ISSN: 2249-4804

Business Spectrum

** Volume – VIII No. 1 January - June, 2018 ***

An Open Access Fully Referred Peer Reviewed Journal

The Bi-annual Journal of

Indian Accounting Association

South Bengal (Midnapore) Branch, West Bengal

Business Spectrum (ISSN: 2249-4804) Vol. VIII No. 1 January-June 2018
An Open Access Fully Referred Peer Reviewed Bi-annual Journal of IAA South Bengal Branch
(Available online at: www.iaasouthbengalbranch.org)

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EDITORIAL

It gives me immense pleasure to present before you Vol. VIII, No. 1 of Business Spectrum, the peer reviewed fully referred e-Journal of IAA South Bengal (Midnapore) Branch. Although we are in late, we are trying to regularize the Journal without compromising its quality. In this issue we have accommodated five qualitative articles on different areas of business.

Agnishwar Basu in his article entitled 'Demonetisation and the Retail Market Perceptions: A Survey of the Vegetable Vendors in Siliguri' has mentioned that the objective of demonetization is to capture the unaccounted money and make an end to the parallel economy of 'black money'. A consensus view is achieved on the fact that the demonetisation indeed affected the consumer behavioural patterns in India, at least for a while.

Amalesh Patra in his article titled 'Digitalization and Its Impact on Indian Economy' has argued that the Indian Government to remodel India into a knowledgeable economy and digitally empowered society with good governance for citizens should bring synchronization and co-ordination in public accountability, digitally connecting and delivering the government programs and services by deploying information technology across government departments. The author also opine that in the next 5 years, India will emerge to be a leader in application of IT in the sectors like health, defense, education, manufacturing, aviation, cement, agriculture and banking.

Madhurima Basu and Kumkum Mukherjee in their article entitled 'E-Catering Services An Accolade For Digital India: A Study on The IRCTC E-Catering Services (East Zone)' have mentioned that Indian Railways Catering & Tourism Corporation (IRCTC) launched the pilot project on E-Catering as a part of the E-Services in the year 2015, enabling rail users to order meals as per their choice which will be delivered at the specified stations from popular private caterers. The finding of the study seems to suggest that there has been a phenomenal increase in the number of booked meals over the specified time frame generating better revenues and also rail users willingly embrace digitalization of E-Services.

Sujit Mondal, Dr. Tarak Nath Sahu and Krishna Dayal Pandey in their article titled 'Corporate Social Responsibility and Corporate Performance: Some Insights from Indian Public and Private Companies' have mentioned that the CSR initiatives should not be ethically driven by profit motive but a bunch of empirical studies establish a good relationship between CSR expenditure and performance of firms in perspective of different countries including India. The authors have attempted to establish the way in which CSR is associated with the performance of Indian firms.

Pooja Mehta in her article entitled 'Diagnosing Intellectual Capital: A Case Study of Textile Company and its Implications on Managerial Decision Making' has focused on the valuation of human capital and opine that the valuation can become more meaningful by giving equal weight age to the turnover rate of the employees, training cost and the annual increment being given to the employees. The study also has revealed that the inclusion of human capital valuation enhances the quality of the information content of financial reports.

Before I conclude I profusely thank to the paper writers, reviewers, desk editor and executive editor for their hearty co-operation in bringing out this volume of Business Spectrum.

Professor Samir Ghosh

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Demonetisation and the Retail Market Perceptions: A Survey of the Vegetable Vendors in Siliguri

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Abstract

Demonetisation is probably the biggest financial reforms in India since the early 90's. The sudden announcement of demonetisation on 8th November 2016, withdrawing the legal tender of 500 and 1000 rupee notes was primarily aimed with an objective to capture the unaccounted money and make an end to the parallel economy of 'black money'. Though the announcement of demonetisation was sudden, its indication could be traced in various schemes introduced by the Central Government to pull back the black money. While many discussions and works were undertaken regarding its effect on the economy, a consensus can be achieved on the fact that the demonetisation in deed affected the consumer behavioural patterns in India, at least for a while.

This paper shows the comparative results of two surveys conducted by the researcher, one within 10 days of demonetisation and the other in November 2017 to check the uniformity of perceptions of retail vegetable vendors of Siliguri regarding demonetisation and its effects. A definite change of perception was identified which indicates a difference between the expected and actual results of demonetisation.

Introduction:

Demonetisation remained the hottest financial topic of debate for the financial year 2016-17. On 8th November, 2016, the Prime Minister of India announced withdrawal of the legal tender of all existing 500 and 1000 rupee notes with immediate effect. It was also announced that citizens could avail the option of depositing the old 500 and 1000 rupee notes to banks and can redeem the value in newly issued notes within 31st December 2016. Heavy panic of demonetisation was instantly observed in the long ques in front of banks for depositing the old notes. Some temporary threshold limits of deposit and withdrawal were also imposed by the Reserve Bank of India in order to cope with the huge demands. Demonetisation is, however not a new phenomenon in India. Previously in 1946 and 1978, similar reforms were undertaken by the Central Government. However, this time the main objective of demonetisation was said to be different and that is why it took away the limelight in international financial markets. The primary objective of the government was to pull back the unaccounted money into the banking system and make an end to the black or shadow

economy. If looked upon carefully, demonetisation was not a sudden decision and its indication can be traced back in the other tax amendments made during the last couple of years including the Income Declaration Schemes.

It has always been an argument whether it is ethical to harass the honest ones who form the larger section of the population, in order to catch a few. The basic fundamental of jurisprudence reinstates this fact saying, "let a hundred guilty be acquitted, an innocent should not be punished". Demonetisation affected every level of the society in one way or the other. Initially the decision was welcomed by many considering its claimed objectives. The popularity of the prime minister added by substantial marketing of the government policies led to high perceived value of demonetisation at the time when it was announced. Citizens suffered a lot waiting for hours in front of banks, but supported demonetisation estimating the consequences. The perceived value of demonetisation was increased in the mind of the poor, expecting a betterment in their life-style with the money 'illegally stored by the rich'.

Literature Review:

As said earlier, demonetisation had been the biggest financial issue in 2016-17.Mallikarjuna (2017) referred to a report of Nihilent Analytics where 66% of the respondents showed support to the decision of demonetisation and believed that demonetisation will help to curb black money and reduce terrorism funding.

Joshi, Desai and Belim (2017) worked on the effect of demonetisation on small retailers. They concluded that small Retail businesses were negatively affected by demonetisation. Liquidity, material buying and loss of business were identified as the biggest problems of demonetisation.

Abidi and Joshi (2017) coined demonetisation as a "black swan event" and contended that demonetisation led to unbelievable suffering to the most helplesspart of the society includingthe labours in the unorganized sector, small farmers and small & medium industries which employ millions of people.

Objective:

The primary objective of this paper is to

1. Understand the immediate perceived value of demonetisation to the small retailers.
2. Understand the perceived value of demonetisation to the small retailers after one year of the reform.
3. Evaluate the changes in the above, if any.

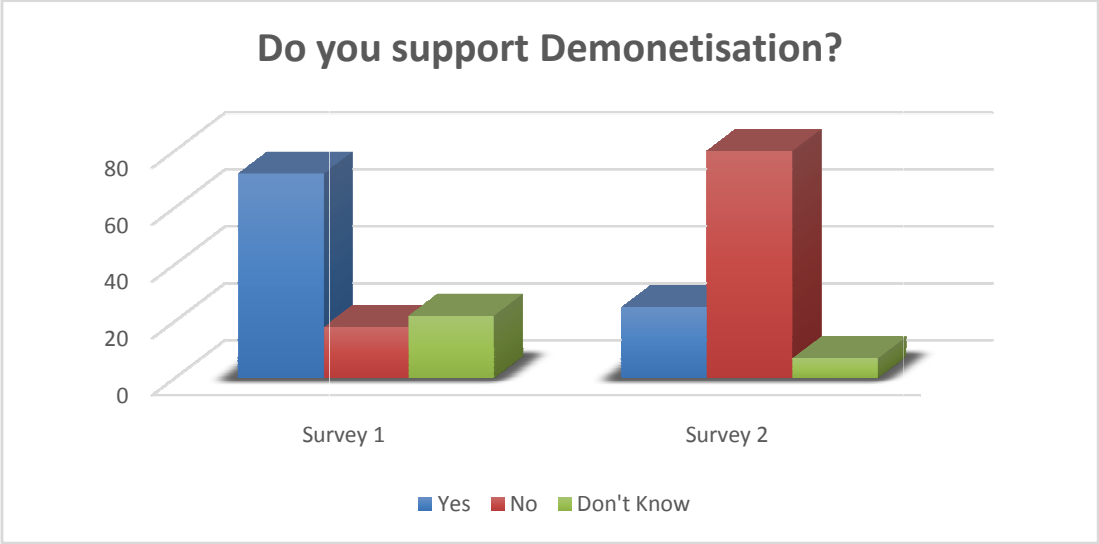
Research Methodology:

The study was undertaken through two different surveys, conducted at around a gap of one year. The first survey was conducted between 14th to 19th November 2016 while the second one was conducted between 10th to 20th November 2017. In the first phase, 120 vegetable retailers from four retail markets in Siliguri (Subhashpally Market, Bidhan Market, Town Station Market and Shivmandir Market) were surveyed as per the researcher's convenience. However, in the second phase, only 112 of them could be identified and questioned. The remaining eight samples were rejected for the sake of expediency. The retailers found it difficult to respond in a questionnaire and therefore they were asked open-ended questions and on the basis of their answers, the surveyor filled them up.

Survey Results:

The two studies taken up by the researcher revealed the followings answers.

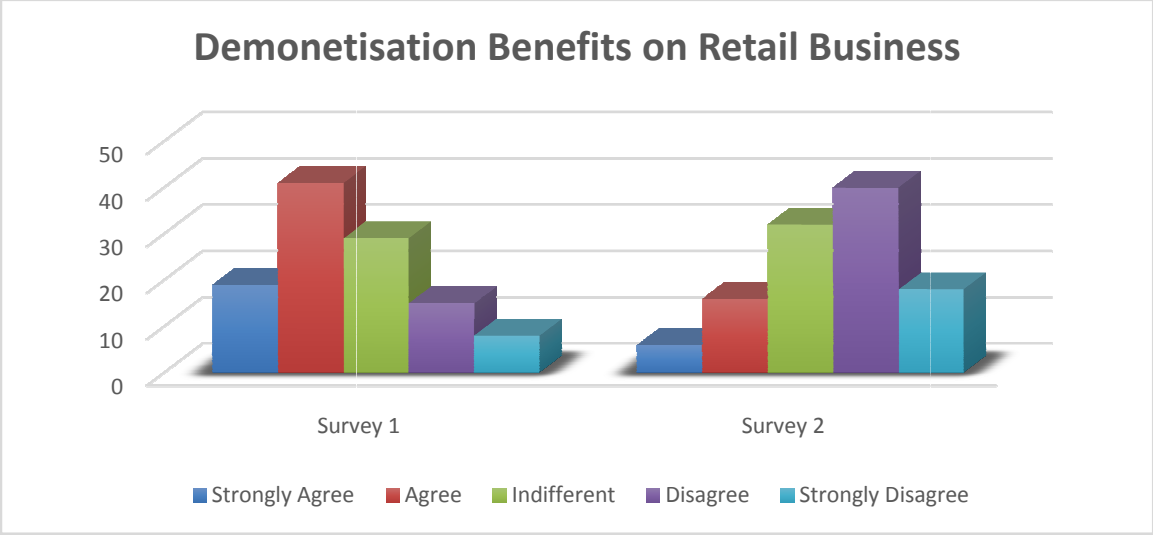
1. ***Do you support demonetisation?***
   This question was asked to the respondents in both the surveys.



A clear shift of the perceptions can be observed from the respondents in this question. In the first survey, 64% of the respondents supported the decision of demonetisation whereas 16% were against it and the rest 20% remained undecided. This shows that demonetisation received an immediate welcome from the small vegetable retailers in Siliguri. However, the second study reveals a completely different state of the perceptions. Here, only 22% showed their support for demonetisation and 71% went against it. This complete shift of the scenario indicates that the expectations of the vegetable retailers during the announcement of demonetisation could not be lived up to. Even if it is assumed that those who remained undecided in the first survey, provided

negative responses in the second, a heavy shift of from "YES" to "NO" can still be easily recognized.

2. ***Will demonetisation benefit your business in the coming days? (Survey 1)***
   Has demonetisation benefitted your business in last one year? (Survey 2)



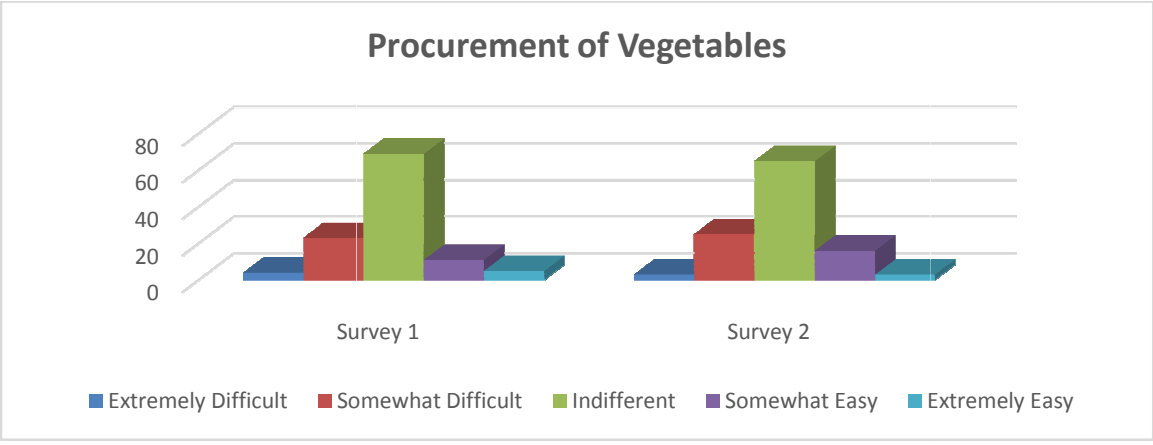
In the first survey, the researchers found the vegetable retailers to be hopeful about the positive impact of demonetisation on their business. Nearly 54% of the respondents were of the expectation that demonetisation will benefit their business in the coming days. However, around 20% were afraid of the outcomes, probably considering the immediate loss they suffered.

Just like the first question, a shift in the paradigm was observed in the second study. Around 52% of the respondents said that demonetisation in fact had a negative impact on their business and another 29% believed that demonetisation failed to make any good for their business.

3. ***Procurement of Vegetables:***

i. How difficult it is to procure the vegetables after demonetisation? (Survey 1)

ii. How difficult it had been to procure the vegetables after demonetisation? (Survey 2)

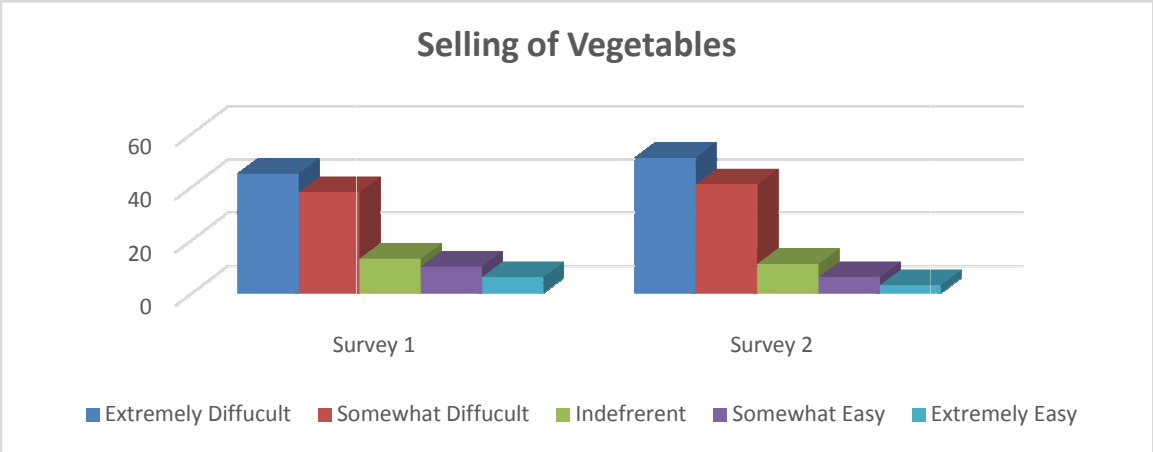


The next question aimed to evaluate the difficulties faced by the vendors to procure their trading items, i.e. – vegetables. Unlike the first two questions, here both the surveys provide identical results. In the both the survey, majority of the respondents believed that demonetisation did not have any impact, positive or negative, on the system of procuring the materials. In the first survey, 61% respondents did not feel any impact of demonetisation on procurement process of trading items and this slightly decreased to 58% in the second survey. Further open-ended questions made by the researcher to analyse such responses revealed that even though the big currency notes were banned, the old notes were being accepted at the auctions even after demonetisation in order to reduce the difficulties of the market. In an informal interview with the wholesalers, the researcher identified that the wholesalers used these notes mostly to pay the transporters who in turn used them in Petrol Pumps which were accepting the old notes.

4. Sell of Vegetables

i. Are you facing problems in selling the vegetables since demonetisation? (Survey 1)

ii. Did you face problems in selling the vegetables after demonetisation?(Survey 2)

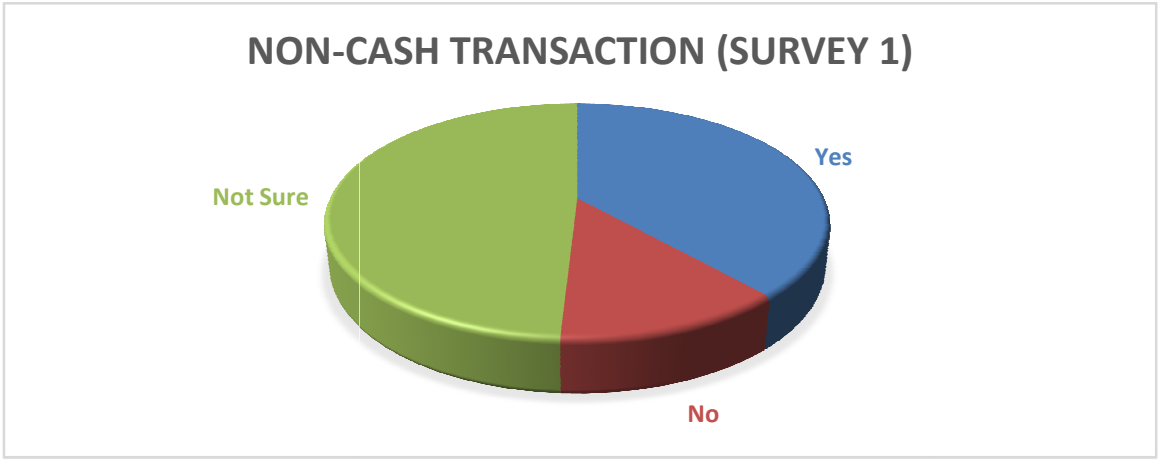


Though procurement of vegetables was not a problem, the other part of the economic cycle, i.e. – the selling of such vegetables was indeed a difficulty. Both the surveys project identical results indicating an extremely difficult selling environment. Overall, 74% of the respondents found it difficult to sell the vegetables after demonetisation in the first survey and this increased to 82% when the researcher went to survey after one year.

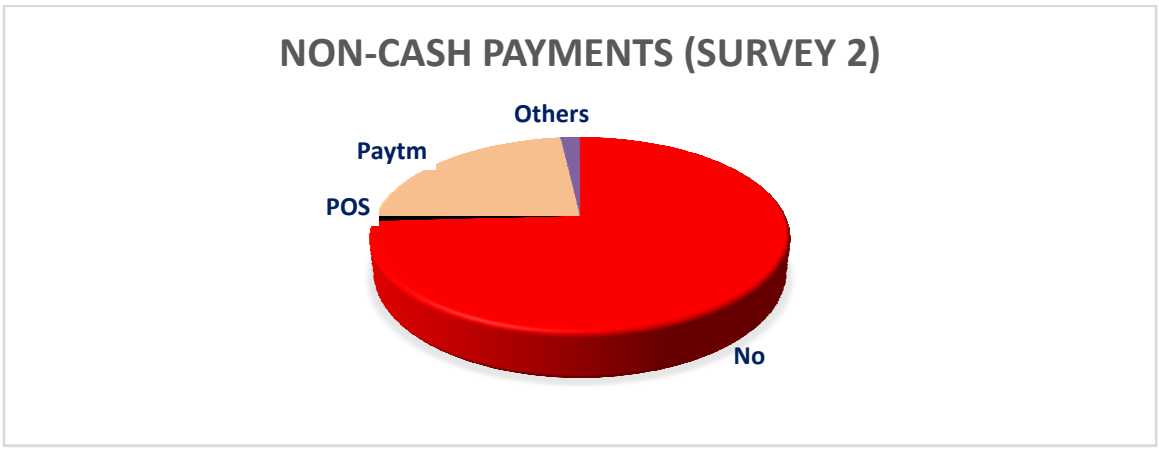
5. Cashless Transactions

i. Do you plan to implement non-cash means of payments? (Survey 1)

ii. Do you accept non-cash payments? (Survey 2)



When asked about implementing non-cash means of payment, only 12.5% gave a negative response while 49% could not be able to give a confident reply. Through open-ended questions, it was identified that the major reasons behind such dilemma included the operational aspects of POS and Smart-phone applications, the additional cost of purchasing the infrastructure etc.



Again, the second survey results brought a bit of surprise as 74% of the total respondents did not opt for any non-cash means of transactions. In other words, they still accept physical cash as the only mode of payment. The primary reasons behind this were definitely those pointed out in the first survey. In addition, remonetisation of the economy eased the business as adequate cash was released in the market afterwards. 26 respondents however stated that they accept payment through PAYTM and only 1 of them bought POS machine. This is because PAYTM comes for free as an application and is more easy to operate since the customer is required to complete the payment process. The retailer has nothing to do but to receive the confirmation message of the money received at his end. On the other hand, a POS machine is required to be operated by the seller himself and therefore did not attract the vegetable retailers.

Analysis:

The results of the two surveys, if studied together, provides an easy understanding of the changes in perception about demonetisation. It is quite surprising given the fact that the currency notes which were invalidated, are not the most popular ones in the vegetable retail market in West Bengal. In Bengal, people being mostly non-vegetarian, transact in the large currency notes mostly for buying non-veg items (which are comparatively expensive) from the market. Nevertheless, the results reveal that the effects of the shock was no less observed in the vegetable market and a clear shift in the perceptions indicate an obvious difference between the expectations and reality. It was observed that the vendors did not face much trouble in procuring the vegetables. However, immense problems were faced in selling the items in the retail market. Yet, retailers expected the situation to change very fast and sales to rise but unfortunately, that did not actually happen. This affected the overall business and led to a clear change in the perception regarding demonetisation.

The first survey, taken up within 10 days from the date of demonetisation, basically reflects the opinions based on expectations of the retailers. On the other hand, the second survey which was undertaken on the first anniversary of demonetisation, consists opinion based on the experience of one year. Reconciling the two, it can be easily observed that the difference between initially expected results and the actually experienced results of demonetisation played a crucial role.

Demonetisation also aimed to lower paper-based transactions. However, this survey does not come out with any hope for the policy-makers in this aspect as well. After the demonetisation, most of the sample vendors were in an unsettled mind and considering non-cash mediums of transactions. Further, some of them started accepting payments through mobile phones. This indicates that there definitely was initial consideration of non-cash transactions in the retail vegetable markets. However, as time progressed, market was remonetised with new 2000 rupee and 500 hundred rupee notes and the fear of spending physical cash available to the buyers was faded away. This reduced hoarding of physical currency and the temporary cash crunch was resolved. Consequently, as the buyers started paying in cash, the requirement of implementing non-cash medium of payment was no more observed. This was revealed by the second survey where cash was found to be the sole medium of transaction for a significant portion of the vendors.

Limitations and Future Scope:

This study aimed to examine the perception of demonetisation to the retail market operators and highlights a paradigm shift in a span of one year. It should be kept in mind that even the RBI was worried of bad results in the market and anticipated that the market may not be stable before two to

three quarters. Since these quarters fell within the time gap of this two studies, there is always a scope of another shift of perception once the market obtains stability.

Another limitation in this respect is the political interferences. Demonetisation, which was more of an economic decision, became a political agenda. The ruling political party in West Bengal and that in Delhi had different outlooks and stands on this decision. This might affect the perceptions since more or less all the retail markets have trade unions influenced by a political party that was clearly against the decision of demonetisation. Over and above, no statistical method has been used to justify the analysis.

Since the market has become much stable now, similar surveys may be further undertaken to check whether the latest perceptions hold true or there comes another change with the use of advanced statistical tools.

Conclusions:

Life is always a cost-benefit analysis. The decision of demonetisation, backed by well-planned and explained reasoning through an effective line of promotion, faced very little protest and disapproval from the citizens. The biggest projected objective of demonetisation was to bring back the black money into the economy. This was highly appreciated by the common man without having proper knowledge of the international laws relating to exchange of financial information. People, in spite of the extreme suffering, welcomed the decision with the hope of a better future. However, wherever an economic reform receives a mass welcome due to expectation of something very extraordinary, there is always a risk of not living up to it. Demonetisation was not an exception to this rule. As stated earlier, demonetisation was not a new phenomenon and a well-practiced economic reform. But the strategy taken by the Indian Government was more backed by marketing than by infrastructure. As a result, actual results could not match with the expectations. Recent information of the Reserve Bank of India indicates that nearly 99% of the total invalidated currency notes were received back. This also indicates that the decision could not match the expectations and predictions of the policy makers. It can be concluded that demonetisation might have its benefits, but the implementations were not smooth enough because of the infrastructural difficulties which led to hoarding of cash. The changes in perceptions of the retailers who interact with the ultimate consumers leads to the observation that demonetisation was a costly decision to the common man.

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Digitalization and Its Impact on Indian Economy

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Abstract

Digital India is the outcome of many innovations and technological advancements. Digital India aims at providing e-solutions through e-Governance to everything. It is a flagship program of Government of India which aims to provide connection between all government run institutes and people. Its main motive is to ensure that all the work is done electronically and we go completely paperless in the coming years. It is a dream project of the Indian Government to remodel India into a knowledgeable economy and digitally empowered society, with good governance for citizens by bringing synchronization and co-ordination in public accountability, digitally connecting and delivering the government programs and services to mobilize the capability of information technology across government departments. The process of digitization is marked by cost effectiveness to cut the cost that incurred in various knowledge practices related to the production, organization and communication of information that makes long-term economic growth. The process of digitization facilitates to preserve, access, and share an original document to the people worldwide that may only be available earlier to those who visit its physical location A number of measures are taking in the field all over the world and in India, to conserve and preserve the knowledge of the past and present for the upcoming generations. Today, every nation wants to be fully digitalized and this programme strives to provide equal benefit to the user and service provider. Hence, an attempt has been made in this paper to understand "Digitalization and Its impact on Indian Economy" with the help of secondary data.

***Key words**: Digitalization, e-solutions, e-governance, Empowered, Communication, Knowledge, Economic growth.*

1. Introduction

Digital India aims at providing e-solutions through e-Governance to everything you can think of. It is a flagship program of Government of India which aims to provide connection between all government run institutes and people. Its main motive is to ensure that all the work is done electronically and we go completely paperless in the coming years. The GOI has set a deadline of 2019 for completion of this mammoth task. Digital India was formally launched by the Honourable Prime Minister of India Mr. Narendra Damodardas Modi on 1st of July, 2015. All the stalwarts including the likes of Mr. Mukesh Ambani, Mr. Ratan Tata, Mr. Azim Premji, Mr. KM Birla committed a total of 4.5 lakh crore towards digitalising India. Huge job opportunities are to be

created in the IT sector with Tata group already announcing 60,000 jobs. Also, corruption, which has been one of India's major problems, is set to take a back seat with high transparency due to this program.

With Digital India, have the facility of Digital Locker, where we can save all your documents and it can be accessed through any place via internet. So, in short, it avoids difficult task and saves our precious time. It can be solved through e-signature. As the name suggests, we can digitally sign your document through Aadhaar e-KYC service. Now these solutions are just about the problems discussed above. There are many more things such as broadband highways which will include laying down of optical fibre network in all the 2.5 lakh gram panchayats of this country and enabling them to connect to each and every part of the world with high speed internet, mobile phones to everybody which aims at connecting all the 44,000 remaining villages to mobile connection by 2018, public internet access program to provide common service centre in 1.5 lakh villages, e-Governance which aims at reforming government through technology, e-Kranti which provides with electronic delivery of services, information for all through data available on social media and site like mygov.in, electronics for manufacturing such as mobiles and set top boxes, IT training for 1 crore people from villages and towns and, at last, early harvest program which aims at biometric attendance system at all central government offices.

According to a global study by Mckinsey and Facebook- 'Offline and Falling Behind: Barriers to Internet Adoption', almost 1 billion people in India are without an internet connection which comprises of 25% of the similar world population. Also, 26% of Indian population or almost 30 crore people are illiterate, that too when the condition to be counted as a literate is so lenient. India has some of the cheapest mobile internet plans; but this fact goes for a toss when it comes to country's average income of just INR 7378/month. The troubles are further manifested when we take into account the poor condition of telecom network infrastructure in India. But I am hopeful, and so is everybody I suppose, because, "Hope is a good thing, maybe the best of things and no good thing ever dies" (https://ecoworldnmims.wordpress.com/2015)

2. Review of the literature

A number of research papers and articles provide a detailed insight about the role of digital India and the implications of this project in India.*Review of the existing literature are as follows:-*

Name & Year	Articles	Findings
Jain, P.M (2006)	E-payments and e-banking opined that e- payments will be able to	Taking fullest advantage of technology, quick payments and remittances will

	check black—An Analysis of Growth Pattern of Cashless Transaction System.	ensure optimal use of available funds for banks, financial institutions, business houses and common citizen of India. He also pointed out the need for e-payments and modes of e-payments and communication networks.
Srinivas, N. (2006)	An analysis of the defaults in credit card payments‖, has tried to analyse the socio-economic profile of the defaulters of credit cards, to identify the set of factors which contributed to such defaults and suggest relevant measures to minimize the default cases	Analysis of reasons indicated that economic hardship is the major reason identified by majority of the sample units follows by rigid payment structure and loss of job/business. The main suggestion is that the banks concerned should redesign the payment structure of credit card defaulters in a flexible and affordable installment.
Alvares, Cliford (2009)	The problem regarding fake currency in India.	It is said that the country's battle against fake currency is not getting easier and many fakes go undetected. It is also stated that counterfeiters hitherto had restricted printing facilities which made it easier to discover fakes.
Gupta and Arora (2015)	Studied the impact of digital India project on India's rural sector.	The study found that many schemes have been launched in digital India to boost agriculture sector and entrepreneurship development in rural areas. Digital India programme has also set the stage for empowerment of rural Indian women.
Rani (2016)	The opportunity of digital India to redefine India the paradigms of service industry. service industry	Concluded that the digital India has a huge opportunity to use the latest technology to redefine India the paradigms of service industry. It also pointed out that many projects may require some transformational process,

		reengineering, refinements to achieve the desired service level objectives.
Midha (2016)	The digital India for knowledge future and its challenges	Concluded that digital India is a great plan to develop India for knowledge future but its improper implementation due to inaccessibility and inflexibility to requisite can lead to its failure. Though digital India programme is facing number of challenges yet if properly implemented it can make the best future of every citizen. So we Indians should work together to shape the knowledge economy.

3. Problems

The current debate among investors and economists is about the extent of slowdown in economic growth and the timing as to when a cyclical recovery is likely to take hold. However, beyond this cyclical story, there are emerging positives that can have an impact on the long-term growth story. Indeed, some of these positives can be a multiplying force that will have far-reaching implications.

***4.* Objectives of the study**

To study the concept of digital India programme.

To find the impact of digitalization on Indian economy.

***5.* Needs for the study**

Digital India programme is the beginning of digital revolution. It is a big initiative to empower people of the country. Main benefits of this programme are-

1. It will help in decreasing documentation and reducing paper work.
2. It will help in getting things done easily. We can save time and the pain of standing in long queues for getting our documents would be reduced.
3. Digital India mission is away for cashless transactions.
4. It can help small businesses. People can use online tools to expand their business.
5. It can play a key role in GDP growth. According to analyst the digital India could boost GDP up to $1 trillion by 2025. According to World Bank report a 10% increase in mobile and

broadband penetration increases per capita GDP by 0.81% and 1.31% respectively in developing countries.

6. Research Methodology

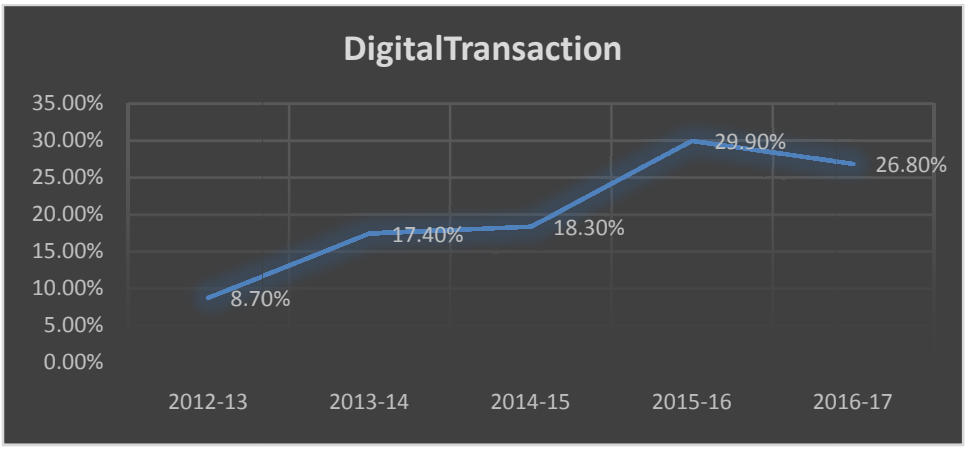
The secondary data has been collected. For this purpose, various magazines and journals have been used as it is a conceptual paper. Thus, the focus is to know more about "Digitalization and its impact on Indian economy" via other parameters. Therefore, qualitative and quantitative data have been used.

7. Data Analysis

7.1 Digital Transaction

Year	2012-13	2013-14	2014-15	2015-16	2016-17
D.Tran	8.70%	17.40%	18.30%	29.90%	26.80%

Sources: RBI



Digital Transaction was increased 8.7% in 2012-13, 17.4% in 2013-14, 18.3% in 2014-15, 29.9% in 2015-16 after that it little bit decreased to 26.8% in 2016-17. #According to ***the EconomicTimes*****, t**he RBI data shows that UPI alone has raised transactions by up to 40% month-on-month after it saw nearly 145.5 million transactions in December as compared to 104.8 million done in November2017.

IMPS (Immediate Payment Service) also grew by 10 percent to see nearly 98 million transactions happen as compared to 9.5 million in November said the report.

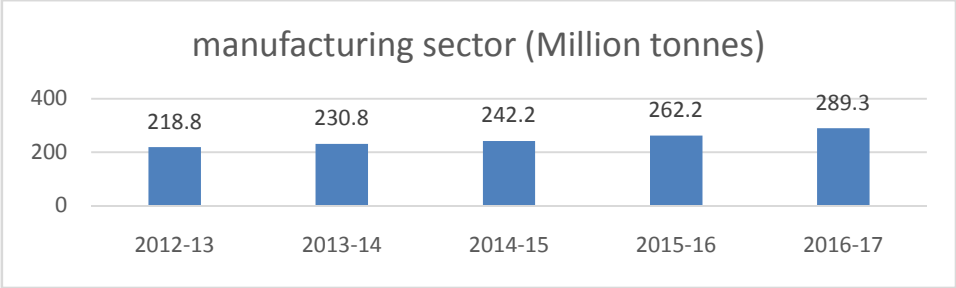
The RBI report says that UPI transactions were only 2 million in December 2016 and by December 2017 that number had risen to 145.5 million. E-wallets like Paytm, PhonePe, Google's Tez and the BHIM app announced by Modi have played a big hand in shaping the economy from a cash-strapped one to progressively pushing it towards a digital one.

*# **Economic Times**, Published Date: Jan 10, 2018 08:45 AM | Updated Date: Jan 10, 2018 08:45 AM*

7.2 Manufacturing Sector

2012-13	2013-14	**2014-15**	2015-16	2016-17
218.8	230.8	242.2	262.2	289.3

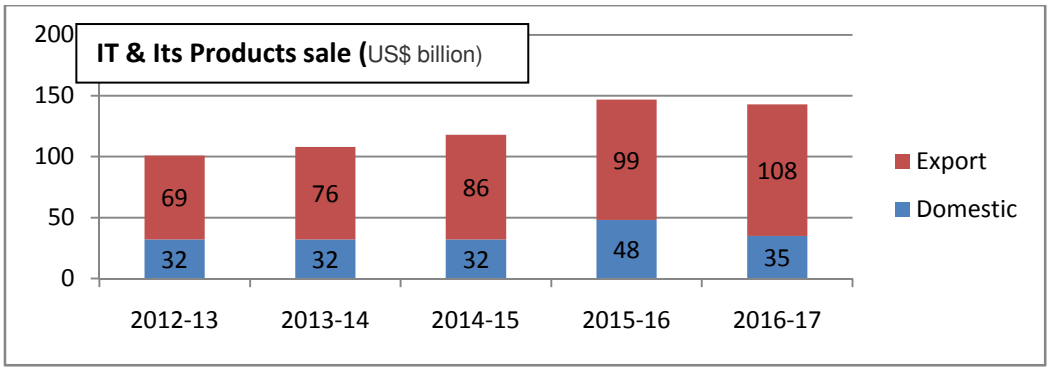
Source: *MOSPI*



- Manufacturing sector produces 218.8 Million tonnes in 2012-13, 230.8 Million tonnes in 2013-14, 242.2 Million tonnes in 2014-15, 262.2 Million tonnes in 2015-16 and increased to 289.3 Million tones in 2016-17.
- Manufacturing sector grew at a CAGR of 5.75 per cent between 2012-13 and 2016-17.

7.3 IT & ITes Sector

Year	2012-13	2013-14	2014-15	2015-16	2016-17
Domestic	32	32	32	48	35
Export	69	76	86	99	108



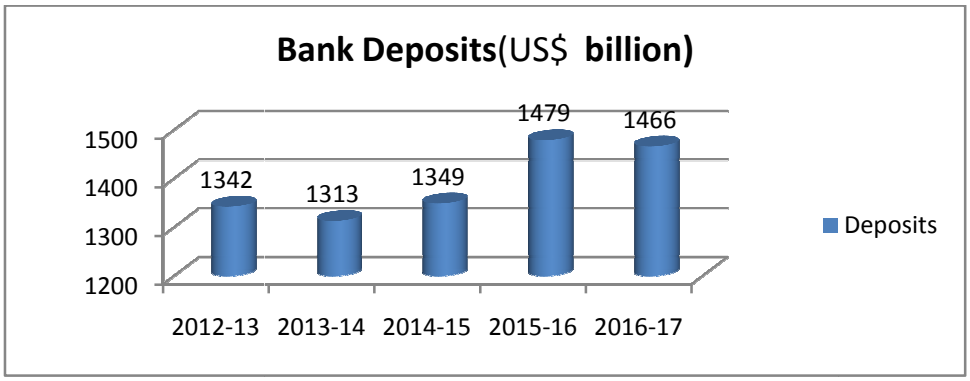
Sources*: NASSCOM*

- The domestic revenue of IT sector was 32 US$ billion in 2012-13,2013-14,2014-15 and 48 US$ billion in 2015-16, and it decrease to 35 US$ billion in 2016-17.
- The Export revenue of IT sector was 69 US$ billion in 2012-13, 76 US$ billion in 201314, 86 US$ billion in 2014-15, 99 US$ billion in 2015-16 and it increase to 108 US$ billion in 2016-7.
- IT sector's Export grew at a CAGR of 9.3 per cent between 2012-13 and 2016-17.
- The contribution of the IT sector to India's GDP stood at 7.7 per cent in 2016-17.

7.4 Banking Sector

2012-13	2013-14	2014-15	2015-16	2016-17
1342	1313	1349	1479	1466

Sources: RBI

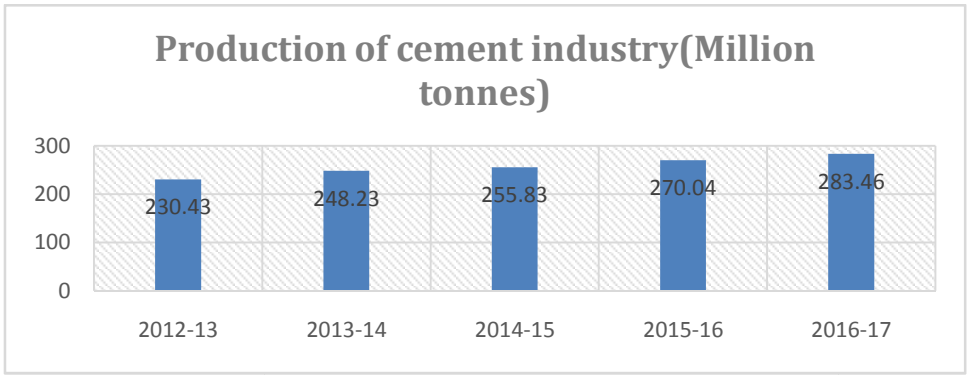


- Bank deposits was 1342US$ billion in 2012-13, 1313 US$ billion in 2013-14, 1384 US$ billion in 2014-15, 1479 US$ billion in 2015-16 and reached to 1466 US$ billion in 2016-17.
- During 2012-13 to 2016-17deposits grew at a CAGR of 1.5 percent.
  - Strong growth in savings amid rising disposable income levels are the major factors influencing deposit growth. Access to banking system has also improved over the years due to persistent government efforts to promote banking-technology.

7.5 Cement Industry

2012-13	2013-14	2014-15	2015-16	2016-17
230.43	248.23	255.83	270.04	283.46

Source: *DIPP data, Crisil*

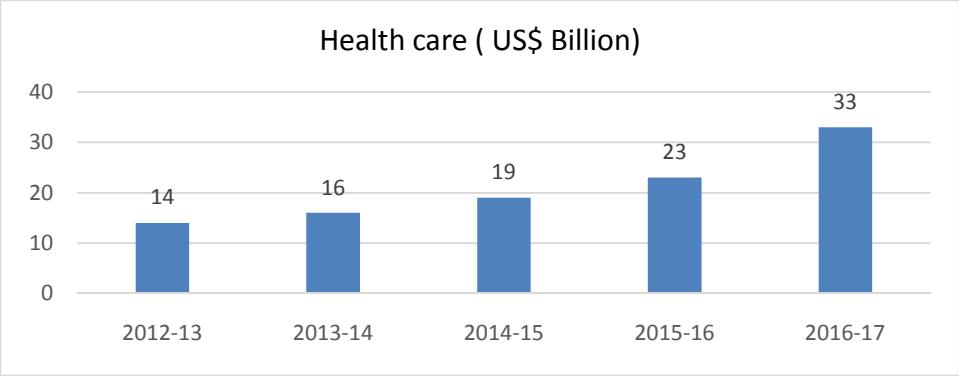


- Cement sector produces 230.43 Million tonnes in 2012-13, 248.23 Million tonnes in 2013-14, 255.83Million tonnes in 2014-15, 270.04 Million tonnes in 2015-16 and increased to 283.46 Million tones in 2016-17.
- It grew at 4.23 per cent between 2012-13 and 2016-17

7.6 Indian Pharmaceutical Industry

2012-13	2013-14	2014-15	2015-16	2016-17
14	16	19	23	33

Sources: BMI

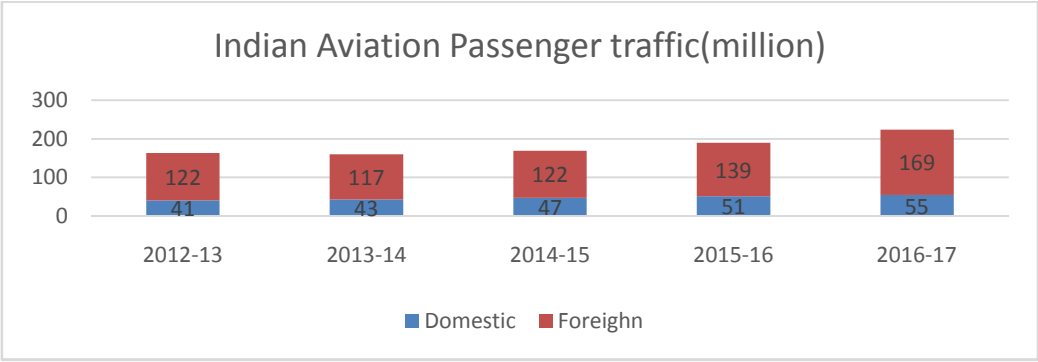


- Pharmaceuticals sector was produced 14 US$ billion in 2012-13, 16 US$ billion in 2013-14,19 US$ billion in 2014-15, 23 US$ billion in 2015-16 and significantly increased to 33 US $billion in 2016-17.
- It grew at a CAGR of 18.71 per cent between 2012-13 and 2016-17

7.7 Indian aviation industry

Year	2012-13	2013-14	2014-15	2015-16	2016-17
Domestic	41	43	47	51	55
Foreign	122	117	122	139	169

Source: *Airports Authority of India*



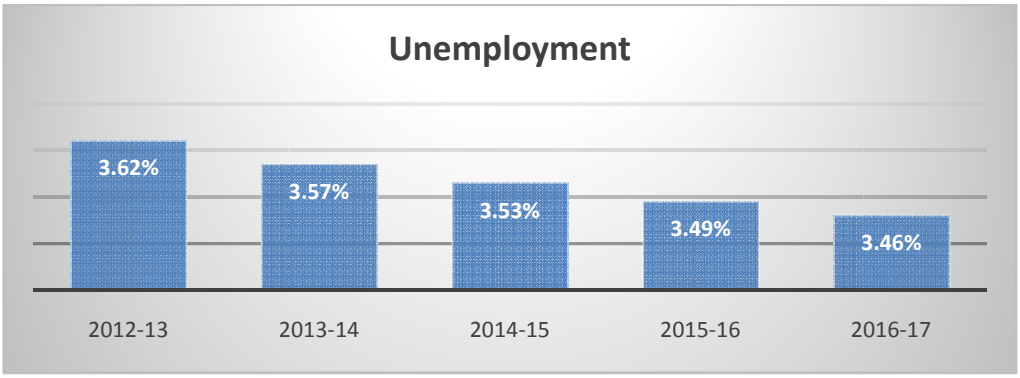
- Aviation sector performed 41 Million of Domestic passenger traffic and 122 Million Foreign passenger traffic in 2012-13, 43 Million of Domestic passenger traffic and 117 Million Foreign passenger traffic in 2013-14, 47 Million of Domestic passenger traffic and 122 Million Foreign passenger traffic in 2014-15, 51 Million of Domestic passenger traffic and 139 Million Foreign passenger traffic in 2015-16, and it increased to 55 Million of Domestic passenger traffic and 169 Million Foreign passenger traffic

- It grew at a CAGR of6.73 per cent in Domestic and 6.05 percent in foreign passenger traffic between 2012-13 and 2016-17.

7.8 Unemployment

Year	2012-13	2013-14	2014-15	2015-16	2016-17
Unempl	3.62%	3.57%	3.53%	3.49%	3.46%

Sources:TRADINGECONOMICS:COM INTERNATIONAL LABOUR ORGANISATION(IOL)

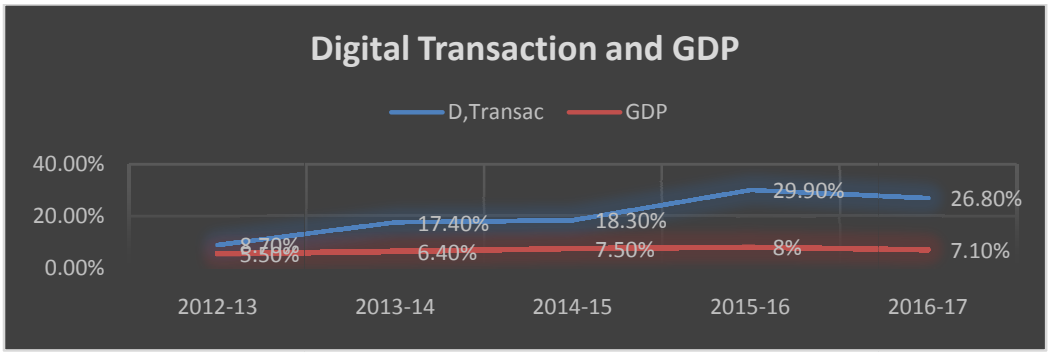


Unemployment Rate in India decreased to 3.46 percent in 2016-17 from 3.62 percent in 2012-13. Unemployment Rate in India averaged 4.08 percent from 1983-84 until 2016-17, reaching an all-time high of 8.30 percent in 1983 and a record low of 3.46 percent in 2016-17.

7.9. Digital Transaction and GDP

Year	2012-13	2013-14	2014-15	2015-16	2016-17
D,Transac	8.70%	17.40%	18.30%	29.90%	26.80%
GDP	5.50%	6.40%	7.50%	8%	7.10%

Sources: world Bank,RBI



India's gross domestic product (GDP) will grow by 5.5% in 201-13, 6.4% in 2013-14,7.5% in 2014-15, and it increased to 8% in 2015-16 after that it slow down to 7.1% in 2016-17. The Central Statistical Office (CSO) said on January 5, confirming that the hasty implementation of the Goods and Services Tax (GST) has had a toll on economic growth.

GDP growth picked up to 6.3% in the July-September quarter after slowing to a three-year low of 5.7% in the first quarter, signaling that the economic recovery had gathered momentum. That gave rise to hope that economic growth for the full year will average at above 7%.

8. Impact of digitalization on Indian Economy

India's economy has witnessed a significant economic growth in the recent past by growing 7.3 per cent in 2015 as against 6.9 per cent in 2014. The steps taken by the government in recent times have shown positive results as India's gross domestic product (GDP) by the increase ofDigital Transaction of 8.7% in 2012-13, 17.4% in 2013-14, 18.3% in 2014-15, 29.9% in 2015-16 after that it decreased a little bit to 26.8% in 2016-17. The RBI report says that UPI transactions were only 2 million in December 2016 and by December 2017 that number had risen to 145.5 million. This clearly shows that the Digital India initiative introduced by Indian government has contributed a lot to boost the economy of the country. *According to The World Bank report a 10% increase in mobile and broadband penetration increases per capita GDP by 0.81% and 1.31% respectively in developing countries.*

In the next 5 years, India will emerge to be a leader in using IT in the sectors like health, defence, education, manufacturing, aviation, cement industry, agriculture and banking. Also the service sectors will be digitally empowered. In the field of education, it also assures broadband connectivity in all Panchayats, schools, libraries and other public places.

9. Challenges

- Making Digital India scheme known and creating an awareness among common masses about its benefits is also a great challenge.
- A key component under this vision is high speed of internet as a core utility to facilitate online delivery of various service. India has low internet speed. According to third quarter 2016 Akamai report on internet speed. India is at the105th position in the world in average internet speed. This rank is the lowest in entire Asia Pacific Region.
- The private participation in government projects in India is poor because of long and complex regulatory processes.
- India has 1600 languages and dialects. Non availability of digital services in local languages is a great barrier in digital literacy.
- Fear of cybercrime and breach of privacy has been deterrent in adoption of digital technologies. Most of the technology including cyber security tools are imported. We do not have requisite skills to inspect these for hidden malwares.

10. Conclusion

The adoption of one type of Digital Transaction may leads another type of negative effect on economy in the short run. The impact of adopting Digital Transaction on economic growth can only be significantly observed in the long run. Hence, any policy that promotes Digital Transaction will not affect the economy immediately.

11. Recommendation

Digital India campaign can't be successful on its own. Policy changes are needed to make digital India a reality. Few of the suggestions are –

- Digital literacy is first step in empowering citizens. People should know how to secure their online data.
- To make this programme successful, a massive awareness programme has to be conducted.
- Private sector should be encouraged for development of last mile infrastructure in rural and remote areas. To encourage private sector, there must be favorable taxation policies, quicker clearance of projects.
- For successful implementation, there must be amendments in various legislations that have for long hindered the growth of technology in India.

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Business Spectrum (ISSN: 2249-4804) Vol. VIII No. 1 January-June 2018
An Open Access Fully Referred Peer Reviewed Bi-annual Journal of IAA South Bengal Branch
(Available online at: www.iaasouthbengalbranch.org)

E-Catering Services An Accolade For Digital India: A Study on the IRCTC E-Catering Services (East Zone)

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Abstract

The Indian government is promoting digitalization of services as a part of the government policy. The vision of Digital India initiative as advocated by the present Indian Government has the potential to grow across the various sectors. E-Commerce is one of the most happening events that have taken the Indian Organizations by storm. The Indian Railways is one of the largest railway networks in the world. The Indian Railways is the largest railway system under a single management in the world and India's largest commercial venture. The Indian Railways in a way is the lifeblood to the Indian Economy. Indian Railways Catering & Tourism Corporation (IRCTC) launched the pilot project on E-Catering as a part of the E-Services in the year 2015, enabling rail users to order meals as per their choice which will be delivered at the specified stations from popular private caterers. E-Catering services since the time it was launched has witnessed remarkable growth. The present paper aims to evaluate the effectiveness of the E-Catering services of the IRCTC (East Zone) for a period of three consecutive financial years (2014-2015, 2015-2016 and 2016-2017). In depth interviews were taken of senior officers working with the East Zone (IRCTC) to understand the entire procedure of the E-catering services. The finding of the study seems to suggest there has been a phenomenal increase in the number of booked meals over the specified time frame thus generating better revenues. Rail users are willingly embracing digitalization of E-Services. Additionally, it was found most meals are delivered on board while the reason for non-delivery may be accounted to the logistics. The railway authorities are working on the possible solutions to minimize the non-delivery of meals due to issues related to the logistics. Therefore, it may be concluded E-Catering services of the Indian Railways is an accolade for the Digital India.

Keywords: Digital India, Indian Railways, E-Business, E-Services, E-Catering

Introduction

Digitalization denotes the adoption or rise in the number of the digital usage by a business house or a country at large. The present day Indian government is boosting digitalization as a part of the government policy. The vision of Digital India program as advocated by the present Indian government is one that has the potential to grow in the areas of electronic services, products, manufacturing and job opportunities etc. The Digital India also focuses on three key sectors namely- 'Digital Infrastructure as a Utility to Every Citizen, Governance & Services on Demand, and Digital Empowerment of Citizens' (Subramanyachary, 2017). Digital India Program is a national campaign. It is an attempt to transform our nation into a globally connected hub. The emphasis of Digital India Program is to generate jobs and enhance skills in the fields of E-Governance, electronic delivery of products and services along with access to mobile services for all and so on. In the words of (Subramanyachary, 2017) 'Digital India is a campaign launched by the Government of India is to ensure that Government Services are made available to citizens electronically by improving online infrastructure and by increasing Internet connectivity or by making the country digitally empowered in the field of technology.' E-commerce is part of the digitalization regime. E-commerce has become an imperative environment for the business houses. Therefore, it may be said India is witnessing the transformation of the traditional market place to digital market place.

Review of Literature

E-commerce: E-commerce more specifically is a platform where individuals can buy or sell and can access products of a diverse range; which includes convenience products to speciality products (Bajaj and Nag, 2000; Joseph, 2012; Raunaque, Imam & Raja, 2016). The primary reason for consumers opting for the electronic media platforms for shopping are easier accessibility and the absence of physical sellers, what makes buyers more comfortable while purchasing (Tesche, 2013). E-commerce offers competitive advantages such as cost reduction because it entails gaining in precision and speed for the transaction on internet (Lefebvre & Lefebvre, 2002).

E-commerce In India: E-commerce has emerged to become a game changer in India since its delicate start in the late nineties. In the recent times the prevalence of E-commerce has immensely expanded. It may be accounted for the speedy and advantageous method for trading products and services across the territories. E-commerce consists of a wide range of services; 'from ordering online, through delivery of paid content, to financial transactions such as movement of money between bank accounts' (Malhotra, 2014).It was noted by Mitra (2013) a number of Indian portals sites have shifted their focus on to E-commerce instead of depending on advertising revenues. Mitra

(2013) pointed out that there has been an increase in the number of organizations absorbing E-commerce in the recent past. Consumers' perception of E-commerce websites tends to suggest emotional features such as discounts, free shipping and ease of use have positive impact on purchasing behaviour as when compared to the technical ones (Fatta, Musotto and Vesperi, 2016). Citizens are willingly absorbing E-commerce services for their own convenience.

Objective

The present paper aims to evaluate the effectiveness of the E-Catering services of the IRCTC (East Zone) for a period of three consecutive financial years (2014-2015, 2015-2016 and 2016-2017).

Methodology

Qualitative analysis of the interview data based on the interview guidelines prepared for the purpose of the present study of the senior executives working with East Zone (IRCTC).In depth interviews were taken of senior officials working with the East Zone (IRCTC) to understand the entire mechanism of the E-catering services.

Findings and Discussion

Indian Railways:

The Indian Railways is the pre-eminent mode of transport for both passengers and freight. It connects the citizens and places in the vast country, therefore constituting a vital national integrating and amalgamated force. Indian Railways is a gigantic system. The Indian Railways began its first journey in the year 1853. It is the largest railway system under a single management in the world and India's largest commercial venture. It employs over 1.6 million people and transports over 13 million people every single day (Richardson & Nigam, 1999). For a huge country like India with nearly 100 million people, Indian Railways constitutes the lifeblood of the economy (Richardson & Nigam, 1999).

Indian Railways & E-Commerce:

Indian railways forms one of the busiest and densest railway networks in the world moving millions of people to their desired destination has the complex cumbersome responsibility of intimating and booking tickets for the millions of rail users in a single day. Prior to the advent of the E-Commerce phase the standalone mechanism for booking rail tickets was at the railway reservation counters. The railway authorities had the herculean task of managing long queues of passengers at the ticket counters on a daily basis. The first step by the Indian railway in the world of E-Commerce was with the IRCTC (E-Ticketing) online services. E-ticketing service was launched in August 2002. E-ticketing provides a platform from where rail users can browse train information, seat availability

and can book his/her tickets online (Srivastava& Singh, 2013). It is a noteworthy task for the IRCTC to keep a track of such a huge database for thousands of trains and millions of passengers moving on a regular basis. Ever since the launch of the E-ticketing services the number of rail users embracing E-ticketing services are on the rise.

IRCTC E-Catering Services (East Zone):

Indian Railway Catering and Tourism Corporation (IRCTC) launched the pilot project on E-catering as a part of E-services in the second half of the year 2015, allowing rail users to order meals as per their choice which will be delivered at the specified stations from popular private caterers. Rail users can book their meals through various channels by mentioning the details of the PNR, seat number along with the mobile number. The rail users have the option of placing the order though the E-catering app, E-catering portal, toll free number or simply by sending a SMS to a designated number. The Indian railways offer to the esteemed rail users to make the payment online while placing the order or through cash on delivery. 'Nowadays passengers prefer to place the meal orders through the E-catering app' said an official working with E-catering services (East Zone). E-catering services since the time it was launched has witnessed phenomenal growth.

Exhibit 1: The IRCTC E-Catering Services (East Zone): Growth Rate For The Number Of Booked Meals For The Specified Time Period (2014-2015) To (2015-2016).

Percentage increase in the number of booked meals for the specified time period (2014-2015) To (2015-2016)	28707%

Exhibit 1 shows an extraordinary percentage increase in the number of booked meals (East Zone) for the consecutive financial years (2014-2015) to (2015-2016). It is to be noted here the E-catering service was introduced in the year (2014-2015) as a pilot project. The number of booked meals for the financial year (2014-2015) was less than '150'. The number of booked meals for the financial year (2015-2016) was little over '37000'. One of the key moderating factors which may have contributed to the steep increase is greater awareness amongst the rail users regarding the E-catering services.

Exhibit 2: The IRCTC E-Catering Services (East Zone): Growth Rate For The Amount Of Sales (In Rupees) For The Specified Time Period (2014-2015) To (2015-2016).

Percentage increase in the amount of sales for the specified time period (2014-2015) To (2015-2016)	28457%

Exhibit 2 depicts the percentage increase in the amount of sales for the consecutive financial years (2014-2015) to (2015-2016) (East Zone). The amount of sales (in rupees) for the year (2014-2015) was around 'Rs 15000'. The amount of sales (in rupees) for the financial year (2015-2016) was little above 'Rs 4261000'. A unique rise in the number of booked meals is reflected the sales growth.

Exhibit 3: The IRCTC E-Catering Services (East Zone): Growth Rate For The Number Of Booked Meals For The Specified Time Period (2015-2016) To (2016-2017).

Percentage increase in the number of booked meals for the specified time period (2015-2016) to (2016-2017)	685.94%

Exhibit 3 shows a steady percentage increase in the number of booked meals (East Zone) for the consecutive financial years (2015-2016) to (2016-2017). The number of booked meals for the financial year (2015-2016) was little over '37000'. The number of booked meals for the financial year (2016-2017) was around '292000'. The steady increase in the number of booked meals over the years seems to suggest rail users are willingly opting for the E-catering services. The external factors which may have contributed to the growth are increasing number of the smartphone users absorbing new technology and better net connectivity across the nation.

Exhibit 4: The IRCTC E-Catering Services (East Zone): Growth Rate For The Amount Of Sales (In Rupees) For The Specified Time Period (2015-2016) To (2016-2017).

Percentage increase in the amount of sales for the specified time period (2015-2016) to (2016-2017)	662.9%

Exhibit 4 depicts the percentage increase in the amount of sales for the consecutive financial years (2015-2016) to (2016-2017)(East Zone). As the number of meals booked and sales amount is related so are the external factors like rising number of the smartphone users absorbing new technology and better net connectivity across the nation which may have played a vital role contributing to the sales growth. The amount of sales for the financial year (2015-2016) was around 'Rs 4261000'. The amount of sales for the financial year 2016-2017 was little over 'Rs 32514000'. The steady rise in the sales growth suggests E-catering services have been beneficial for both the rail users and the Indian Railways at large.

Exhibit 5: Status of Booked Meals (2014-2015)(East Zone)

Meals Delivered (In Percentage)	Meals Undelivered (In Percentage)
100%	0%

Exhibit 5 denotes for the financial year 2014-2015 (East Zone), 100% of the booked meals were delivered on board. The E-catering service was launched in the financial year (2014-2015); it seems to have embarked its journey on a positive note. It is also to be noted the number of booked meals for the financial year (2014-2015) was less than '150'. It may be due to the small number of booked meals it was easier to cater the services to the esteemed passengers.

Exhibit 6: Status of Booked Meals (2015-2016) (East Zone)

Meals Delivered (In Percentage)	Meals Undelivered (In Percentage)
98.8684%	1.1315%

Exhibit 6 suggests for the financial year 2015-2016 (East Zone), 98.8684% of the booked meals were delivered on board. While a low 1.1315% of the booked meals were undelivered. The number of booked meals for the financial year (2015-2016) was little over '37000'.

Exhibit 7: Status of Booked Meals (2016-2017) (East Zone)

Meals Delivered (In Percentage)	Meals Undelivered (In Percentage)
93.6526%	6.3473%

Exhibit 7 shows for the financial year 2016-2017 (East Zone) 93.652% of the booked meals were delivered on board. The non-delivered meals accounted for 6.3473%. The number of booked meals for the financial year (2016-2017) was around '292000'.

Senior officials pointed out the prime reason for non-delivery of meals is due the logistics issues. They are working on the possible solutions to minimize the percentage of the non-delivered meals on board. Some of the most vital factors for the non-delivery of the meals on board as narrated by a senior officer working with the east zone team are as follows:

1. Time management issue

   A major problem faced by the E-catering vendors is time management. An executive explained it to the researcher, sometimes the schedule stoppage for trains at particular station is around two-five minutes. Within the short span of time the delivery boy has to reach the designated coach, deliver the food and take the payment. Time management issues also contribute to the non-delivery of meals.

2. Trains running late

   At times trains run late. Due to this the meals booked by the passenger may not be delivered at the allocated station. This seems to be an external factor which cannot be controlled by the E-catering service providers.

The E-catering team (East Zone) is working on the logistics issues so that the number of non-delivered meals can be minimized. It may be said E-catering services is an asset for the Indian Railways as it is generating better revenues with each passing year.

Conclusion

The Indian Railways is dedicated to offer plethora of services to their esteemed rail users. One such service offered by the Indian Railways which comes under the purview of E-commerce segment is E-catering services. The E-catering service (East Zone) seems to be a boon for both the rail users and the Indian Railways at large. The rail users are getting an opportunity to explore and avail varieties of delicacies during their train journey. The E-catering services since the time it was introduced has witnessed a steady rise in the number of booked meals which is reflected in the sales growth for the specified time period under the present study. Though there is a snag for the undelivered meals the E-catering service department (East Zone) is diligently working on it to overcome the stumbling block. The entire scenario suggests Indian Railways and the rail users are willingly embracing digitalization of E-services. Thus, it may be concluded E-catering services of the Indian Railways is an accolade for the Digital India.

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Business Spectrum (ISSN: 2249-4804) Vol. VIII No. 1 January-June 2018
An Open Access Fully Referred Peer Reviewed Bi-annual Journal of IAA South Bengal Branch
(Available online at: www.iaasouthbengalbranch.org)

Corporate Social Responsibility and Corporate Performance: Some Insights from Indian Public and Private Companies

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Abstract

The provision of Corporate Social Responsibility (CSR) in India is introduced in the Companies Act, 2013. In very simple terminology, Corporate Social Responsibility (CSR) is the sense of belongingness, accountability and obligations of a business corporation towards the society in which it exists. When a firm thinks and acts something, which is not driven by the profit or value maximization objective rather by the sense of humanity and social accountability the said contribution in any form represents corporate social responsibility. It indeed helps a firm to develop and maintain healthy relationship with its stakeholders and the society as a whole. Although the CSR initiatives should not be ethically driven by profit motive but a bunch of empirical studies establish a good relationship between CSR expenditure and performance of firms in perspective of different countries including India. This paper also attempts to establish the way in which CSR is associated with the performance of Indian firms. For the purpose of the study, we use two samples of firms; one is of twenty-nine private sector companies and another of seventeen public sector companies. The study considers employee welfare & training expenses, social & community expenses and environment & pollution control related expenses in constructing the CSR variable. The study employs panel data regression analysis under which it introduces Restricted F Test, Lagrange Multiplier Test and Hausman Test for the selection of best fit model. The result of panel data analysis suggests a significant and positive impact of CSR expenditures on the accounting performance measured by return on capital employed (ROCE) of both the sampled firms. However, the impact CSR expenditure is found to be insignificant to the market performance of both the sampled firms. The study finally suggests the Indian companies of both the sectors to keep on doing CSR expenses and initiatives to maintain strong social bonding and to avail its favourable impact on their financial performance.

Keywords: *Corporate Social Responsibility, Corporate Performance, Panel Data Analysis*
JEL Classifications: *M14; L25; C23*

Introduction

For last couple of decades, the corporate sector has realized the fact that a corporation should not be simply driven by its profit-maximization criterion and that a business entity and its activities are also the integral parts of the economy, society and environment in which it operates (Herrmann, 2004). In contemporary socio-economic scenario the concept of CSR has become widely integrated with ethical business practices across the world. Since corporations work in society, through society and for society, hence they must recognize themselves as corporate citizens and they must reinvest their profits to mitigate the societal and developmental challenges and threats. They should play socially responsible role for the betterment of the community through active participation for realizing developmental goals set by the government. According to Bowen (1953) a socially responsible business must pursue policies, make decisions and follow lines of action which are desirable in terms of the objectives and values of our society.

Notably, the necessity of corporate social responsibility is much more urgent in an emerging economies (like India) where economic disparities are clearly visible and both ecology and society are vulnerable to human engineered environmental hazards (Doh et al., 2010). Sustainability reporting helps the company build a positive image with its stakeholders, thereby helping it manage the social expectations and reduce legitimacy risks (Ghosh, 2013). Given the situation, the Government of India has tried to inject good governance practices both in administration and business functionaries. It has brought transparency in the form of 'Corporate Governance' in business ethics and accountability among the corporate both by legal and ideological means. The SEBI has set out various clauses in the listing agreement regarding corporate financial reporting (such as Clause 49 on corporate governance reporting and Clause 55 on business responsibility reporting) that have prescribed various provisions with regard to mandatory disclosure.

Moreover, also ethically corporate social responsibility is not supposed to be undertaken with the motive of profit making but of late, the corporate sector realised that the CSR practices can well exert favourable impact on the profitability or overall financial performance of corporations. Sometimes corporate social responsibility in the form of employee welfare activities encourage employees to work harder for the company's goal. Besides, social and community expenses by corporations help to build and maintain a congenial relationship with the society. It encourages customers, local labourers, suppliers and other concerned parties to the business to act in favour of the business corporations. Moreover, practicing CSR ensures a number of competitive advantages to the corporations in terms of reduction in operating cost, lower cost of raising funds, increased productivity; attracting top talents, saving on hiring and training of employees, employees' loyalty,

customers' loyalty etc. Thus, it increases profitability of the corporations in the long- run and ensures smooth functioning of business operations in a sustainable manner. Conversely, it may have negative implications on firm performance since spending on CSR is exclusively expenses and indicates erosion of firm's capitalization.

In this background, this empirical investigation makes an attempt to examine the empirical association between CSR expenditures by public and private sector corporations and their financial performance in Indian economic context.

Literature Review

Corporate social responsibility has attracted considerable research attention worldwide since last couple of decades. However, in India the issue gets attention just for last two decades. Moskowitz (1972) argues that responsible companies outperform conventional firms. Ullmann (1985) coins 13 studies of social scale for American Companies to find relationship of CSR and CFP and finds no clear relationship between CSR and CFP. Dsilva (2008) argue that the important factors that influence the company to contribute are: customer oriented, ethical oriented, community oriented, humane oriented. Mosaid and Boutti (2012) don't find any significant relationship between performances of Islamic banks and corporate social responsibility. Conversely, Samina and Sagota (2012) document a positive correlation between CSR expenditure and performance of Islamic banks in Bangladesh. Arshad and Othman (2012) assess the impact of CSR on Malaysian Islamic banks' performance and finds that CSR has significant and positive impact on performance of such banks. Palmer (2012) tries to establish the association between CSR and corporate financial performance (CFP) taking 167 companies of S&P 500 Index covering a period from 2001 to 2005. The study incorporates return on assets (ROA), sales and gross margin to examine impact of CSR. The study finally marks existence of direct impact of CSR on bottom line profits and margins because customers are willing to pay premium for those products and services which have contribution towards society though CSR practices. Tilakasiri (2012) in in context also gets a positive relationship between CSR and CFP. Flammer (2013) has shown that the companies that value CSR stood better in terms of financial performance than those don't much concern about CSR. Mishra and Suar (2013) make an attempt to investigate whether salience towards natural environment influences the corporate sustainability towards natural environment. The study also examines the impact of corporate responsibility towards environment upon the financial performances of a size of 150 listed and non-listed manufacturing companies in India for the three years period ranging from 2003-04 to 2005-06. The results of the study indicate that higher the salience of the environment, the more favourable is the corporate responsibility towards the environment. Moreover, it suggests

that a favourable corporate responsibility towards environment significantly increases the financial performance of the sample companies. Malik and Nadeem (2014) explore the linkage between CSR and financial performance of eight banks operating in Pakistan during 2008 to 2012. They select EPS, ROA, ROE and Net Profit to measure financial performance. Through this study, the authors have expressed their concern about lack of CSR practice in Pakistan and therefore, recommend that banks should discharge their social responsibilities towards society and environment which would be beneficial to the firms as well as promote the sustainable economic development in the country. Kamatra and Kartikaningdyah (2015) make a sincere effort to discern the relationship between CSR and corporate financial performance taking into account 24 companies belonging to mining and chemical industry listed in Indonesia stock exchange during the period 2009 - 2012. The results of the analysis indicate that CSR have only moderately significant implication on ROA and NPM whereas there exist no significant impact on ROE and EPS. Han et al., (2016) investigate how do CSR activities affect the corporate financial performance of 94 companies listed in the Korean Stock Exchange in the period 2008-14. The study reveals that there is no significant impact of CSR performance on firms' financial performance. Ahmadi and Bouri (2017) have examined the association between environmental disclosure and environmental performance by taking a sample size of 40 largest companies operating in France (Index CAC40) over the three years period from 2011-13. The study finally concludes that there is a significant positive relationship between environmental performance proxy and environmental disclosure level. Charumathi and Ramesh (2017) analyze the trends in sustainability reporting practices in India considering a sample size of 144 non-financial companies listed in BSE 100 Index in both pre and post implementation of Business Responsibility Reporting (BRR) period by way of constructing an index called as Social and Environmental Disclosure Index (SEDI) and examines the impact of such disclosures on the said firm performance for the period from 2010 to 2014. They conclude that the levels of such disclosures (SED) have a positive and significant impact on the firm performance which indicates that markets pay a premium for socially responsible companies.

A brief account of the literatures on corporate social responsibility leads us to some inclusive findings. Again, the literatures on Indian economic context are found to be very limited in numbers. Therefore there is enough scope to test the relationship in Indian present economic perspective. In this juncture, the present study sets a broad objective to testify the CSR- financial performance nexus in an emerging market context like India.

Based on the objectives of the present study the following hypotheses are framed to be tested:

Hypothesis 1:

Null Hypothesis (H_0): Corporate Social Responsibility expenditures do not affect financial performance of Indian Listed Private Sector Companies.

Alternative Hypothesis (H_1): H_0 is not true.

Hypothesis 2:

Null Hypothesis (H_0): Corporate Social Responsibility expenditures do not affect financial performance of Indian Listed Public Sector Companies.

Alternative Hypothesis (H_1): H_0 is not true.

Data and Methodology

The present study has been carried out with data of two groups of companies consisting twenty-nine private sector companies and seventeen public sector companies. The data are collected from annual reports of the sample companies and as well as financial database package 'Capitaline Plus', developed and marketed by Capital Market Publishers Pvt. Ltd, Mumbai. The study uses panel data regression analysis under which it introduces Pooled Regression Model (PRM), Fixed Effect Model (FEM) and Random Effect Model (REM). The study employs Restricted F test, Langrange Multiplier Test suggested by Breusch and Pagan (1980) and Hausman test, suggested by Hausman (1978) for the selection of best fit model of regression among the three models. The study also introduces basic descriptive statistics and checks the presence of Multicollinearity property among the independent variables through Variance Inflation Factor.

The basic econometric model of the study takes the following form:

$$\text{Performance}_{it} = \alpha + \beta\,(\text{CSR Variables}) + \gamma\,(\text{Control Variables}) + \acute{\varepsilon}_{it} \quad \ldots\ldots\ldots\ldots (1)$$

Where, Performance_{it} represents the financial performance of i^{th} firm at time period t, CSR Variables represents corporate social responsibility activities of the i^{th} firm, Control Variables refers the variables except CSR Variables affecting the performance of the i^{th} firm and $\acute{\varepsilon}_{it}$ indicate the idiosyncratic Error.

Performance variables include Return on Capital Employed (ROCE) and Market Value to Book Value Ratio (MVBR) and Corporate Social Responsibility Expenditure (CSRE) variable is measured by taking the sum of Employees Training and Welfare Expenses (ETWE), Social Development and Community Welfare Expenses (SDCWE) and Environmental Protection and Pollution Control Expenses (ENPPCE). A range of control variables such as Age (AGE), Firm Size

(FS), Liquidity Ratio (LQR), Leverage Ratio (LVR) and Assets Utilization Ratio (AUR) have been incorporated in the present study.

Thus, the following two models have been constructed to explore the impact of the CSR performance on corporate financial performance:

Model – 1:

$ROCE_{it} = \alpha + \beta\ (CSRE) + \gamma 1\ (AGE) + \gamma 2\ (FS) + \gamma 3\ (LQR) + \gamma 4\ (LVR) + \gamma 5\ (AUR) + \acute{\varepsilon}_{it}$ ..... (2)

Model - 2 :

$MVBR_{it} = \alpha + \beta\ (CSRE) + \gamma 1\ (AGE) + \gamma 2\ (FS) + \gamma 3\ (LQR) + \gamma 4\ (LVR) + \gamma 5\ (AUR) + \acute{\varepsilon}_{it}$ ..... (3)

Data Analysis

Descriptive Statistics for Private Companies

Descriptive statistics of the variables used in the study presented in Table – 1 indicate that on an average, the sample companies have spent Rs. 4.178 crore for practicing CSR. Considering the financial performance dimensions of selected private firms we observed that the average accounting performance (ROCE) is moderately adequate as the mean value is 21.553. The mean value of market-based measure (MBVR) is observed to be 5.072 which indicates the market value of the sample private companies is on an average five times of their book value. According to the table value, the sample companies are not too younger as mean age is 41.793 years. The firm size indicates that on an average, the sample companies are high capital based (10.502) and enjoying economies of scale. Furthermore, the descriptive statistics demonstrate that liquidity, solvency and managerial efficiency positions are satisfactory.

Descriptive Statistics for Public Companies

The descriptive statistics of the sample public companies (Table - 8) indicates that they have spent on average 4.233 towards different CSR activities which shows that public companies have spent on an average as compared to private counterparts. Moreover, the CSR expenses do not found to be stable as the range is very high. The accounting performance in terms of ROCE is fairly enough as the mean value is 14.952 but it has very high standard deviation value, specifically, in some cases it has negative value. Furthermore, the market performance considering MBVR reflects that the market value of the sample public companies is on an average 2.392 times of their book value. But,

in both the cases of corporate performance, private companies exhibit more profitability as compare to public counterpart. According to the table-8, on an average, the companies are matured (43.6471) and assets based (11.4058). They are comparatively more liquid (2.4831) and highly leveraged (3.4592) which indicates that the companies are mainly debt dependent. It further demonstrates that the management is not fully efficient as the mean value of assets turnover ratio is 1.0910 and more importantly, in some companies ATR is 0.01.

Panel Data Analysis

The study analyses the data of two groups of companies. The presence of multicollinearity can lead to erroneous results and findings. Therefore, before going to panel data regression analysis, the study tests the presence of multicollinearity through variance inflation factor. The test of multicolinearity is presented in Table-2 and Table-9 for the private and public companies respectively. However, in both the cases we don't find any significant multicollinearity as the maximum VIF values found are less than 10. It is a commonly accepted criterion, that a VIF of less than 10 signifies no multicollinearity.

In case of Private companies the study through Hausman Test finds REM as the best fit model (Table-3 and Table-4), when ROCE is taken as dependent variable. In this case both the Restricted-F statistic of FEM [F (28, 51) = 18.95*] and Breusch-Pagan Lagrange Multiplier test statistic [χ 2 (1) = 61.48*] are found to statistically significant at 1 percent level. But, the Hausman test statistics if found to be insignificant [χ 2 (8) = 5.33] and the underlying null hypothesis of the test i.e. fitness of random effect model can't be rejected.

However, following the similar method of testing the best fit model, the FEM model for the same companies is found to be fit when MBVR is taken as the dependent variable (Table-5 and Table-6). In case of public companies, the REM is found to be fit when ROCE is taken as dependent variable (Table-10 and Table-11). However, for the public companies, the PRM model is found to be fit when MBVR as dependent variable (Table-12) as the F-statistic of FEM (0.49) and Wald-χ2 statistic of REM (4.27) are found to be insignificant.

FINDINGS OF THE STUDY

For Private Companies

The summarised regression results shown in Table - 7 confirm that:

- In case of accounting performance, the table value of the Random Effect Model (REM) indicates that CSR expenditure leads to increase in ROCE thus validates the positive and significant (at 5% level) effect of corporate social responsibility in the form of fair treatment and due diligence towards employees, minimization of negative externalities to the environment etc. The results indicate that increased employees' morale and loyalty, efficient use and conservation of scare resources, recycling of wastage, reducing pollution, due consideration to the community at large etc. exert a favourable impact on the performance of the private corporations. However, the market performance is not improved as a result of CSR expenditure and the absence of significant relationship may be due to incapability of market to perceive such spending.
- The reason behind negative impact of firm size on financial performance can be attributed to large employees' base, inadaptability with new technology and improper monitoring and evaluation of CSR activities.
- The negative relation between corporate performances with firm's age may be due to newly set up company's more attention towards CSR concerns and their pro-active role in this regards.
- Moreover, the AUR is also positively linked with both the dimensions of corporate financial performance measurement. The result indicates efficiency of private companies to utilize their resources for generating revenue.

For Public Companies

The summarised regression results shown in Table - 13 confirm that:

- CSR spending is positively associated with the performance of public companies measured by ROCE. However, we don't find any significant impact of CSRE on the market based measure of financial performance represented by MBVR. The result may be so due to improper communication of different CSR activities to the equity market.
- Size of public companies adversely affect their performance and market valuation. Again, in line with per theoretical supposition liquidity is negatively related to profitability of these companies.

Conclusions

The present research is an endeavour to extend the literatures on the relationship between corporate social responsibility and corporate financial performance for twenty-nine private sector companies and seventeen public sector companies listed in S&P BSE CARBONEX Index of India. The past as

well as contemporary researches on CSR in India are mainly restricted to the nature and pervasiveness of CSR, ignoring completely inter-relationship between CSR and firm financial performance. However, the studies that attempt to establish such relationship fail to capture other firm characteristics such as firm age, firm size, risk, liquidity etc. The present study aims at filling this crucial gap through testing the linkage between CSR and firm performance empirically taking a set of other control variables. Our study covers the period of 2015 to 2017 considering the fact that the mandatory CSR provision and rules have been enacted in 2013 and it has been applied from 1st April, 2014. 31st March, 2015 was the first year for post mandatory CSR era and here lies the relevancy of the considered study period. Particularly, the study considers the three individual CSR variables namely, employees welfare and training expenses, social and community development expenses and environment and pollution control expenses. Moreover, the study employs greater procedural consistency than other similar literatures and employs two dimensions of corporate financial performance namely, accounting based measure (ROCE) as well as market based measure of firm performance i.e., MBVR. The panel data regression analyses in both the cases of private as well as government- owned Indian companies reveal that CSR expenditures have significantly positive relationship with firm financial performance However, most of the firm characteristics are maintaining significant relationship with corporate performance. The study also reveals that major significant relationship is observed between CSR variables with accounting based financial performance as proxied by ROCE. CSR performance of private companies and its positive as well as significant impact on financial performance discloses that CSR has become an important part of corporate communication due to the enhanced awareness among stakeholders of the companies in recent years. Moreover, to sustain in competitive environment along with diverse stakeholders has forced private companies to super perform in the CSR areas over the study period.

It is therefore recommended that for an increased accounting performance Indian firms should intensify more efforts in carrying out their corporate social responsibilities which can serve as a source of increased financial performance of the firm. Therefore, we may conclude that the corporate social responsibility and corporate performance relationship might be evolving and will reach positive trend in the future as the concept of CSR becomes institutionalized.

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LIST OF TABLES

Table 1: Descriptive Statistics (Private Sector Companies)

Variable	Mean	Standard Deviation	Minimum Value	Maximum Value
CSRE	4.178	1.183	0.863	6.501
AGE	41.793	25.191	8.000	110.000
SIZE	10.502	1.151	8.090	12.729
LQR	2.017	1.745	0.22	6.890
LVR	0.794	1.575	0.0005	7.020
AUR	1.102	0.783	0.100	4.650
ROCE	21.553	15.734	-5.800	57.140
MBVR	5.072	3.719	0.340	19.960

Source: Calculated by Authors

Table 2: Variance Inflation Factor (Private Sector Companies)

Variable	VIF	1/VIF
CSRE	1.83	0.545052
AGE	1.30	0.769240
SIZE	2.08	0.481195
LQR	1.84	0.543244
LVR	1.23	0.813120
AUR	1.57	0.636254
Mean VIF	1.64	

Source: Calculated by Authors

Table 3: Regression Results Taking ROCE as Dependent Variable(Private Sector Companies)

Ordinary Least Square Model			Fixed Effect Model			Random Effect Model		
Variable	Coefficient	t-Stat	Variable	Coefficient	t-Stat	Variable	Coefficient	z-Stat
Intercept	64.800	5.71*	Intercept	73.805	2.56	Intercept	45.082	3.05
CSRE	2.828	1.77***	CSRE	1.848	1.73***	CSRE	1.616	1.99**
AGE	-0.024	-0.42	AGE	-1.169	-1.65***	AGE	-0.050	-0.60
SIZE	-6.282	-5.75*	SIZE	-1.656	-0.95	SIZE	-3.815	-2.83*
LQR	-0.495	-0.59	LQR	-2.512	-1.02	LQR	-0.756	-0.66
LVR	1.726	3.04*	LVR	1.676	0.44	LVR	1.112	0.89
AUR	10.509	6.85*	AUR	9.463	2.80*	AUR	11.367	5.24*
F-Stat	54.37*		F-Stat	3.91*		Wald-χ2	56.89*	
R^2	0.608		R^2- Within	0.315		R^2- Within	0.267	
			R^2-Between	0.095		R^2-Between	0.609	
			R^2- Overall	0.101		R^2- Overall	0.590	

Source: Calculated by Authors * Statistically significant at 1 percent level. ** Statistically significant at 5 percent level.
***Statistically significant at 10 percent level.

Table 4: Selection of Model from Regression Results (Private Sector Companies)

Purpose	Null Hypothesis	Test	Test Statistic
Pooled Regression Model Vs Fixed Effect Model	All $u_i = 0$	Restricted F Test	F(28, 51) = 18.95*
Pooled Regression Model Vs Random Effect Model	$\sigma^2_u = 0$	Breusch-Pagan Lagrange Multiplier Test	χ 2 (1)= 61.48*
Fixed Effect Model Vs Random Effect Model	Difference in coefficients is not systematic	Hausman Test	χ 2 (8)= 5.33

Source: Calculated by Authors * Statistically significant at 1 percent level.

Table 5:Regression Results Taking MBVR as Dependent Variable(Private Sector Companies)

Ordinary Least Square Model			Fixed Effect Model			Random Effect Model		
Variable	Coefficient	t-Stat	Variable	Coefficient	t-Stat	Variable	Coefficient	z-Stat
Intercept	25.404	6.26*	Intercept	25.513	2.87*	Intercept	14.829	3.29*
CSRE	0.074	0.23	CSRE	0.259	0.79	CSRE	0.162	-0.63
AGE	0.013	1.01	AGE	-0.562	-2.58**	AGE	0.002	0.11
SIZE	-2.219	-5.90*	SIZE	-0.023	-0.04	SIZE	-1.160	-2.80*
LQR	0.358	2.34**	LQR	-0.392	-0.51	LQR	0.299	0.90
LVR	0.570	2.76*	LVR	0.622	0.53	LVR	0.352	1.00
AUR	0.877	1.68***	AUR	2.417	2.32**	AUR	1.907	2.97*
F-Stat	9.50*		F-Stat	4.71*		Wald-χ2	35.15*	
R^2	0.489		R^2- Within	0.356		R^2- Within	0.224	
			R^2- Between	0.015		R^2- Between	0.450	
			R^2- Overall	0.019		R^2- Overall	0.425	

Source: Calculated by Authors * Statistically significant at 1 percent level. ** Statistically significant at 5 percent level.

***Statistically significant at 10 percent level.

Table 6: Selection of Model from Regression Results (Private Sector Companies)

Purpose	Null Hypothesis	Test	Test Statistic
Pooled Regression Model Vs Fixed Effect Model	All $u_i = 0$	Restricted F Test	F(28, 51) = 14.13
Pooled Regression Model Vs Random Effect Model	$\sigma^2_u = 0$	Breusch-Pagan Lagrange Multiplier Test	χ 2 (1)= 48.63*
Fixed Effect Model Vs Random Effect Model	Difference in coefficients is not systematic	Hausman Test	χ 2 (8)= 12.75**

Source: Calculated by Authors * Statistically significant at 1 percent level. ** Statistically significant at 5 percent level.

***Statistically significant at 10 percent level.

Table 7: Summarized Regression Results (Private Sector Companies)

Variables	ROCE		MBVR	
	Coefficient	t-stat	Coefficient	t-stat
Intercept	45.082	3.05	25.514	2.87*
CSRE	1.616	1.99**	0.259	0.79
AGE	-0.050	-0.60	-0.562	-2.58**
SIZE	-3.815	-2.83*	-0.023	-0.04
LQR	-0.755	-0.66	-0.392	-0.51
LVR	1.112	0.89	0.622	0.53
AUR	11.367	5.24*	2.417	2.32**

Source: Calculated by Authors * Statistically significant at 1 percent level. ** Statistically significant at 5 percent level.

Table 8: Descriptive Statistics (Public Sector Companies)

Variable	Mean	Standard Deviation	Minimum Value	Maximum Value
CSRE	4.233	1.325	0.095	6.224
AGE	43.647	14.069	22.000	65.000
SIZE	11.406	1.014	9.073	12.668
LQR	2.483	2.322	0.450	7.840
LVR	3.459	4.095	0.000	14.237
AUR	1.091	1.583	0.010	6.520
ROCE	14.952	17.316	-5.980	84.870
MBVR	2.392	2.777	0.450	13.680

Source: Calculated by Authors

Table 9: Variance Inflation Factor (Public Sector Companies)

Variable	VIF	1/VIF
CSRE	1.55	0.646533
AGE	1.97	0.506339
SIZE	1.62	0.616690
LQR	3.00	0.333821
LVR	2.54	0.394113
AUR	2.15	0.465295
Mean VIF	2.14	

Source: Calculated by Authors

Table 10: Regression Results taking ROCE as dependent variable (Public Sector Companies)

Ordinary Least Square Model			Fixed Effect Model			Random Effect Model		
Variable	Coefficient	t-Stat	Variable	Coefficient	t-Stat	Variable	Coefficient	z-Stat
Intercept	131.164	2.99*	Intercept	60.718	0.76	Intercept	91.771	2.29**
CSRE	5.582	2.47**	CSRE	1.751	2.69**	CSRE	1.912	3.18*
AGE	-0.039	-0.30	AGE	-0.116	-0.16	AGE	0.091	0.33
SIZE	-12.481	-2.77*	SIZE	-3.554	-0.47	SIZE	-7.566	-2.13**
LQR	2.136	2.22**	LQR	2.422	1.38	LQR	2.207	1.69***
LVR	-0.529	-0.87	LVR	-3.209	-1.78***	LVR	-1.711	-1.72***
AUR	0.714	0.52	AUR	-2.295	-0.94	AUR	-1.963	-1.11
F-Stat	3.78*		F-Stat	2.38**		Wald-χ2	17.78*	
R^2	0.350		R^2- Within	0.337		R^2- Within	0.312	
			R^2-Between	0.072		R^2- Between	0.226	
			R^2- Overall	0.075		R^2- Overall	0.228	

Source: Calculated by Authors * Statistically significant at 1 percent level. ** Statistically significant at 5 percent level. ***Statistically significant at 10 percent level.

Table 11: Selection of Model from Regression Results (Public Sector Companies)

Purpose	Null Hypothesis	Test	Test Statistic
Pooled Regression Model Vs Fixed Effect Model	All $u_i = 0$	Restricted F Test	F(16, 28) = 76.61*
Pooled Regression Model Vs Random Effect Model	$\sigma^2_u = 0$	Breusch-Pagan Lagrange Multiplier Test	χ 2 (1)= 42.86*
Fixed Effect Model Vs Random Effect Model	Difference in coefficients is not systematic	Hausman Test	χ 2 (6)= 2.48

Source: Calculated by Authors * Statistically significant at 1 percent level.

Table 12: Regression Results taking MBVR as dependent variable (Public Sector Companies)

Ordinary Least Square Model			**Fixed Effect Model**			**Random Effect Model**		
Variable	Coefficient	t-Stat	Variable	Coefficient	t-Stat	Variable	Coefficient	z-Stat
Intercept	21.550	3.07*	Intercept	-10.888	-0.76	Intercept	12.774	1.90**
CSRE	0.594	1.71	CSRE	0.007	0.06	CSRE	0.069	0.63
AGE	0.021	1.11	AGE	0.017	0.13	AGE	0.019	0.42
SIZE	-2.002	-2.82*	SIZE	1.059	0.79	SIZE	-1.018	-1.71***
LQR	0.120	0.81	LQR	0.443	1.40	LQR	0.229	1.00
LVR	0.062	0.64	LVR	-0.274	-0.85	LVR	-0.089	-0.52
AUR	-0.230	-1.07	AUR	0.249	0.57	AUR	-0.139	-0.45
F-Stat	2.54**		F-Stat	0.49		Wald-χ2	4.27	
R^2	0.366		R^2- Within	0.095		R^2- Within	0.010	
			R^2- Between	0.172		R^2- Between	0.299	
			R^2- Overall	0.164		R^2- Overall	0.293	

Source: Calculated by Authors * Statistically significant at 1 percent level. ** Statistically significant at 5 percent level. ***Statistically significant at 10 percent level.

Table 13: Summarized Regression Results (Public Sector Companies)

Variables	**ROCE**		**MBVR**	
	Coefficient	t-stat	Coefficient	t-stat
Intercept	91.771	2.29**	21.550	3.07*
CSRE	1.912	3.18*	0.594	1.71
AGE	0.091	0.33	0.021	1.11
SIZE	-7.566	-2.13**	-2.002	-2.82*
LQR	2.207	1.69***	0.120	0.81
LVR	-1.711	-1.72***	0.062	0.64
AUR	-1.963	-1.11	-0.230	-1.07

Source: Calculated by Authors * Statistically significant at 1 percent level. ** Statistically significant at 5 percent level. ***Statistically significant at 10 percent level.

Business Spectrum (ISSN: 2249-4804) Vol. VIII No. 1 January-June 2018
An Open Access Fully Referred Peer Reviewed Bi-annual Journal of IAA South Bengal Branch
(Available online at: www.iaasouthbengalbranch.org)

Diagnosing Intellectual Capital: A Case Study of Textile Company and its Implications on Managerial Decision Making

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Abstract

The advent of knowledge based economy has led to a number of changes in the accounting and reporting practices of the organizations. In spite of the fact that human capital is the real contributory for the success of an organization, It is very sad to note even today, our accounting researches could not develop a foolproof accounting system to evaluate the most important and valuable assets of an enterprise, that is man. The concept continues to be debated by economic, accounting, and psychology theoreticians universally. Different models have been developed for the valuation of human capital focusing on different aspects. The present study is based on providing an extended version of the Lev and Schwartz model of valuation. A case study of a Textiles company has been done to suggest a model of valuation. The results show that the valuation of human capital can become more meaningful by giving equal weightage to the turnover rate of the employees, training cost and the annual increment being given to the employees. It has also revealed that the inclusion of human capital valuation enhances the quality of the information content of financial reports.

Keywords: *Training cost, Turnover rate, Lev and Schwartz model*

1.1 Introduction

Human resources are the most valuable resource of any organization. They are the secret behind the success of all great companies. Of the four factors of production i.e. men, money, method and land only the first one is active factor and is responsible for the successful application of the rest of others (Avazzadehfath and Raiashekar, 2010). The latest advancement in technology is also inert and cannot be applied without human intervention. Despite such widespread acceptance of the importance of humans, they are not accounted for in the books of accounting and are not considered in financial decision making.

This creates a fundamental gap in our current accounting practices. Any financial reporting which does not take into account the contribution of human capital is incomplete. The primary role of accounting is to provide an effective measurement and reporting system for decision making. Thus,

the acceptance of Human Resource Accounting as a separate field of research is necessary. For any organization, the value of its HR depends upon their contribution in achieving organizational goals.

1.2 Indian experiences with HRA

In India, the Government of India took initiative as early as 1968 by issuing the guidelines for incorporating the required information regarding employee (employer relations, lockouts, strikes, training, incentive schemes etc.) and staff welfare activities (education, health facilities, township etc.) in the Annual Reports of Public Sector Entities (No. BPE/10(1)Adv(1)/1968 dated 11 September, 1968).

HRA was pioneered by PSUs like BHEL and SAIL in the 1970's. Several other companies like Cement Corporation of India (CCI), National Thermal Power Corporation (NTPC), Oil and Natural Gas Corporation of India (ONGC), Hindustan Petroleum Corporation Limited (HPCL) etc followed suit and started reporting their human assets. Private sector corporations like Infosys, Reliance Industries, Satyam Computers and DSQ Software have also reported their human asset values at some point.

1.3 Various complexities related to company's Human Capital in Textille Business

Keeping into mind an element of complexity in human capital of fabric business, a Textiles unit has been intentionally chosen for the study. The said complexity is explained as follows:

a) **Heterogeneity in Production Process:** A variety of jobs are required to be performed in fabric business. Fabric Business is complex as compared to yarn business since the production is done as per customers' requirements. Right from procuring raw material till finish product, great amount of precision is required for each and every task.

b) **Use of special skill:** Special skill is required to perform the variety of jobs. Each and every person's role is limited. Manpower is skilled. Majority workers are minimum matriculation pass. Engineer workers are ITI diploma holders. All product variants are made on one type of machine only by making differentiation in manufacturing process.

c) **Timely delivery is required:** Ordering process is season based. It is carried out according to four seasons i.e. spring, summer, fall and winter. Even a minimal delay in production can lead to rejection of order by the customers.

d) **High Temperature in plant:** The temperature in the plant is around 42 degree Celsius. There are many Pharmaceutical packing companies around this unit, where temperature is also not a problem. It posses a biggest challenge for the company to retain the employees.

e) **Separate Standard Operating Practices (SOP) for each single order:** There is a separate Standard Operating Practice (SOP) for each single order with respect to speed and temperature setting details of the machine. A separate Process Sheet is attached along with each order. The operator has to be very particular in understanding and following the specifications of each order. That is why, skilled labour force is required. All production is done strictly according to the order, that too with prototype sample already given to the customer.

f) **Customers are sensitive for Colour and 'hand-feel' of the product:** Customers are Colour sensitive and they are very particular about ' *hand-feel'* of the product, which is very subjective thing. The finished product in fabric business is not a standard product. The CEO of the unit explained this thing by taking an example of 'Swift Desire' car, which is a standard product with all the set particulars. However, the end product of fabric business can never be compared with that of vehicle industry.

g) **All customers are Brand Retailers:** Almost all of the customers of the unit are Brand Retailers viz. a viz. Raymond, Marks & Spencer, H&M etc. Accordingly, the expectations for quality product increases. Hence, For finding new innovation, the company has its own Central Product Development Centre (CPDC).

1.4 Objectives of the study

This study focuses on development of a model for addressing the issue of valuation of human resources. The objectives of the study are:

1. To propose a model for HRA for the valuation of human resources based on the understanding of existing models.
2. To value the human resources of a Textiles unit based on the proposed model.
3. To establish that human resource valuation can be helpful for managerial decision making.

2. Literature Review

The past several decades have witnessed a remarkable emphasis in the area of HRA. Several advocates of HRA have propagated the practical implications of HRA and its use in several areas. The most popular amongst being, Lev & Schwartz (1971), Elias (1972), Hendricks (1976), Pekin Ogan (1988), Dawson (1994), Flamholtz (2004), Herman & Mitchell (2008). Hendricks (1976) conducted a study taking accounting and finance students a as sample. The simulated study shows that HRA has a significant positive relationship with the decision making by the investors. Gupta (1992) conducted a study on the comparative analysis of HRA disclosure practices followed by the selected public and private enterprises. The findings of the study reveal that although the

organizations disclose the information regarding the valuation of human resource, yet it is lacking in the area of quality and use of human resources. He has suggested that attention should be given towards the second element as it can be crucial for the purpose of decision making.

Dawson (1994) investigated in his study the relationship between two the replacement cost model (RCM) and the stochastic rewards valuation model (SRVM) of human resource valuation. The study highlights the practical implications of human resource valuation by throwing light on the benefits and limitations of simulation methodologies and its relationship with the prescriptive and descriptive approaches to the study of management. Batra (1996) asserted in his study the importance of auditing for human resource valuation by suggesting successful human resource accounting must be accompanied a system of HR audit to assure the performance of mangers in the overall interest of the organization. Moreover it is imperative for finding out the efficiency of various segments of the business as well as the human resources in the ever changing business environment. Cuganesan (2006) examined the use of Key Performance Indicators (KPI) by the Australian banks in managing and utilizing the human resources. The author claims that the examination of KPI reporting indicates significant differences in the amount of KPIs reported and focus of the KPIs reported. The main reason for reporting of human resources is the stakeholder perspective. Theeke and Mitchell (2008) evaluated the applicability of reporting under a human resource liability into the traditional accounting framework of contingent liabilities. The authors have examined the effect of human resource reporting on the two very important aspects i.e. market valuation and internal planning. They have propagated the need to have a shift in the human resource liability for the proper valuation of human resources. Singh and Singh (2009) have reported the results of a study nconducted to evaluate the human resource accounting practices in Infosys Technologies Limited (ITL). The study shows that the HRA practices in ITL are satisfactory. In spite of the fact that there is neither any provision in the Companies Act 1956 nor there is standard regarding HRA, ITL has adopted HRA practices on its own. However the authors have suggested the inclusion of HR ratios by ITL in order to make HR decision more effective. Cirappa and Muttesha (2010) reported the results of a study on the relationship between corporate attributes and HRA decision of the listed companies in Bangladesh. The findings reveal that the companies having higher market value give more importance to HRA information and hence disclose more as compared to the smaller companies. The fundamental reason for such disclosure is to maintain such market share in future as well. Another finding of the study is that the financial companies disclose more information relating to human resources as compared to non financial companies. Andrade and Sotomayor (2011) discussed the various models for the measurement of

human resource values. The paper validates the popularity of Lev & Schwartz and Flamholtz model as far as the practical applicability is concerned. Avazzadehfath and Raiashekar (2011) performed a study with threefold objectives i.e. the impact of HRA information disclosure on the investment decisions, factors affecting such decision and the evaluation of most appropriate method for the valuation of human resources. The findings reveal that the disclosure of HRA information significantly affects investment decision. Regarding the method of evaluation, it is being observed that the original cost method is the most appropriate method which is consistent with the Iranian companies. Kashive (2011) argued that in spite of the fact that the Intellectual Capital (IC) measurement, reporting and disclosure are important elements for any organization; the Indian forms are still lagging behind their counterparts in European and American continents. This actually requires awareness about the significance of disclosure of human resource valuation on market valuation so that the companies pay their attention towards voluntary disclosure of human resources valuation.

Ratti (2012) conducted a study to determine the human resource efficiency quotient by calculating the value of human resources at different levels of the organization. The study concludes that the calculation of human resource efficiency quotient is quite an expensive affair and difficult as well. Islam et al (2013) performed a study on the recognition and disclosure of accounting methods and techniques of HRA. The authors have supported the use of economic value approach for the valuation of human resources, as the historical cost method is not the appropriate method of valuation. The authors have advocated the use of specific provisions in the Companies Act for the proper valuation of human resources as well as disclosure of details of investment in human assets in the form of training and development expenses, salaries and other allowances etc through annual reports. Pandurangarao et al (2013) advocated the use of HRA by arguing that there is need to do more in the area of human resource valuation so as to show greater progress. In fact it requires an extensive search into the valuation methods and models, so as to ensure its practical applicability. Qatawneh (2013) found in his study that there exists a positive and significant relationship between human resource accounting information and accounting information system. At the same time it also enhances the reliability of the accounting information system. Human resource accounting information had contributed to increase efficiency and role effectiveness of accounting information systems in companies. Khodabakhshi and Arash (2014) in his study focused on the analysis of HR valuation models used by the Indian companies. The main objective of the study is to do analysis of the variables so as to arrive at some logical decision and monitor the effectual use of human asset

and assign value to the human resources. The findings reveal that amongst all the models, Lev and Schwartz model is the most popular.

3. Methodology

A two pronged research methodology was followed in this study. The first part was development of a model for HRA. To achieve this, the existing body of knowledge was thoroughly studied. This also covered two aspects, studying the existing models of HRA and studying the implementation of these models in different parts of the world and understanding the inferences of these researches.

The second part is an empirical study for practical application of the model developed above. It is based primarily on the use and interpretation of primary data in the form of employee salary/wages, emoluments and other employee related expenses.

Data has been primarily collected through physical visit to the plant the Textiles unit. In order to understand the human resource practices, complexities in production process, supply chain management, marketing and distribution network, challenges faced by the company, various officials were contacted personally.

The secondary data and information have been used mainly for the purpose of ascertaining the existing accounting practices regarding valuation of HR, the practical application of HRA models and the disclosure of HR values in the annual reports of the companies.

4. Conceptual Discussion

The review of literatures throws light on some the important studies on HRA practices which are adopted by the companies. At this point of time it becomes imperative to understand the approaches for valuation of HRA. There are two approaches i.e. cost based and ***value based.*** The cost based models are based on acquisition cost and replacement cost. The value based models are based on finding out the present value of employees. Some of the important value based models include **Hermanson's Model** (calculating present value of discounted wages of employees and adjusting by efficiency ratio), **Flamholtz's Model** (calculating the amount that an organization realizes if an employee works in an organization considering the fact that he can leave the organization), **Ogans Model** (calculating the value of human resources based on efficiency index and standard work index), **Jaggi and Lau's Model** (Based on calculating the value of human resources based on homogeneous groups) and LEV AND SCHWARTZ MODEL. The current research, is largely based on *'Lev and Schwartz Present Value of Future Earnings Model'* and research findings of Singh in his book *'Accounting for Human Resources- Acquisition, Development and Retention'*. In order to understand this research, we need to first understand the studies stated above.

4.1 Lev & Schwartz Model

The Lev & Schwartz model states that the human resource of the company is the summation of the Net Present Value (NPV) of the expenditure on employees. It determines the present value of future earnings of a person in an organization. Under this model, the following steps are adopted to determine the value of HR:

i. All employees are classified in specific groups according to their age and skill.
ii. Average annual earnings are determined for various ranges of age.
iii. The total earnings which each group will get upto retirement age are calculated.
iv. The total earnings calculated as above are discounted at the rate of cost of capital.

The value thus arrived at will be the value of human resources/assets. So, the human capital embodied in a person is the present value of his earnings from employment. The following formula has been suggested for calculating the value of an employee according to this model

$$V_r = \frac{I(t)}{(1+r)^{t-r}}$$

Where:

V_r = the value of an individual r years old

I(t) = the individual's annual earnings up to retirement

t = retirement age

r = the discount rate specific to the cost of capital to the company.

The limitations of Lev and Schwartz Model are as follows-

1. The Model ignores the possibility and probability that individual may leave an organization for reason other than death or retirement.
2. The acquisition expenses incurred by the company on its employees are not considered.
3. The development expenses incurred by the company on its employees are not considered.
4. This model does not consider the variable of career management of the worker within the organization.

4.2 Proposed Acquisition, Development & Retention Model for HR Valuation

The proposed model aims to incorporate existing research in the field of HRA and develop a new model for HR valuation. The objectives of this model are:

1. Quantify and calculate the Acquisition, Development and Retention cost of existing HR and use them to find the 'value of HR' of a Textiles unit.

2. Analyse the value of HR and its uses in managerial decision making.
3. Enumerate the possible benefits arising out of such disclosure to the stakeholders of a company.

4.2.1 Components of ADR Model

There are 3 main components of ADR Model:

1. **Acquisition Cost**: It is the cost of acquiring the HR by an organisation and includes- agency fees, advertisement cost for recruitment, overhead expenses in selection, expenses incurred on recruiting workers by organizing various camps in rural areas and relevant salary of recruitment personnel. AS 10 specifies that the cost of fixed assets includes any directly attributable cost of bringing the asset to its working condition for its intended use.
2. **Development Cost**: It is the training and development expenses undertaken by organisation for effective and efficient employment of HR and includes- induction expenses, on/off the job training cost, salary/fees of training staff, travel & lodging cost for off-the-job training, study material cost, paid leave for training and trainer fees.
3. **Retention Cost**: It is the cost incurred by an organisation to retain its employees thereby gaining long term benefits of performance from them. It includes- basic wages/salary, allowances, fringe benefits, welfare expenditure, employer contribution to PF, retirement benefits and gratuity. An organisation intends to retain HR up to its useful life. Retention cost also includes expenditure incurred by the company on recreational activities for employees viz v viz get togethers, festivals celebration etc.

4.3 Empirical Study- Application of ADR Model:

Table 1: Compensation and Expense Summary

PARTICULARS	MANAGER +EXECUTIVES + STAFF	WORKERS
Acquisition Cost	References, online placement agencies and consultants	Expense incurred for holding various camps in rural areas for recruitment
Development	Cost incurred by company's Training	Induction cost
Retention Cost	Basic	Minimum Wages
	Employer contribution to PF@ 12%	Employer contribution to PF @12%
	Leave Encashment	Admin charges @ Rs 0.85%
	Gratuity	Welfare Fund
	House Rent Allowance	Inspection charges @ 0.01%

	City Compensatory Allowance	ELDI charges @ 0.5%

Table 2: Hierarchical Structure of Textile Unit

SL NO	HIERARCHY	PARTICULARS
1	STAFF	● Unskilled/ inexperienced fresh graduates ranging from S5 to S1 depending upon their skill and experience.
2	OFFICERS	● Campus recruits having qualification of MBA/B Tech/ Diploma in textiles ● Two levels O2 and O1 depending upon their skill and experience.
3	EXECUTIVES	● Skillful professionals with MBA/B Tech having Minimum 3-7 years of experience ● Two levels E2 (Executive) and E1 (Assistant Executive) depending upon their skill and experience.
4	MANAGERS	● Either Section Heads or Sub Heads or Main Heads ● Four levels: M4 --- Chief Manager M3 --- Senior Manager M2 --- Manager M1 --- Assistant Manager
5	AVP and above	● Includes all Key Managerial Personnel ● Five levels: AVP --- Assistant Vice President VP --- Vice President SVP --- Senior Vice President GM --- General Manager CEO --- Chief Executive Officer

** Keeping the element of confidentiality, the company provided data of employees til M3 level only. Therefore, the study has been restricted till M3 level only.

Table 3 : Number of Employees at a Glance

SR. NO.	PARTICULARS	NO. OF PERSONS
1	M3 LEVEL - MANAGER	07

2	**M2 LEVEL - MANAGER**	**12**
3	**M1 LEVEL - MANAGER**	**11**
4	**E2 LEVEL - EXECUTIVE**	**20**
5	**E1 LEVEL - EXECUTIVE**	**38**
6	**O2 LEVEL – OFFICER**	**45**
7	**O1 LEVEL – OFFICER**	**31**
8	**S5 LEVEL – STAFF**	**06**
9	**S4 LEVEL – STAFF**	**30**
10	**S3 LEVEL – STAFF**	**26**
11	**S2 LEVEL – STAFF**	**24**
12	**S1 LEVEL – STAFF**	**03**
13	**SS LEVEL – STAFF**	**28**
14	**Workers: Production/ Technical/ Non Technical**	**573**
15	**Workers: Engineering/ Maintenance/ Electrical**	**104**
Total		**958**

5. Valuation of Human Capitalization of Textile Unit

1. The workers have been valued for the year 2016 .
2. The total workforce of the company is divided into FIVE major groups on the basis of nature of work performed by them.
3. The Textiles unit has 677 Workers sub-divided into Production/ Technical/ Non Technical/ Engineering/ Maintenance/ Electrical
4. Values for various heads namely acquisition, development and retention are calculated separately.

5. All future expenses are discounted at the cost of capital which was discounted at 10% to arrive at present value of future earnings of employees.
6. The acquisition and development cost of current workforce already incurred are calculated.

Table 4: Acquisition Cost of Employees

	Managers	Executives	Officers	Staff	Workers	Total
Number	30	58	76	117	677	958
Acquisition cost per year	80,855	60,754	40,800	1,64,799.53	3,45,416.59	6,92,625.12
Acquisition cost per employee per year	2,695	1,048	537	1410	510	

Table 5: Training & Development Cost of Employees

Common/Misc.	357506.3
Managers and Above	3255305
Officers/Executives	14275
Total	3627086.3

Table 6: Retention Cost of Employees

	Managers	Executives	Officers	Staff	Workers
Number	30	58	76	117	677
Retention cost per year (Cost to company) (1)	3,06,25,519	3,13,09,834	2,63,70,213	2,36,29,355	11,31,46,848
Retention cost per employee per year	10,20,850	5,39,825	3,46,977	2,01,960	1,67,130
Present Average Age (2)	30	32	28	29	30
Retirement Age (3)	58	58	58	58	58

Increment Rate	8.42%	9.74%	9.74%	8.42%	8.42%
Annual Increment (4)	25,78,668.7	30,49,577.83	25,68,458.75	19,89,591.70	95,26,964.6
Cost to Company at the time of retirement (5) =(1) + (4)*(3-2)	10,28,28,242.6	11,05,98,857.6	10,34,23,975.5	8,13,27,514.3	37,99,01,856.8
Present value Factor @ 10% assumed rate	0.0693 (for 28 years)	0.0839 (for 26 years)	0.0573 (for 30 years)	0.0630 (for 28 years)	0.0693 (for 28 years)
Present Value of Cost to Company at the time of retirement (assumed Discount Factor @ 10%)	71,25,997.21	92,79,244.15	59,26,193.80	51,23,633.4	2,63,27,198.68

Table 7: Total Present Value of Human Capitalization

PRESENT VALUE OF COST TO COMPANY AT THE TIME OF RETIREMENT				
Managers		71,25,997.21		
Executives		92,79,244.15		
Officers		59,26,193.80		
Staff		51,23,633.4		
Workers		2,63,27,198.68		
Total				5,37,82,267.24
Acquisition Cost				6,92,625.12
Welfare expenses p.a				
employee welfare exp		1109189.54		
Festival celebration exp		461138.54		15,70,328.08
Training Cost p.a		36,27,086.3		

Plus: Additional training cost incurred due to attrition (overall 13%)		4,71,521.22		40,98,607.52
TOTAL PRESENT VALUE OF HUMAN CAPITALISATION				6,01,43,827.96

6. Human Capitalization and Managerial Decision Making

The value of human capital thus arrived at, can also be used by the company for managerial decision making. Following ratio analysis is useful in his regard:

Table 8: Ratio Analysis with HR Values

RATIO	FORMULA
Increase in value of HR	(Current year value of HR - Previous year value of HR) x 100 / Previous year value of HR
HR contribution towards Capital employed	Value of Human Resource x100 / Capital Employed
HR contribution towards Net Profit	Value of HR x 100 / Net Profit
Worker contribution towards Operating Profit	Value of HR x 100 / Operating Profit
Revenue per unit HR	Total Revenue / Value of HR
Total Assets to HR Assets	Total Assets (excl HR assets) x 100 / Value of HR

Increase in Value of HR: This ratio indicates whether the value of HR has increased from the previous year or not. It also tells the magnitude of such change. It is useful when the value of HR is calculated periodically over the years.

Contribution Ratios: These ratios calculate the contribution of employees towards various major factors of the company. It assumes that of the four factors of production, only man is an active factor and responsible for extracting value from the other factors. It indicates the ability of HR to extract value from its factors of production. It includes:

1. HR contribution towards capital employed
2. HR contribution towards net profit
3. Worker contribution towards operating profit
4. Revenue per unit of HR
5. Total assets to HR assets

Return on Human Resources

So far, an attempt has been made to devise a model for valuation of HR based on futuristic values. In simple terms, the value of HR has been calculated by finding the present value of the salary, the employees will be paid till their age of retirement which turns out to be a number of big denomination.

Such valuations can be used an effective tool when it comes to motivation of employees. But these figures are of little significance for managerial decision-making. This gives rise to a need for formulating a technique which is based on the current accounting year's values and which may help in extracting results useful for decision-making

Thus, the following concept is framed which is based on the assumption that the super normal profits earned by a firm are purely due to the efforts of its HR.

7. Recommendations, Limitations and Conclusion

The model considers **all expenses** made on an employee during his serviceable life by dividing them under acquisition, development and retention cost. The possibility of **attrition** has been considered in this model. The acquisition and development expenses previously incurred are taken at real values, thereby increasing the accuracy of valuation. **Annual increments** in wages/salaries have been duly accounted for.

7.1 Recommendations:

- Including value of human resources can influence the investment decision of investors in an orgaisation and hence must be calculated periodically.

-'Value of HR' must be shown on the Assets side of Balance Sheet under 'Intangible Assets' and an equal value must be shown as 'Capital Reserve' on the Liabilities side.

- 'Value of HR' must be used for managerial decision making and not financial decision making.

- Organisation should value its employees at the end of every year and should use such values for comparison with previous years to check whether its Human Assets were appreciating over the years or not.
- Ratio analysis can be used for various managerial decision making. Also, proposed model can be used as an effective motivational tool as it enables employees to know their value to the organization in quantitative terms.

7.2 Limitations:

- 'Value of HR' can only be used for Managerial Accounting and not Financial Accounting as the system of system of HRA is still not foolproof and a standardized practice of valuing HR is yet to be developed.
- The model works well for manufacturing companies of small to medium size where employees can be divided easily into homogenous groups. However, in service sector or large companies, calculating HR values through the above model may be difficult due to size.
- The model relies heavily on past data which may or may not be maintained properly by organisations.
- Forecast of future values are susceptible to wide range of uncertainties that may arise in the future and may render present values inaccurate.
- Cost of capital is a volatile concept and may be different for different years. Hence, generalizing a rate is difficult.
- Considering HR as assets like any other physical asset is a partially correct statement. While HR like other assets works towards achievement of organisational goals, organisation has little control over the way HR will behave. Additionally, unlike other physical assests, value of HR for any organisation actually increases with time.

7.3 Conclusion:

The proposed model can be used as an effective motivational tool as it enables employees to know their value to the organization in quantitative terms. It will help an employee to estimate his earnings throughout his tenure in the organization which will give him a sense of financial and moral security. Moreover the persons working towards the valuation of human resources must understand its usefulness towards managerial decision making. The present study highlights this

aspect by taking a hypothetical example of two firms and suggests that the contribution of HR towards capital employed can assist the managers in arriving at better decisions. But at the same time, it is an agreed fact that the concept of human resource accounting is still in its adolescence stage and struggling for its applicability by the organizations A lot of research work is required to be done before a holistic method of HR valuation is devised. The value of HR depends upon the contribution in achieving organisational goals. If an employee contributes positively towards this goal, he/she will be rewarded by the organisation in the form of increased security and incentives, thereby increasing his/her value.

Lev & Schwartz is the most widely used model for HR valuation in most companies because of its ease of use and understanding. However, it suffers from some limitations and attempt has been made by this research to overcome those limitations and give an alternate model for HR valuation. Practical applicability of the model and its use in managerial decision making has also been discussed thoroughly.

Time and again studies have shown that superior performing companies recognized and rewarded their best employees thereby highlighting the value of human capital. But at the same time, it is an agreed fact that the concept of human resource accounting is still in its adolescence stage and struggling for its applicability by the organizations. A lot of research work is required to be done before a holistic method of HR valuation is devised.

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