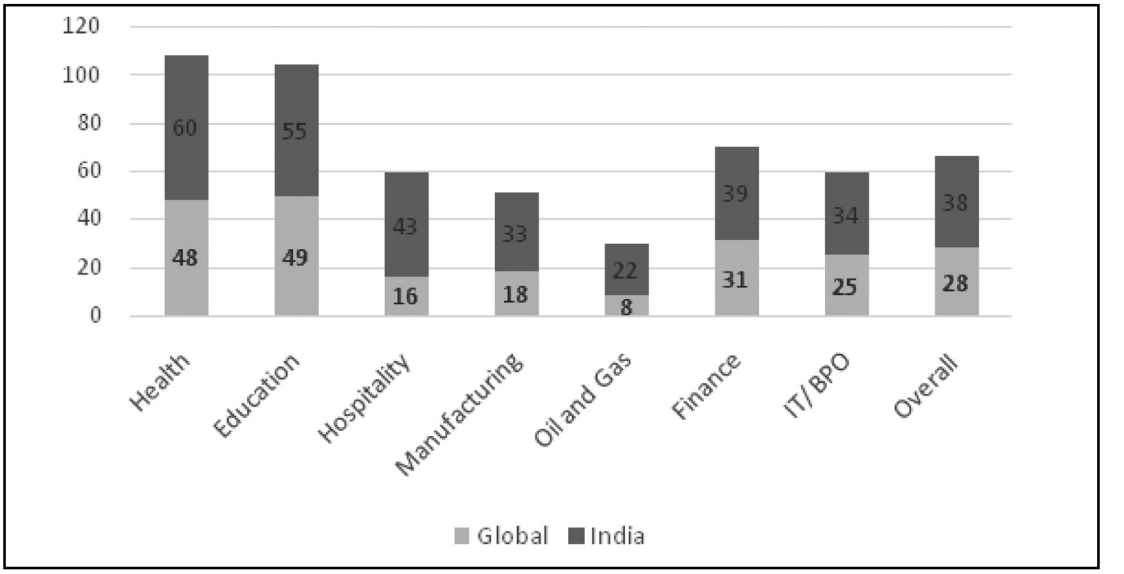
Policies on Women's endorsement exist at the national, state and native (Panchayat) levels in many sectors, along with health, education, economic opportunities, gender based violence and political participation. However, there is a wide gap between policies and actual practice followed in the community. Empowerment of women is largely the strategy of upliftment of economic, social and political standing of women, the traditionally unfortunate ones. It's the strategy of guarding them against all kinds of violence. Women authorization is expected to give rise to an environment where women can breathe without any fear of oppression, exploitation, apprehension, discrimination and general feeling of abuse in the traditionally male dominated structure.

Table 1: Percentage of women workforce in Major Sectors (Global vs. India)

Sl. No.	Sector	Global	India
1	Health	48	60
2	Education	49	55
3	Hospitality	16	43
4	Manufacturing	18	33
5	Oil and Gas	08	22
6	Finance	31	39
7	IT/ BPO	25	34
8	Overall	28	38

Source: BCG Report, BS, 8th March 2019, P-1.

Figure 1: Percentage of women workforce in major sectors Global vs.India



The above table and figure shows the percentage of women workforce in major sectors (global vs. India). In global, the percentage of women workforce is highest in education sector (49%), then health (48%), and finance (31%). Similarly, in India the majority of workforce is highest in health (60%), followed by education (55%).

Table 2: Share of women in Parliament (2018) in selected countries

Sl. No.	Country	% Women
1	Nepal	32.7
2	Germany	30.7
3	China	24.9
4	Pakistan	20.6
5	Russia	15.8
6	**India**	**11.8**
7	Brazil	10.7
8	Bhutan	08.5
9	Sri Lanka	05.8

Source: World Bank

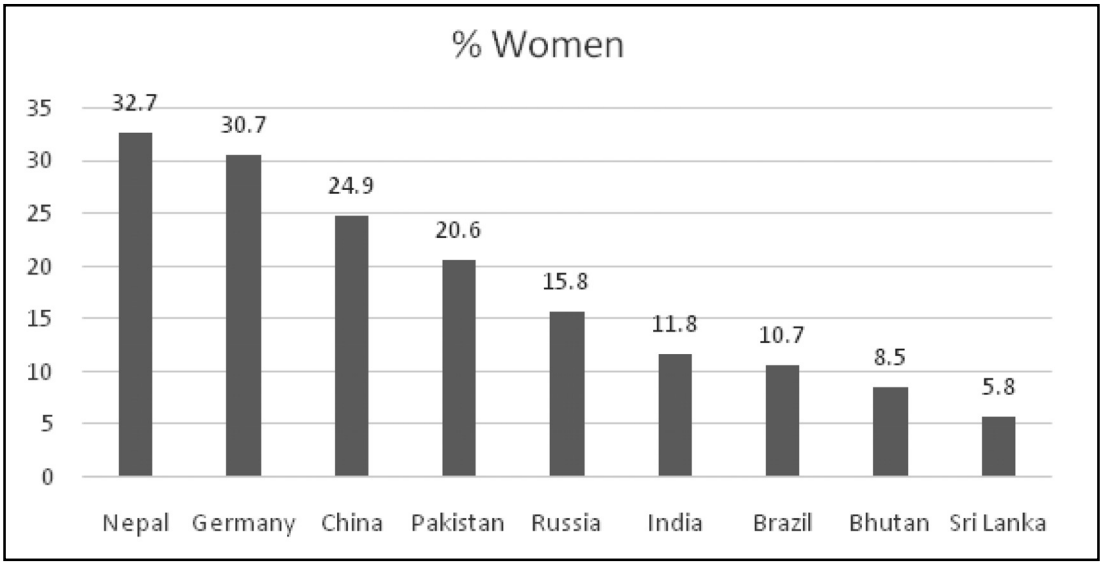


Figure 2: Share of women in Parliament (2018) in selected countries

The above table and chart show the share of women in parliament in selected countries. The percentage of women in parliament is highest in Nepal (32.70%) and then Germany (30.70%). India is at 6th position (11.80%).

Table 3: Women in Parliamentat (Lower House)

Rank	Country	Number of Women in Lower House	%
1	Rwanda	49	61.3%
2	Cuba	322	53.2%
3	Bolivia	69	53.1%
4	Mexico	241	48.2%
5	Grenada	07	46.7%
6	UK	209	32.2%
7	US	102	23.5%
8	**India**	**64**	**11.8%**

Source: World Economic Forum, Global Gender Gap Report 2018

The world Economic Forum in its Gender Gap Report (2018) stated that women spent double time on unpaid work, household work, household care than men. But in Japan, Korea and India, the time spent on household work is five times than men (Mampatta et al., 2019). The Survey of ICICI Lombard on the physical and mental health of working women through their career span (2018) reported that gender equality at the workplace has become a byword in the corporate sector. The survey has brought forth the fact that 53 percent of the working women believe that workplaces are still male-dominated. The Women's Reservation Bill was introduced by the UPA government in 2008 aimed to reserve one-third of all seats in the Lok Sabha and the state legislative assemblies, but lapsed after dissolution of the lower house. The 16th Lok Sabha had just 65 women MPs i.e., 11.9 percent of 543 Members of Parliament.

The ratio in Rajya Sabha was 28 women members out of 244. The setting up of dedicated W-SME (Women - Small and Medium Enterprises) clusters in every district led to a larger contribution to the economic growth and employment generation. In a survey conducted by *Sakshi*, a non-government organization that works in the area of gender justice, 80 percent of respondents said that sexual harassment existed at their workplaces and 53 percent said men and women did not have equal opportunity at work. The social factors responsible for the low participation of women in the workforce in India included the expectation from women as caregivers and caretakers of the household, which often meant that the women who chose to work experienced opposition from their peers and families (Majumdar, 2019).

Table 4: Lok Sabha Election in India and Women Candidates' Status

Year	Total Candidates	Women Candidates
2004	5434	355 (6.5%)
2009	8070	556 (6.9%)
2014	8251	668 (8.1%)

Source: Association for Democratic Reforms

The above table shows the percentage of women candidate's status in Lok Sabha election. The percentage is coming an upward trend from 2004 to 2014 i.e. from 6.5% to 8.10%. There is a 24.65% increase in women candidates of Lok Sabha election in India.

Table 5: Candidates Elected as a Percentage of Contestants in the elections in India

Sl. No.	Year	Women (%)	Men (%)
1	1957	**60.0**	31.7
2	1962	**50.0**	24.0
3	1967	**44.8**	21.30
4	1971	24.4	18.50
5	1977	27.10	22.10
6	1980	19.70	11.50
7	1984	25.60	09.20
8	1989	13.60	08.40
9	1991	11.40	05.80
10	1996	6.70	03.80
11	1998	15.70	11.20
12	1999	17.60	10.20
13	2004	12.70	09.80
14	2009	10.60	06.40
15	2014	9.30	06.30

Source: www.**mospi**.nic.in (Ministry of Statistics and Programme Implementation)

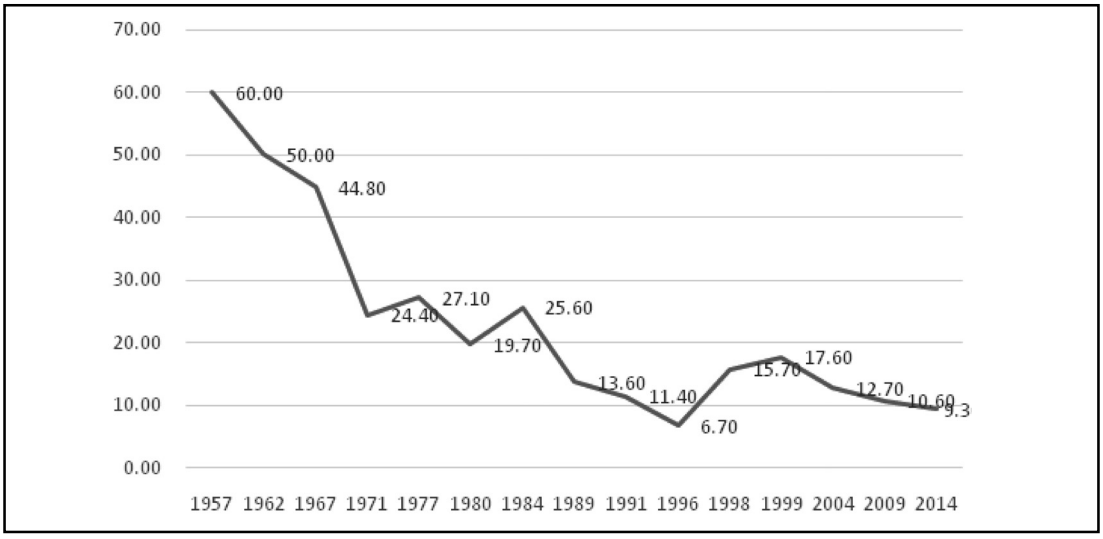


Figure 3: Candidates elected as a percentage of contestants in the elections in India

The above table and chart show the percentage of candidates elected in the elections in India. There is a downward trend of candidates elected as a percentage of contestants in the elections in India.

Table 5: Share of Women in the Council of Ministers (percentage) in India

Sl. No.	Year	% of Women	Year	% of Women
1	1985	10.0	2004	7.70
2	1990	5.10	2009	9.00
3	1995	11.50	2011	10.50
4	1996	2.60	2012	10.80
5	1997	11.40	2013	15.40
6	1998	9.50	2014	15.60
7	2002	11.00	2015	17.80
8	2003	10.30	2016	12.0
9			2017	12.0

Source: www.**mospi**.nic.in (Ministry of Statistics and Programme Implementation)

The above table shows the figures as a percentage of share of women in the council of ministers in India. The figures are highlighted from the 1985 to 2017 of about seventeen years. There is continuous increase in the average trend.

Table 6: Women in poll in India during 1957 to 2014

Year	Women Candidates	Elected Candidates	% of Candidates who won	% of women MPs.
1957	45	21	48.90	4.45
1962	66	31	47.00	6.27
1967	67	29	43.30	5.57
1971	86	21	24.40	4.05
1977	70	19	27.10	3.50
1980	143	28	19.60	5.29
1984	171	43	25.10	7.94
1989	198	29	14.60	5.48
1991	330	39	11.80	7.11
1996	599	40	6.70	7.36
1998	274	43	15.70	7.91
1999	284	49	17.30	9.02
2004	355	45	12.70	8.29
2009	556	59	10.60	10.86
2014	668	62	9.30	11.42

Source: Data net India, www.ElectionIndia.Com

The early-stage startups and small businesses in India have been shying away from hiring women according to Local Circular, a citizens forum which surveyed 9000 early-startups and small businesses. (b) The "Me Too Movement" has now created a mindset in the ecosystem to refrain from hiring women (Peer Mohamed and Kar, 2019).

Table 7: Number and percentage of cases reported for every 10.000 women employed

Year	Data of 67 companies with comparable figures for 03 years.	
2015-16	11%	263 Female Employees
2016-17	11%	262 Female Employees
2017-18	12%	267 Female Employees

Source: Business Responsibility Report for BSE 100 Companies as on March 2018

The SEBI does not disclose data on sexual harassment complaints filed by employees in its Annual Report, despite asking the top 100 listed companies to do so through a Circular in 2012. The Central Bank (RBI) had set up a Committee to deal with sexual harassment in 1998. However, the Annual Report says, one was recorded in 2016 and one in 2017, respectively (Manpalta, 2019). As per the data of IRDA on Sexual Harassment cases, the absolute number of complaints during 2016 was 28, 2017 was 28 and 2018 was 33, respectively. This is based on Annual reports of 03 listed insurance companies like HDFC life Insure, SBI life Insure, and General Insure Company of India.

Table 8: National Family Health Survey (NFHS) during 2005-06 and 2015-16

Sl.	Particulars	2005-06 (%)	2015-16 (%)
01	Currently married women who usually participate in household decisions	76.5	84
02	Ever Married women who have experienced spousal violence	37.2	31.1
03	Women owning land or house Jointly with others or alone	N/A	38.4
04	Women having a bank account that they themselves use	15.1	53
05	Women having a mobile phone that they themselves use.	N/A	45.9

Source: National Family Health Survey - Ministry of Health.

Thus, while there is an impetus to collectivise women and often homogenise experiences for the politics of resistance and advocacy, it is equally critical to localise women's needs, issues, strengths, and perspectives, as a necessary step to reverse this neglect. If grassroots research action and policy is inherently local, then it will be difficult to ignore individual woman's perspectives and needs. In today's India, which celebrates empowerment and progress, if you question the impact of development on women, you are anti-development. We don't want to ask the really uncomfortable questions about how development impacts women's lives, because doing so will divert the gaze from 'development'– a show that we must celebrate to showcase our 'citizenship'– even when it ignores oppression of women. The stand, thus, needs to change.

References

Santhanam, Radhika (2019). From revolutions to roses. *The Hindi,* 15th March, page 8.

Mampatta, Sachin P., & Waghmare, Abhishek (2019). India scales law on women's representation in Politics. *Business Standard,* 15th March, page 4.

The Survey of ICICI Lombard (2018). Working women say their workplaces are male-dominated. *The Hindu,* 12th March, page 20.

Majumdar, Shyamal (2019). The job market paradox. *Business Standard,* 22nd February, page 8.

Peer Mohamed, Alnoor & Kar, Sanghamitra (2019). Startups and small biz hire more men to avoid maternity leave "burden". *The Economic Times,* 9th March, page 8.

Manpalta, Sachin (2019). At RBI, employees filed 50 harassment complaints over 20 years. *Business Standard,* 23rd and 24th February, page 6.

Subramaniam, Garimella (2019). Balancing work. *The Hindu,* page 9.

http://www.onlinewomeninpolitics.org/india/indian.pdf.

Recent Trends in Indian Banks: An Overview

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Abstract

India has a large network of banks, and this network is the backbone of the economy. Banking is covered under tertiary sector as per the classification of Indian Economy. Banking plays a very important role in the growth and development of economy. The sector was not the same a few decades ago, and was not as good as it is today. Innovations have been made in the field of banking wellness and Information Technology has played a significant role in making it possible. The banks are using latest technologies to provide their customers good services in time and at a very affordable cost with full satisfaction. Indian banking system follows branch banking; so there are large number of branches of various banks in the country. Many service reforms have happened in the field of Indian Banking like Telephone Banking, ATM, Internet Banking, Mobile Banking, E-Banking and many more are waiting to be introduced. The banking sector needs to setup innovative framework by building management and customer satisfaction with a variety of services at the lowest cost to stay for the long time. This paper is an attempt to highlight the recent and emerging trends under challenging conditions faced by Indian banking sector especially with reference to the digital era.

Keywords: *Telephone-Banking, ATM, RTGS, NEFT, ECS, NEFT, Mobile Banking & E-Banking.*

Introduction

In the recent times, the technology has been found favorable for the Indian Banking Sector, and almost every bank is in the race for productivity enhancement, innovative products, fast transactions, real time fund settlement and the like. The technology has improved the efficiency of business process in banking sector. Therefore, it can be said that Indian Banking Sector is in the midst of an IT revolution. IT has improved the front-end operations along with back-end operations and has also helped in bringing down the cost of service for the customers. The IT is like blood injected in the Banking system to make circulation faster from one place to another. Banks are also commoditizing now with the help of new technology to attract more customer base. The customer delight being a must, every bank is trying to apply the latest technology to grab the global market and industry. Technology has made banking smoother and

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seamless for the users. Now, online transactions are increasing day by day in India. People are using various banking applications/softwares which are safe, secure, easily accessible and also reliable. The major events in banking sector of India are:

1. Starting of Debit/Credit card in late 1980-90s.
2. Arrival of Electronic Clearing Services (ECS) in late 1990s.
3. Arrival of Electronic Fund Transfer (EFT) in early 2000s.
4. Arrival of RTGS service in March 2004.
5. Replacement of EFT as National Electronic Fund Transfer (NEFT) in 2005/ 2006.
6. CTS in 2007.
7. NPCI/UPI/Paytm Bank/BHIM Apps in 2017-2019
8. Airtel Payment Bank 2019-20
9. Mobile Banking 2019-20
10. Aadhar Based Banking 2019-20

1. *Technology used in Indian Banks* is changing the face of the Indian Banking system through computerization, and new private sector banks have an edge in this regard. Among the total number of public sector banks, 98.2 percent were fully computerized at the end of March-2019, and all State Bank of India branches were 100 percent computerized.

2. *National Automated Clearing House* (NACH) facilitates the handling of cheques by the computers. The computers are deployed in clearing houses to speed up the process of cheque clearing. The nature of work involved in clearing operations is voluminous, repetitive, and routine in nature. The Automated Clearing House is the network for financial transactions. National Payments Corporation of India (NPCI) has implemented "National Automated Clearing House" for Banks, Financial Institutions, Corporate and Government, a web based solution to facilitate interbank, high volume, electronic transactions which are repetitive and periodic in nature. NACH System can be used for making bulk transactions towards distribution of subsidies, dividends, interest, salary, pension, and also for bulk transactions towards collection of payments pertaining to telephone, electricity, water, loans, investments in mutual funds, insurance premium etc. NACH does its work in various batches.

3. *Electronic Payment Services refer to E-Cheques, which are* e-documents used in place of the paper Cheques for electronic transactions with the help of Internet. In this service, handwritten signature is also converted into Digital signature (on the basis of public key cryptography). The e-Cheque system is planned with message integrity, authentication and no cancellation features. It is very secure so there is no possibility of fraud against the banks and their customers. The e-Cheque is used on interactive web transactions or with email. It does not depend on real-time interactions or third party authorizations.

4. *Electronic Clearance Service* (ECS) is the good way of electronic fund transfer from one account to another bank account. This scheme provides an alternative method of effecting bulk payment transactions like periodic (monthly/ quarterly/ half-yearly/ yearly) payments of interest/ salary/ pension/ commission/ dividend/ refund by Banks/Companies /Corporations /Government Departments. The transactions under this scheme move from a single User source (i.e., Banks/ Companies /Corporations /Government Departments) to a large number of Destination Account Holders (Customers/Investors). This scheme obviates the need for issuing and handling paper instruments and thereby facilitates improved customer service by the Banks and Companies/Corporations/Government Departments effecting bulk payments.

   The Scheme is in operation at 15 centres where Reserve Bank of India manages Clearing Houses, 21 centres where SBI is managing ECS on behalf of RBI and 29 other centres where PNB and other banks are managing ECS on behalf of RBI. The ECS is offered in the Department of Posts in connection with payment of monthly interest under "Monthly Income Scheme" (MIS). The Department of Posts introduced ECS scheme on a pilot basis in Mumbai City on 9th August 2003. Under ECS, the depositors have the facility of getting MIS interest automatically transferred and credited into their SB account on the due dates at the designated Bank of their choice. Currently, the service is available in the Department of Posts at 15 RBI locations and 21 SBI locations. This facility is used for bulk transfer of funds from one account to another account.

5. *National Electronic Fund Transfer* (NEFT) is a nation-wide payment system facilitating one-to-one funds transfer. Under this Scheme, individuals can electronically transfer funds from any branch of a bank to an individual having an account with any other bank branch in the country participating in the Scheme. It is being used at a wide level in India. It is a payment system facilitating fund

transfer from one bank account to another. One can access this service either by using Internet banking or by visiting the bank branch. (Not all bank branches are enabled with this service.) Once transfer is initiated, the money reaches the beneficiary account within hours. There is no limit on the minimum or maximum amount one can transfer, however, individual banks may put restrictions on per transaction. Mostly, NEFT is used for transferring funds below Rs. 2 Lac.

6. *Real Time Gross Settlement* (RTGS) service was introduced in India in March 2004. RTGS is used for transferring high value amounts. The minimum amount that can be currently transferred is Rs 2 lac. This is the best facility for big transactions. RBI has removed charges for RTGS payments. It has asked banks to pass on benefits to customers. Mostly business transactions are being done by this facility. This facility is used at a broad level in the banking system because it works on the "Real-Time" basis. The fund is transferred within two hours through this facility. One can transfer funds using RTGS on any working day between Monday and Saturday either via internet banking or branch of a bank. Timings for RTGS transaction on Monday – Friday are 9 a.m. to 4.30 p.m. and for Saturday it is 9 a.m. to 2 p.m.

7. *Automated Teller Machine* (ATM) is an electronic banking outlet that allows customers to complete basic transactions without the aid of a branch representative or teller. Anyone with a credit card or debit card can access ATMs. The first ATM appeared in London in 1967, and in less than 50 years, ATMs spread around the globe, securing a presence in every major country and even tiny little island nations such as Kiribati and the Federated States of Micronesia.

   ATMs are convenient, allowing consumers to perform quick, self-serve transactions from everyday banking like deposits and withdrawals to more complex transactions like bill payments and transfers. ATM is the most popular device in Indian banking system, which enables the customers to withdraw their money on the basis of 24x7 days in a week. There is no need to go to the bank for money withdrawal or deposit. ATM Card holder can use these services at any ATM in India or abroad (in case of International ATM Card).

8. *Core Banking Solution* (CBS) is networking of bank branches, which allows customers to manage their accounts, and use various banking facilities from any part of the world. In simple terms, there is no need to visit your own branch to do banking transactions. A customer can do it from any location, any time. One can enjoy banking services from any branch of the bank which is on CBS network

regardless of branch in which one has opened the account. For the bank which implements CBS, the customer becomes the bank's customer instead of customer of a particular branch.

Execution of Core banking system across all branches helps to speed up most of the common transactions of bank and customer. In Core banking, all the branches access banking applications from centralized server which is hosted in secured data center. Banking software/application performs basic operations like maintaining transactions, balance of withdrawal and payment, interest calculations on deposits and loans, etc. These banking applications are deployed on centralized server and can be accessed using internet from any location. The percentage of CBS branches had increased from 79.4 percent at the end of March, 2009 to 90 percent by the end of March, 2010.

9. *Internet Banking* is a convenient way to do banking from the comfort of one's home or office. To avoid the queues or delays, it is clear that online financing will pick up, and there will be increasing convergence in terms of product offerings of banking services, such as share market trading, insurance, and loans based on the data warehousing and data mining technologies. Any time anywhere banking will become common and will have to upscale. Such upscaling could include banks launching separate internet banking services.

10. *BANKNET* is an internet based communication network. It provides speed to financial transactions. BANKNET, setup in 1991 by the RBI, is the backbone meant to facilitate transfer of inter-bank and inter-branch messages within India by Public Sector banks, which are members of this network. BANKNET is a payment network established by RBI on the recommendation of Iyer Committee. The system makes use of intercity trunk within India. It also makes use of intercity trunk voice grade data circuits. The user banks can access BANKNET from their premises through lease or dial up lines at the local centres using ports on PADS and UNIX machines with popular data communication software. RBINET is a communication system operating over the BANKNET.

11. *Society for Worldwide Inter-bank Financial Telecommunication* (SWIFT) provides reliable and expeditious telecommunication facilities for exchange of financial messages all over the world. The gateway is in Mumbai and is connected to other cities through internet system. The majority of International inter-bank messages use the SWIFT network facility. It is an internationally-recognized identification code for banks around the world. SWIFT codes are most commonly used for

international wire transfers and are comprised of 8 or 11 alphanumeric characters. The International Organization of Standardization (IOS) was the authoritative body that approved the creation of SWIFT codes.

12. *National Payment Corporation of India (NPCI),* an umbrella organisation for operating retail payments and settlement systems in India, is an initiative of Reserve Bank of India (RBI) and Indian Banks' Association (IBA) under the provisions of the Payment and Settlement Systems Act, 2007 for creating a robust Payment & Settlement Infrastructure in India. Considering the utility nature of the objects of NPCI, it has been incorporated as a "Not for Profit" Company under the provisions of Section 25 of Companies Act 1956 (now Section 8 of Companies Act 2013), with an intention to provide infrastructure to the entire Banking system in India for physical as well as electronic payment and settlement systems.

    The Company is focused on bringing innovations in the retail payment systems through the use of technology for achieving greater efficiency in operations and widening the reach of payment systems. NPCI consolidates and integrates the multiple systems with varying service levels to nationwide uniform and standard business process for all retail transactions. NPCI also helps to facilitate an affordable payment mechanism to benefit the common man across the country, and helps in financial inclusion.

Conclusion

The cut throat competition and increasing expectations of customers have resulted in greater use of information technology in the Indian banks. The arrival of foreign and new private banks with their latest technology based services have also forced the commercial banks in India to switch over to the new technology in their regular business operations. The use of technology in the growing banking sector is one of key drivers. The banks in India are using Information Technology not only to improve their own internal work process but also to improve customer services and facilities. At present, everyone is convinced that technology is going to hold the key in the future of Indian banking system. The achievements of Indian banking today would not have been possible without IT revolution.

The key point is that while adapting to the current environment, the banks need to understand the trigger and accordingly find out the best departure point for the change. Although, the adoption of technology in banks continues at a rapid pace, the

concentration is perceptibly more in the metros and urban areas. The benefit of Information Technology revolution is yet to reach sufficiently to the common man living in rural areas. More programs and software in regional languages could be introduced to attract more customers in the rural areas also. Standards based messaging systems should be increasingly deployed in order to address cross platform transactions. The excess human capital generated by the use of IT should be used for marketing of various new schemes. The most efficient use of IT has facilitated correct and in time management of the large transactions of the banks which come with a large customer base.

Indian Banking has been benefitted by the IT revolution globally. It has enabled sophisticated product development, better market framework, inclusion of valid techniques for control of risks and has helped the financial intermediaries to reach beyond boundaries of the country in the diversified market area. The IT Act-2000 has also provided the much essential legal recognition to the creation, transmission and retention of an electronic or magnetic data which can be assumed as legal or valid evidence in a court, except in those areas, which continue to be governed by the provisions of Negotiable Instruments Act, 1881. By adopting very safe, simple and secure technology, banks have reached the doorsteps of the customers with an objective of "delightful customer satisfaction". Information Technology has succeeded in creating a win-win situation for various related segments in India.

Sources

The Economic Times, 18.05.2020

Indian Financial System, Tata McGraw-Hill Education-2013

Introduction to E-Commerce (Ebook). bookboon.com-Martin-2016

www.rbi.org.in

www.icicibank.com

www.banknetindia

www.sbi.co.in

www.investopedia.com

www.npci.org.in

www.jagranjosh.com

www.businessdictionary.com

Case Study

Rise and Fall of Aerospeed Aviation Services Pvt Ltd*

Background

Aerospeed Aviation Services Private Limited is a Private Company incorporated in 2006. It is classified as Non-govt. company and registered at Registrar of Companies, India. Its authorized share capital is Rs. 100 million, its paid- up capital is Rs. 2 million. It is involved in Legal, Accounting, Book-keeping and Auditing activities, Tax Consultancy, Market Research and Public opinion polling, Business and Management Consultancy. This company was promoted by a team of four ex-employees of two airlines operating in India. The company works purely on technical assignment/project basis. Its Cost model is based on panel/expertise need model without employing fulltime staff. The company operated from rented premises between 2006-2009 in its growth period and later shifted to fully owned premises in Mumbai to optimize its facility cost. The present directors of the company are S Dinkar (age 70) and K Mokashi (age 70).

Indian Economy

The economy of India is characterized as a developing market economy. It is the world's fifth-largest economy by nominal GDP and the third-largest by purchasing power parity (PPP). Since the start of the 21st century, annual average GDP growth has been 6% to 7% and from 2014 to 2018, India was the world's fastest growing major economy, surpassing China.

The long-term growth perspective of the Indian economy remains positive due to its young population and corresponding low dependency ratio, healthy savings and investment rates, and is increasing integration into the global economy. The economy slowed in 2017, due to shocks of "demonetisation" in 2016 and introduction of Goods

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* *This case was written by Dr Satwinder Bedi, Unmesh Alawani, Dr Shama Shah and Rhutula Jadhav of Guru Nanak Institute of Management Studies, Matunga, Mumbai-400019, India during the Case Writing Workshop organized by GNIMS Business School, Mumbai from December 02-04 , 2019.*

and Services Tax in 2017. Nearly 60% of India's GDP is driven by domestic private consumption and continues to remain the world's sixth-largest consumer market.

Aviation Industry in India

As per the 2018 Survey, Civil aviation in India is the world's third-largest civil aviation market. Air India is India's national flag carrier after merging with Indian Airlines in 2011 and plays a major role in connecting India with the rest of the world. IndiGo, Spicejet, Go Air and Vistara, AirAsia India are the major carriers in order of their market share. These airlines connect more than 80 cities across India and also operate on overseas routes after the liberalisation of Indian aviation. Several other foreign airlines connect Indian cities with other major cities across the globe. India has the potential of becoming second-largest aviation market by 2020. It recorded an air traffic of 131 million passengers in 2016, of which 100 million were domestic passengers. The largest airline by international passenger traffic was Jet Airways which transported over 10 million passengers in and out of India in 2016, followed by Air India (8.8 million). At third place was Emirates (5.46 million), which is the largest foreign airline operating in India. The growth of the industry is very closely tied to the growth of the national economy.

Future of Civil Aviation in India

- **UDAN-RCS scheme**

  To increase the number of operational airports, number of operational airports with scheduled flights, number of routes, number of flyers and to reduce the cost of flying, the Government of India launched UDAN-RCS scheme from 2016, which increased the number of operational airports from 49 to 70 till April 2017.

- **FDI**

  To modernize existing airports and to establish a high standard and help ease the pressure on the existing airports, 100% FDI under automatic route has now been allowed in airport projects. This move would also serve to develop the domestic aviation infrastructure. Further, FDI limit for Scheduled Air Transport Service/ Domestic Scheduled Passenger Airline and Regional Air Transport Service has been raised from 49% to 100%, with FDI up to 49% permitted under automatic route and FDI beyond 49% through Government approval. For Non-Resident Indians (NRIs), 100% FDI will continue to be allowed under automatic route. However, foreign airlines would continue to be allowed to invest in

capital of Indian companies operating scheduled and non-scheduled air transport services up to the limit of 49% of their paid up capital and subject to the laid down conditions in the existing policy. Increasing the FDI limit for these aviation services is expected to encourage competition, lowering prices and also accord choice to consumers.

- **MRO**

  The civil aviation sector, which till now was dependent on foreign countries for maintenance, repair and overhaul (MRO) services, is planning to have indigenous facilities. The Government of India is planning to develop a sustainable air network in over 400 tier-2 cities across India.

MRO Related Aviation Services

The key trends in the global MRO business indicate higher value addition, integration of services and increasing specialization. Earlier trends indicated that the industry used to earlier operate as a captive maintenance provider. However, it is now gradually moving towards a total solution provider that includes a variety of maintenance and repair services. In fact, airlines now prefer comprehensive solutions that include scheduled heavy maintenance and engine checks over a fixed number of years, ranging between 2 and 10 years.

Business model of Aviation related services has changed very rapidly in the last 10 years with increasing complexity and associated risk. Consultancy services in this domain focus on hitech aviation advice, helping new startups in the airlines sector formulate policies, aviation engineering assessment and appraisal of aircrafts regarding their condition/status and all related documentation. They also help assess Third party reports, quotations, financial assessment of business models of new/existing startups, infrastructure projects related to MRO operations.

Aerospeed Aviation Services Pvt Ltd

Growth Phase

The company grew in the period from 2006-2011. The growth was dependent on the growth and the business model of their Indian clients, which depended more on leasing to exploit the fast growing aviation sector in India. Most leased aircrafts were obtained from USA and Europe. The company also entered into joint ventures with some airline companies based in South Africa & Dubai.

Decline Phase

The Decline phase started from around 2011. With changes in the Regulatory framework, the DGCA regulations required extensive approvals and documentation. The policy was more restrictive than designed to promote growth of the industry. The policy framework changed further with the change in government in 2014.

Cost Structure

The cost structure of the airlines changed drastically due to DGCA policy intervention. Most charges/expenses became uncontrollable like the Maintenance-Repair-Overhaul Charges, Fuel charges, Airport Charges, Navigation Charges, and Manpower Costs. The net result was that the fixed component increased rapidly than the variable cost.

Due to the adverse environment in which the airline sector had to operate S Dinkar & K Mokashi were wondering whether Aerospeed Aviation Services Pvt Ltd should continue its operations in 2019 and beyond ?

Questions for Discussion in the Class

1. Analyse the core and peripheral issues facing Aerospeed Aviation Services Pvt Ltd.

2. If you were the Head of this organization, what would be your Strategic decision?

   (i) continue and wait for future opportunities, or

   (ii) shutdown ?

TEACHING NOTE

Case: Rise and Fall of Aerospeed Aviation Services Pvt Ltd

1. Synopsis

Aerospeed Aviation Services Pvt. ltd is a service organisation involved in Legal, Accounting, Book-keeping and Auditing activities, Tax Consultancy, Market Research and Public opinion polling, Business and Management Consultancy specifically related to Aviation sector.

It grew rapidly from 2006 (year of inception) till 2011 and declined ever since. The growth phase was characterised by dependence on the business model of their Indian clients which resorted more on leasing to exploit the fast growing aviation sector in India. The Decline phase started around 2011. With changes in the Regulatory framework, DGCA regulations required extensive approvals and documentation. The Policy framework changed further with the change in government in 2014. The business environment is now very uncertain and challenging to operate in.

Now in 2019, the organisation had to make a strategic decision regarding the future course of the organisation.

2. Target Learning Group

Post Graduate Management Students and Working Executives from Industry.

3. Learning and Teaching Objective and Key Issues

Learn Challenges faced by a manager of a declining service firm totally dependent on few clients who are themselves facing issues of increasing regulations and uncontrollable costs.

4. The Teaching Strategy

Divide the Class into groups. Each group is asked to formulate questions related to the core issue of the case. Each Group discussed these questions and formulated and presented their answers/ideas as group work. The ideas are debated in the class and a consensual strategy and approach to the problem is evolved in the class discussion, controlled by the teacher.

5. Questions for discussion

a) Analyse the core and peripheral issues facing Aerospeed Aviation Services Pvt Ltd at present.

b) If you were the Head of this organization, what would be your Strategic decision

(i) continue and wait for future opportunities, or

(ii) shutdown ?

6. Background Reading

Wikipedia Articles on Civil Aviation Sector in India.

Strategy Management book - Fred David

7. Experience of using the Case

The Case will help post graduate students of management and working executives to understand the situation prevailing in a declining organisation in an uncertain environment, where strategic decisions need to be made regarding the future direction of organisations in similar situation.

Book Review

Hindu Trinity (21 Life-enhancing Secrets Revealed Through Stories and Art)

(*Author*: Devdutt Pattanaik. Chennai: Westland Publications Private Limited, Year of Publication: 2019, First Edition, ISBN: 9789388754712).
Pages: xii+715, Price: Rs.999

Upinder Dhar, Santosh Dhar**[1]*

Books are an ideal source of wisdom, so are the religious books. The motive behind such books is to help one not only to improve one's knowledge but also make one a better person. Reading of religious books influences a human being in many ways and transforms him/her into a better person. Certain virtues like compassion, empathy, honesty open-heartedness, and the like are reflected in religious literature. These virtues require a high level of self-knowledge. That is, knowledge of why we hold the beliefs we do, knowledge of why we act in certain ways, and most importantly, knowledge about our interdependence.

The book under review is divided into three sections, and each section has seven chapters. The author has mentioned in the introduction itself that the book was written to help people in India and around the world understand the meaning of artworks in India that have a mythological theme. The first chapter of the first section on Lingeshwara's Secret looks at the meaning of the Shiva-Linga beyond the conventional titillation offered by a phallic symbol. Shiva is visualized seated under the banyan tree. Roots of this tree emerge from branches and anchor themselves in the ground and eventually become so thick that it becomes difficult to differentiate the trunk from the roots. One does not know where the tree starts and where it ends, like the limitless pillar of fire. It also has an unusually long life, making it appear almost indestructible, defying the laws of nature. That makes it a symbol for Shiva. The self-stirred phallus of Lakulesh is a physical expression of an idea known as *sat-chitta-ananda,* which means tranquility (*ananda*) that follows when the mind (*chitta*) discovers the truth of nature and of the human condition (sat) by purging itself of all memories and prejudice.

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The second chapter on Bhairava's Secret focuses on Shiva's violent disdain for territorial behavior amongst humans. Shiva reveals the power of the higher brain over the lower brain, the human brain over the animal brain. That is why he is called *Pashu-pati*, master of animal instincts. He offers the promise of a-bhaya, the world where there is no fear of scarcity or predator, in other words no fear of death. Shiva offers immortality. The third and fourth chapters on Shankara's Secret and Bholenath's Secret, respectively, deal with how the Goddess gets Shiva to engage with the world out of compassion. Determined to get Pashupati to help humans, Shakti transforms Shiva, the insensitive angry god, into Shankara, the God who empathises and is patient. Shiva does not seek to defy or deny the value of cultural rules, rites and rituals. He is not a rebel and his simplicity and purity is evident during the marriage of Shiva and Parvati.

The next two chapters on Ganesha's Secret and Murugan's Secret respectively revolve around Shiva's two sons, Ganesha and Murugan, through whom he connects with the world. Ganesha is said to have two sons, Shubh and Labh, which means 'auspiciousness' and 'profit'. His daughter is called Santoshi, goddess of satisfaction. These are metaphors to indicate that when Ganesha is brought into the house, he removes all obstacles to wealth, peace, auspiciousness, growth and happiness. He does so by enabling the potbellied Ganas to outgrow fear of scarcity. That is why he is their leader and called Ganapati. Murugan is visualized as a muscular god surrounded by symbols of martial power and authority such as a spear, a peacock and a rooster, the warrior son of the Goddess, renowned for killing demons while Ganesha is the scholar son, renowned for his cleverness.

The seventh chapter of this section on Nataraja's Secret presents Shiva as the wise teacher who expresses wisdom through dance. Maya gives us meaning to survive this world until Shiva, the Destroyer, gives us the strength to outgrow fear and hence outgrow dependence on constructed realities. Shiva helps us realize that heroes, villains and victims are creations of fear. When fear is destroyed, there is no hero or villain or victim. Shiva, the Destroyer, thus offers wisdom to outgrow fear, and that is liberation-*the moksha.*

The first chapter of the second section on Gaia's Secret highlights that male anxiety is outdated. The Tantrik tradition of India speaks of the primal one, Adya, who took the form of a bird and laid three unfertilized eggs from which were born Brahma, Vishnu and Shiva. Adya then sought to unite with the three male gods. Brahma refused as he saw Adya as his mother; Adya cursed him that there will be no temples in his harbour. Adya found Vishnu too shifty and shrewd, so she turned to stern Shiva who, advised

by Vishnu, agreed to be her lover provided she gave him her third eye. She did, and he used it to set her aflame and turned her into ash. From the ash came three goddesses, Saraswati, Lakshmi and Gauri who became wives of Brahma, Vishnu and Shiva.

Three sects emerged in the later Puranic Hinduism: two masculine, focused on Shiva and Vishnu, and one feminine, focused on Devi. Shiva is the ascetic who attacks Brahma for coveting and trying to control Devi; he shuns worldly life until Devi transforms into Gauri and makes him a householder and father.

Vishnu is the householder who looks upon Devi as Lakshmi, goddess of auspiciousness and abundance; taking various avatars to enable Brahma and his sons to cope with Kali. But Devi is divinity in her own right, independent as the earth, responding to the gaze of Brahma who seeks to control her, Vishnu who enjoys her and Shiva who withdraws from her. She is their mother, daughter, sister and wife.

The second chapter of second section is on Kali's Secret. The rise of Devi worship in India arose with the transformation of Hinduism over four thousand years from the pre-Buddhist Vedic phase. In this phase rituals were more important than gods (devas). In post-Buddhist Puranic phase of Hinduism devotion to God (bhagavan) gained paramount importance and gave rise to colonial gaze and the native reaction to it. The third chapter of this section is on Gauri's Secret. Gauri is more commonly known as Parvati, wife of Shiva, daughter of Himavan, the god of the Himalayan mountain range, and also known as Parvateshwar, or lord of the mountains. She is also called Uma. Parvati/Uma is the mother of Ganesha and Kartikeya. It is Kali who domesticates the hermit Shiva and in the process gets domesticated herself as Gauri.

The fourth chapter of the second section is on Durga's Secret. The words Durga and Shakti are often used synonymously. But there is a subtle difference. Shakti means power that is natural. Durga evokes 'durg', or the fortress that is artificial. Thus, Shakti embodies energy that is natural, while Durga embodies power that is cultural. In culture, power is created through laws. These laws shift power from the strong to provide security to the weak. This makes Durga the defender of the weak, to be invoked at wartime by warriors and kings. The fifth chapter of the second section is on Lakshmi's Secret. Lakshmi has two forms: Bhu-devi and Sri-devi. Bhu-devi is the earth-goddess and embodies tangible wealth like food. Sri-devi is associated with intangible wealth or glamour. One can say Bhu-devi is natural wealth and Sri-devi is cultural wealth.

The sixth chapter of the second section is on Saraswati's Secret. Saraswati, like Lakshmi, is essentially an independent goddess. Her origins can be traced to the four thousand-

year old *Rig Samhita.* There she shares her name with the river Saraswati and her qualities with vak, goddess of speech, language and meaning. She is sometimes also linked to Gayatri, the goddess of Vedic hymns and melodies. The seventh chapter of the second section is on Vitthail's Secret. In the 13th century, a young sage from Maharashtra called Dyaneshwar did something revolutionary for the times; he translated the Sanskrit *Bhagavad Gita* into the local tongue of Maharashtri Prakrit (old Marathi). But with one difference: while in the Sanskrit Bhagavat Gita, Krishna is the valorous masculine warrior-charioteer, in Dyaneshwar's *Dyaneshwari,* Krishna is Vitthia, or 'mother Vitthal'. Dyanashwar saw him in feminine terms. For him, Krishna was the affectionate cow who comforts the lost and frightened calf, Arjuna, with his milk of wisdom.

The first chapter of the third section focuses on how gender is used to explain fundamental metaphysical concepts integral to Hinduism. This chapter is on Mohini's Secret. Mohini is female in form but male in essence, unlike Apsaras who are totally female. Both enchant, but their intentions are different. An Apsara enchants to distract humanity from spiritual reality and entrap all in material reality. Mohini enchants to draw humanity's attention to spiritual reality within materials reality. Mohini is thus, spiritual reality wrapped in material reality. The second chapter of this section on Matsya's Secret discusses the difference between man and animal. Of all living creatures, only humans can imagine a world where might is not right, the tiger and the goat can live in harmony and the hawk and serpent can be friends. From this imagination comes the notion of heaven – the paradise of perfection. Desire to create this paradise of perfection provokes man to create culture.

The third chapter of this section on Kurma's Secret describes the conflict between two forces, a recurring theme in Hindu mythology. One conflict is between material and spiritual reality, between the hermit and the nymph, between Shiva and Mohini. The other is within material reality, between the Devas and the Asuras. The fourth chapter of this section on Trivikrama's Secret highlights that the ignorance breeds insecurity and arrogance. At any moment of life, things either go our way or the other way. When things go our way, we are happy. It is the state of Vijaya, material victory, often at the expense of others. In the latter situation, when things do not go our way, we are unhappy. But unhappiness propels us to introspect on the nature of material things, and question the reason for our emotions. This introspection and questioning reveals to us the mysteries of the world and make us realize the true nature of the world.

The fifth chapter of this section on Ram's Secret advocates how after killing Ravana, Ram returns to Ayodhya with his wife Sita, and is crowned as king. This marks the

dawn of Ram-rajya, the golden age, when dharma is perfectly upheld. The sixth chapter of this section on Krishna's Secret emphasizes that one should know the thought behind the action. The Maha-raas, where Krishna plays the flute surrounded by a circle of dancing milkmaids, is a symbolic representation of absolute spontaneity. No formal relationship dictates Krishna's affection for the milkmaids. Unfettered by social restriction, it is created by emotions that are simple, innocent, with no underlying motive. The seventh chapter of this section on Kalki's Secret describes Kalki as the tenth and final avatar of Vishnu, visualised as a warrior who rides a white horse and brandishes a flaming sword. The story of Kalki starts appearing in Hindu scriptures at the time when India was overrun by a whole host of foreign marauders from Central Asia. Kalki is the one who will complete the Kalpa, the world-cycle and herald Pralaya.

The book is well written in simple and lucid language which retains the attention of the reader till last page of the book and arouses the curiosity to know more. Although, it is a useful reading for all irrespective of the age, profession and education but more insightful for those who have interest in the subject. Management practitioners and academia can also draw lessons from it. The book would have looked more authentic, if the geographical locations of the religious places had been checked. For instance, the geographical location of Amarnath has been given in Jammu, which is not correct. Amarnath is in Kashmir. The author could have ensured the geographical locations before mentioning because it puts the authenticity of other locations also under question. Further there are a few spelling and grammatical mistakes on some pages, such as page 557 and 641 which could have been avoided. It is suggested to incorporate the corrections in the next reprint.

Good books are known for the everlasting impression which they leave in the reader's life. Overall this book is one of the best investments one can make with time and money, and, therefore, is a welcome addition to the treasure of knowledge.

Book Review

Handbook of Sustainability in Management Education: In Search of a Multidisciplinary, Innovative and Integrated Approach

(*Authors:* Arevalo, Jorge A. and Mitchell, Shelley F. (Eds.)
Edward Elgar Publishing, Cheltenham, United Kingdom, 2017,
pages: xxvi + 675. ISBN: 978-1-78536-123-4)

Upinder Dhar, Santosh Dhar**[1]*

The book is an edited volume divided into five parts covering Theorizing the Field of Sustainability in Management Education Development in Practice, Exploring Transformational Interventions in SiME, Understanding Change Agents' and Reform Accelerators' Roles, Sustaining Long Term Programs through Innovation, and Conclusion. The first part has six chapters covering business cases, delinquent organization, critical reflection and transformative learning, substantive rationality, a journey from awareness to behavior change, and the importance of philosophical and anthropological knowledge.

In the *first chapter*, the authors have considered the business cases for sustainability - integrated management education beyond the design and implementation of individual courses or programs. They have developed a framework outlining a variety of viable business cases for implementing sustainability-integrated management education into curriculum design. In the *second chapter*, the author has observed that business schools and society exist almost in parallel universes. This chapter answers two interrelated questions: how do we explain why management academics simply reify society as an 'it' and research about 'it' instead of engaging with society? how can academia practice research and teaching that pay attention to the creation of the maximum social value for society within the limits of academic freedom?

In the *third chapter*, the authors have presented the results of a qualitative study conducted by them. The study has revealed that there is a need to discuss alternative

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forms of dealing with consolidated contents in order to meet the individual's predisposition. This would help to internalize a new paradigm in business management that encompasses sustainability in management education. In *fourth chapter*, the authors have presented an alternative paradigm based on critical pedagogy and substantive rationality. They have observed that sustainability should be integrated not only into the rhetoric but also into the practice of management research.

The *fifth chapter* analyzes integration of sustainability education at the university level. The authors have developed a framework that extends on innovation diffusion approaches to demonstrate how sustainability can be adopted as a university value. In the *sixth chapter*, the author has used philosophical anthropology to develop and provide the outline for a new sustainability in management education course. Researchers in the future can elaborate on these transformative approaches within specific business school contexts to develop and refine the approaches presented and to further test and extend the ideas suggested in different socio-economic and cultural contexts.

Across the *seven chapters* in Part II, there are common conceptual themes, pedagogical approaches and faculty roles that may provide guidance to other faculty who hope to integrate sustainability into their courses and curriculum. In *chapter seven*, the author has observed that there are needs for innovative businesses to strengthen the economy and improve communities and thereby improve the life of people who live in them, while preserving the environment. The authors of *eighth chapter* have observed that higher education professionals have spearheaded changes and innovations in curricula and assessment with the goal of inspiring the students to be responsible and accountable for the planet. To keep options open for future generations, the present generation must begin now together nationally and internationally.

The *ninth chapter* has raised the question of whether it is possible to develop leaders motivated and ready to act in a sustainable way and, if so, what such a course would look like. A series of elements were identified as key for a sustainability mindset. The construct of a 'sustainability mindset' is defined as a way of thinking and being that results from a broad understanding of the ecosystem's manifestations, and from an introspective focus on one's personal values and the higher self, which finds its expression in taking actions for the greater good of both society and planet. The authors of *tenth chapter* have observed that education for a sustainable society should be centered on the students and in the development of their autonomy, alongwith the production of knowledge and cultural environments for collective creativity.

In *eleventh chapter*, the authors have proposed the application of the concept of Expansive Learning as a novel approach to teach the subject of sustainability, which is full of contradictions to business-oriented students at a university. In *twelfth chapter*, the authors have described the results of a comprehensive review and revision to MBA curriculum, which were guided by the faculty's strong commitment to the college of business's mission to prepare competent and responsible managers who are also principled and moral leaders. The curriculum revisions discussed in this chapter were intended to provide a more explicit link between mission and curriculum.

The thirteenth chapter presents a narrative as to how the authors integrated the concept of gender and sustainability in management education. It offers an application that illustrates how a university in the United Kingdom is integrating social sustainability in management and business education, including lessons learned. The framework presented here recognizes that students may wrestle with the complexity that surrounds the concept of gender, and provides a means of bridging the concept of gender, and provides a means of bridging the knowledge/practice gap in management studies.

The chapters in *Part III* are united by a theme – what the role is of external organizations as change agents in business schools in their passage to embrace sustainable management education. The *fourteenth chapter* provides a transdisciplinary social-economic-ecological perspective to addressing challenges and opportunities of sustainable development. Panarchy is introduced as a holistic framework that integrates the cross-scales and domains of social, economic and ecological systems. The *fifteenth chapter* reports on efforts currently underway at the School of Business and Governance, Murdoch University to create new learning contexts where disciplinary knowledge can converge, values are included, and reflexive learning is embraced, allowing students to adopt a meaning orientation and a deep approach to learning.

The *sixteenth chapter* reviews studies of sustainability reporting by universities and identifies factors that are associated with a decision to report on sustainability and the quality of those reports. The *seventeenth chapter* is aimed to help readers identify what the role of external organizations is in integrating sustainability in management and general education. A better understanding of such roles will help in conceptualizing what academic societies can do to serve as more effective change accelerators and further identify distinctive aspects of higher education institutions that foster and impede change. The *eighteenth chapter* answers whether and how

administrators and faculty can work with students and partner organizations to create experiential learning opportunities that help to accelerate social and environmental change.

The *six* chapters in Part IV are diverse. Examples of what readers will find in these chapters include testimonies and narratives as to the difficulties of designing and delivering new programs and how to maintain programs over time. The authors of *nineteenth chapter* maintain that in community-based service-learning projects, universities, businesses, and communities engage in a process of knowledge co-construction in which temporality is an influential factor in the students' learning processes. The *twentieth chapter* emphasizes that it is important that students' network with each other and their teams to emulate, assimilate, and build their views on sustainability.

The *twenty-first chapter* reflects on how the existing and conventional management curriculum in prominent management institutions in India has endeavored to address and synergize the concerns for sustainability in their core curriculum that goes beyond ad hoc and arbitrary inclusion. It also throws light on the challenges involved in delivering courses that address concerns about sustainability. The *twenty-second chapter* demonstrates how to integrate sustainability into business school programs and the mechanics needed to sustain its success and evolution.

Looking into assessment and benchmarking, the authors of *twenty-third* chapter provide a taxonomy for identifying which programs within the USA have a more integrated approach. Identifying and classifying the top 100 MBA programs, we get to see the US News and World Report programs in a new way. The authors of *twenty-fourth chapter* have gone through a detailed chronology of events that have shaped the development of a new sustainability major. The authors provide an insight regarding what it takes to get an undergraduate program started.

Part V of the book has covered conclusion in *twenty-fifth chapter*. To this end, the editors have examined SiME inquiries in five ways. They have first considered the applicability of each conceptual approach to the four principal areas. Second, the editors provide a discussion that ranges the implications, applications and utilities of these contributing conversations. This section also discusses the prospects for future research. Third, to further contextualize SiME, additional commonalities, transversalities, and linkages among all the chapters have been identified. Fourth, some brief insights as to the general statistics the Handbook offers have been shared. Fifth, the concluding section wraps up the chapter.

This exhaustive *Handbook* strives to enhance knowledge and application within sustainability in management education across various academic programs, geographic regions and personal/professional contexts. Cross-disciplinary and boundary-spanning, the book focuses on specific themes and is therefore split into four distinct sections. The *Handbook* is a composite of wide range of topics within sustainability. It endeavours to provide a future perspective for coming decades. All the chapters are well presented, barring a few portions where language is ambiguous. Management scholars, researchers, educators and practioners as well as current, emerging and future leaders in various academic streams will find this *Handbook* quite useful. The *Handbook* provides guidelines for designing the curricula for new programs or courses on sustainability. It can serve as a key reference for more advanced studies in this rapidly developing field.

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