



06.

VOLTE: VOLTAGE OF THE NEW ERA

Mr. Rohan P. Dahivale

Wireless operators throughout the world are getting ready to retire their older 2G voice networks and replace them with service that runs over the new super speedy 4G LTE networks they've built during the past couple of years.

The benefit to wireless operators is crystal clear: more-efficient use of their network resources, which will result in lower operational costs. But the benefit to consumers, at least in the short term, isn't as obvious.

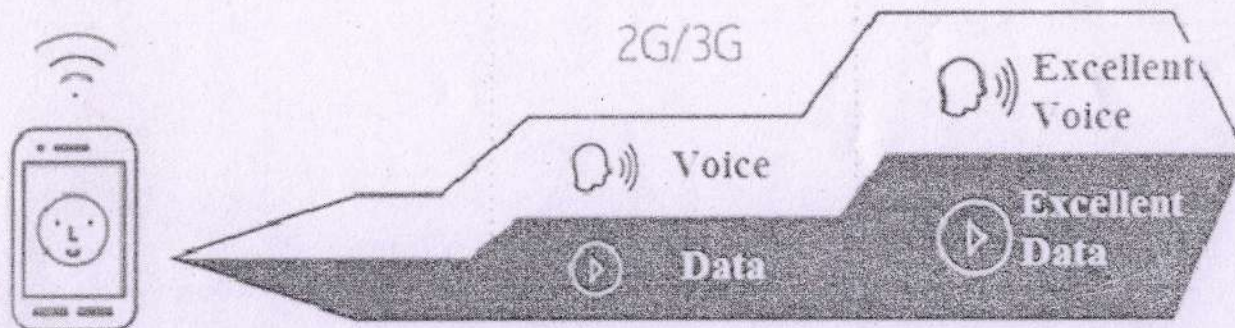
Still, in the long run consumers will see better voice quality and more enhanced services. If we're lucky, we'll also see true device interoperability among various carrier networks. This means being able to take any device to any carrier network.

What is VoLTE?

Voice over Long-Term Evolution (VoLTE) is a standard for high-speed wireless communication for mobile phones and data terminals. It is based on the IP Multimedia Subsystem (IMS) network, with specific profiles for control and media plans of voice service on LTE defined by GSMA in PRD IR.92.

Voice in LTE
requires VoLTE

4G with
VoLTE



This approach results in the voice service being delivered as data flows within the LTE data bearer. This means that there is no dependency on (or ultimately, requirement for) the legacy circuit switched voice network to be maintained.

VoLTE has up to three times more voice and data capacity than 3G UMTS and up to six times more than 2G GSM. Furthermore, it frees up bandwidth because VoLTE's packets headers are smaller than those of un-optimized VoIP / LTE.

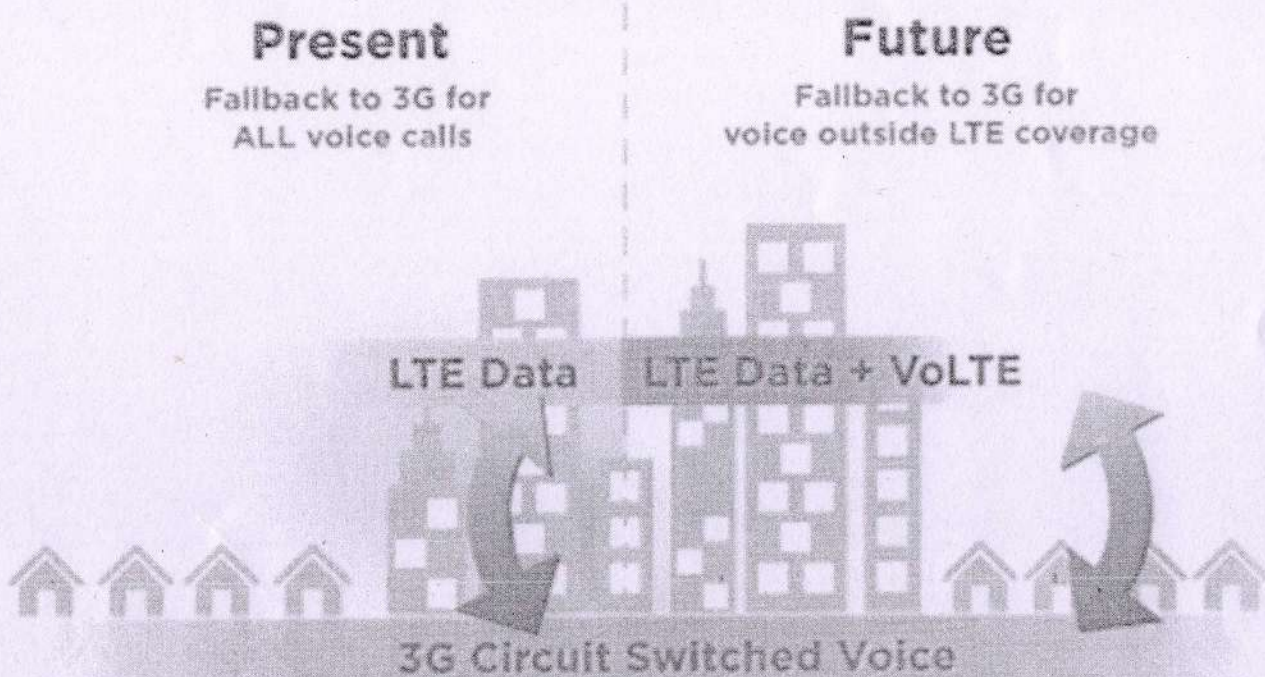


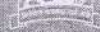
In May 2014, Singtel introduced the world's first commercial "full-featured" VoLTE service in Singapore, only in combination with the Galaxy Note 3; it was subsequently expanded to the other.

Most of the handset makers in now equip 4G VoLTE feature as a result of the revolution it made in the Indian market in last few months. Having said that, desi mobile maker Lava recently launched a feature phone with 4G VoLTE dubbed as 4G Connect M1.

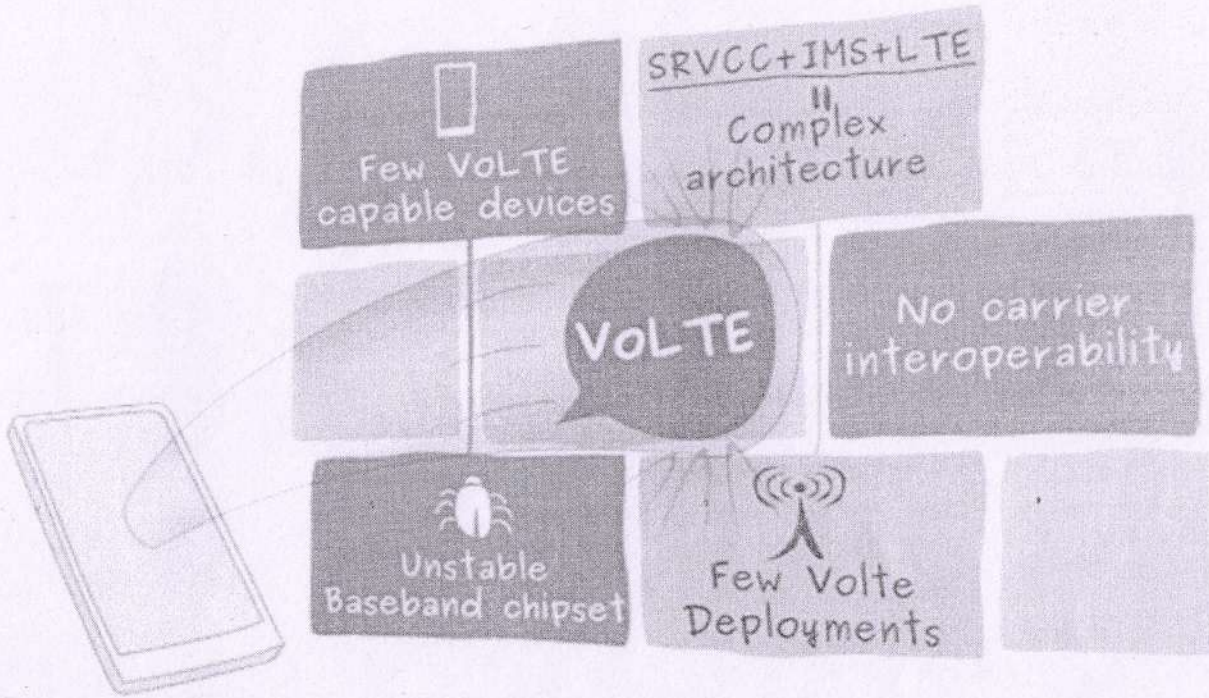
The Voice over LTE is just another way of calling but through the Internet. Instead of routing the calls over standard Internet protocol, VoLTE calls are delivered over a mobile 4G LTE broadband network.

Advantages of VoLTE	
HD Voice Call	<ul style="list-style-type: none">• HD Voice call talking about the advantage, this feature provides HD voice call, which is not available in circuit switched networks as it uses HD Voice codecs such as AMR Wideband.• As the calls are delivered over the LTE networks, the latency (Delay) is much lower when compared to current mobile networks.
Video Calling	<ul style="list-style-type: none">• Video calling Moving on to the next, the VoLTE also supports native video calling as well.• Here, the video services use the HD video codec called H.264, which allows the operators to offer video services on their networks.
Improves Efficiency	<ul style="list-style-type: none">• Improves efficiency previously, when you receive a call your mobile data stops until your call disconnects.• But now, both the voice and data work simultaneously allowing you to place a voice call over a high-speed data connection itself.• You can browse the internet while you are on the call.





Disadvantages of VoLTE	
Not all smart-phones	<ul style="list-style-type: none"> • Not all smart-phones some of them who bought the mobile just before the revolution of Jio won't be having VoLTE feature in the Smart-phone in case of mid-range and lower end version. • For example, XiaomiMi4 doesn't support 4G VoLTE option in India.
Battery life	<ul style="list-style-type: none"> • Battery life while it is not sure, some report says that the VoLTE feature slashes the battery life of the smart-phone by 50%. • The other report says that it optimizes the battery life as it uses a continuous stream of small packets with low data rate.











The Bottom Line

VoLTE is the future of voice communications on all wireless networks, whether wireless customers want it or not. There will be benefits to consumers in the long run. But in the short term, there could also be some hiccups that frustrate consumers.

Once wireless operators get more experience in real-world deployments, they'll refine the technology. Dropped calls won't be an issue, and eventually VoLTE and all the nifty benefits and services that come with it will be available on all wireless networks, including crystal-clear voice quality and video chat services.



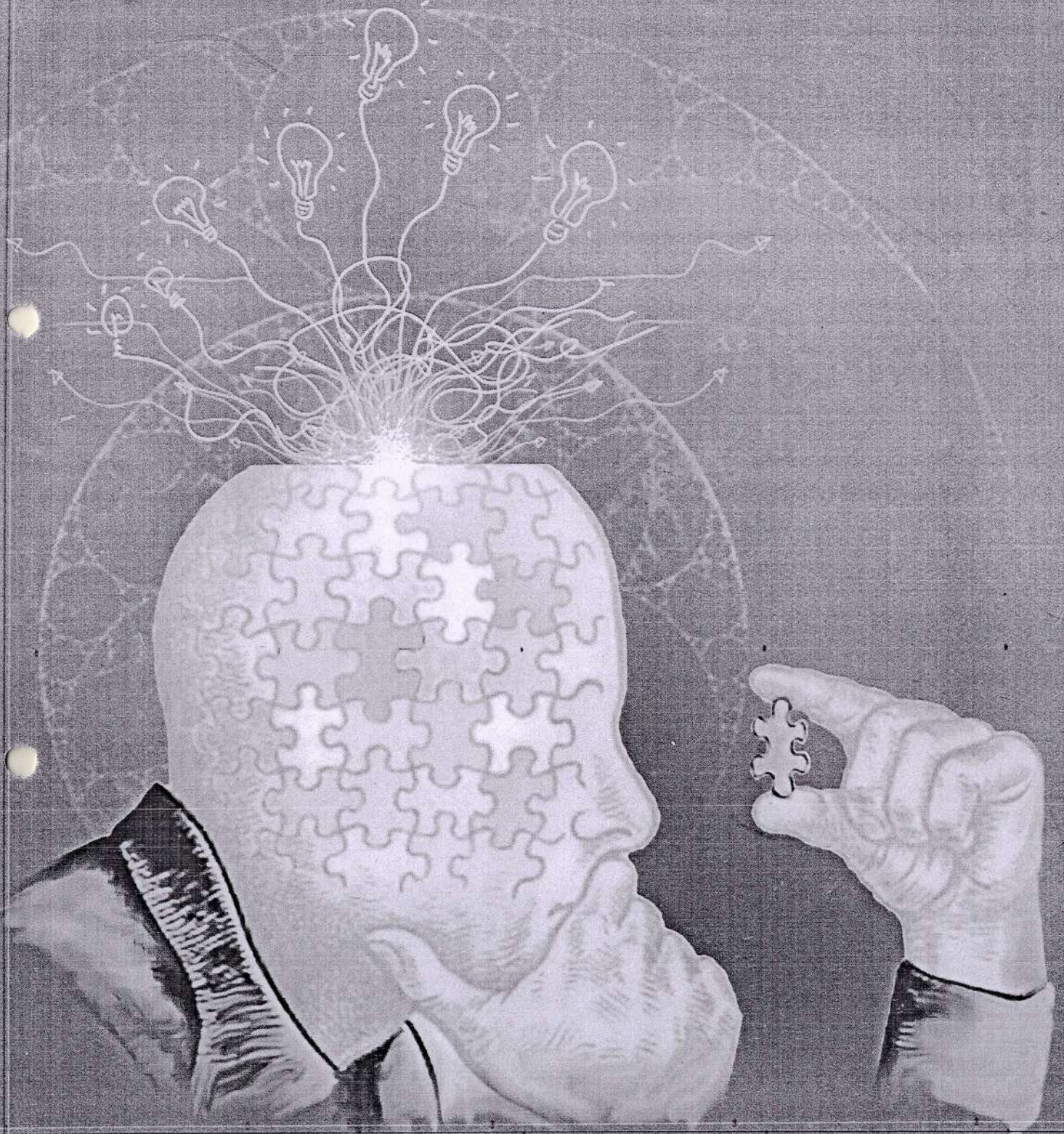

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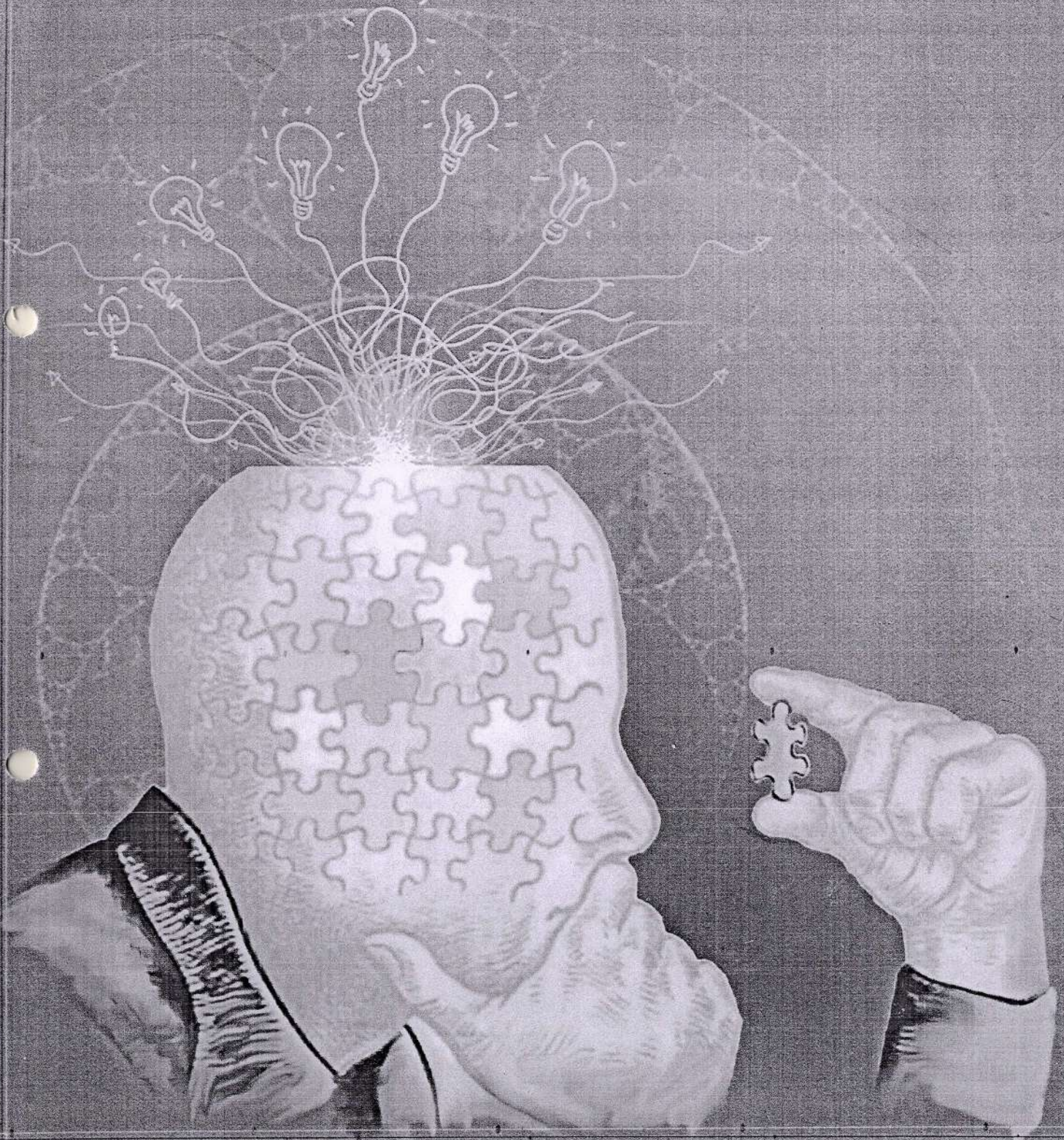
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08.

GREEN HRM: GROUND-BREAKING APPROACH IN INDIAN BANKS

Ms. Roshna Jaid

In recent scenario Banks are the important financial pillars of Indian Economy. Global Pressure & policy of liberalization affected competitiveness of banks which result into the Combination of HRM & corporate policies. Survey of Indian Bank Association & BCG report that the Indian Banks will face new challenges in upcoming years like

1. Innovation & experimentation for economically viable solution for addition in financial structure.
2. Competitive & Unique, creative Human Resource Policies to stay competitive.

Many new Yojana from Honorable Prime Minister of India boosted Banks contribution in financial enclosure. In same time employee's expectations from the Banks also raised, this need to improve HR policies & practices to enhance productivity. One of them Green HRM is the key business strategy in today's competitive world. The Reserve Bank of India (RBI) issued a circular in December 2007 (RBI 2007-2008/216) highlighting the importance of Banks to act responsibly & contribute to sustainable development, emphasizing need of Banks to establish institutional mechanism to preserve sustainability.

This article is an attempt to emphasis Green HRM practices followed by Indian Banks with respect to their ground breaking approaches.

Keywords: Banking, Green HRM, Ground Breaking Approach, Green Practices, Indian Banks.

INTRODUCTION:

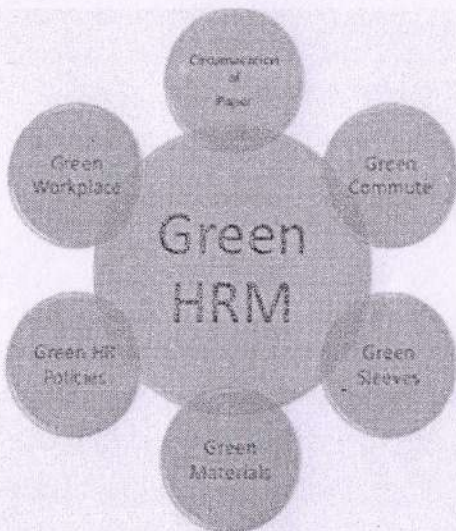
Banks are to be expected play a very significant role in the economic development & emerging markets will provide ample business opportunities to harness. Green Banking is a general term, under which multitude of areas cover for being environmental friendly money investment. Green Banking is a bank to promote environmental & social responsibility but operates as a traditional community bank & provides excellent services to clients & investors. Green Banks are also beingan Ethical Banks, Environment Responsible banks, Socially Responsible banks, Sustainable Banks. Green HRM in banking practices is divided into following categories:

1. Green Induction
2. Green job Design & Analysis
3. Green Human Resource Planning
4. Green Recruitment
5. Green Training & Development
6. Green performance Management & Evaluation
7. Green Employee Engagement
8. Green Employee Relations

Green HRM:

Green human resources refer to using every employee touch point/interface to promote sustainable practices and increase employee awareness and commitments on the issues of sustainability. It involves undertaking environment-friendly HR initiatives resulting in greater efficiencies, lower costs and better employee engagement and retention which in turn, help organizations to reduce employee carbon footprints by the likes of electronic filing, car-sharing, job-sharing, teleconferencing and virtual interviews, recycling, tele commuting, online training, energy-efficient office spaces etc. Banks need to add all activity for enhancing the value of employees & the banks also.

Green HRM is a Part of CSR Activity



To implement any corporate environmental program, several units of an organization such as human resource, marketing, finance, operations are put together. But the major part lies to the human resource department as corporate social responsibility (CSR). Though the green HRM is the wider program of corporate social responsibility. In the organization, human resource and their systems are the basic foundation of any business. The green human resource management consists of two major parts of an organization.

Green Employee Relations:

In human resource management, the employee relations are important aspect to establishing good natured employer & employee relationship. Through employee relations motivation & morale of individuals will be enhanced.



Review of Green Initiatives in Banks:

1. State Banks of India :

Banks offers a wide range of financial products & services, each of its has direct & indirect impact on society & environment. Few of the banks recent products & services give benefits to society & environment like Green Channel Counter (Green HR Service), Green Remit Card etc. Also doing CSR like World Water day, Distribution of water Purifiers to School, Fans Distribution to Schools.

2. Punjab National Banks :

Various Green Initiatives like Tree Plantation drives, green buildings.



- Bank encouraging employees to reduce printing, composite fax machines, two sided printing.
- Bank signed green pledged of the ministry of new & renewable energy.
- Environmental protection in the credit process, all loans approval is to be done from pollution control board then only disbursement of loan happens.
- Placed guidelines for providing CSR activity like solar, energy, wind & hydrel energy.

3. **Bank of Baroda :**

Some of the major initiatives in improving customer services like

- Online fixed deposits – Bank customers can now make online deposits through online system
- SMS alert facility

4. **Industrial Development Bank of India :**

IDBI bank takes a step towards the green initiatives in corporate governance by doing paperless & sending documents to shareholders through electronic mode. Bank proposes to prepare all data in electronic forms only.

5. **Syndicate Bank :**

Processing of Green initiatives includes applications of electronic means, a national electronic fund transfer helped syndicate bank in cutting of all stationary expenses.

6. **Canara Bank :**

Canara bank initiator of green banking is a paperless banking. Bank also known to be conducting carbon financing in Delhi & Mumbai.

7. **Union Bank of India :**

UBI use green banking channel for filling up challans or vouchers. Entire report of bank to top management is through e-reporting using SMS & email

RESEARCH FINDINGS:

- Most banks are using various corporate socially responsible practices
- RBI needs to make more required policies on Green HRM practices.
- Many Public banks focusing on various practices like paperless transactions, e-reporting, e-circular, carbon financing etc.
- They are lacking in Green HRM practices. Green HR practices will have positive impact on environment sustainability.

PROPOSED SIGNIFICANT STRATEGIES IN RELATION TO GREEN INITIATIVES:

From literature review & above study clearly state that, there is need to develop green HRM practices like

- ❖ **Green Recruitment & Selection:** E-recruitment also known as online recruitment – in all aspects of finding, attracting, interviewing, hiring personnel.
- ❖ **Green Teams:** Green teams in which Green captain for resident experts on eco options products & environmental issues.



- ❖ **Green Culture:** Harmony together human & environment formed through green Culture. Green culture is the adoption of Human friendly environment.
- ❖ **Green Employee Involvement:** Commitment & engagement from top to bottom management for sustainability.

CONCLUSION:

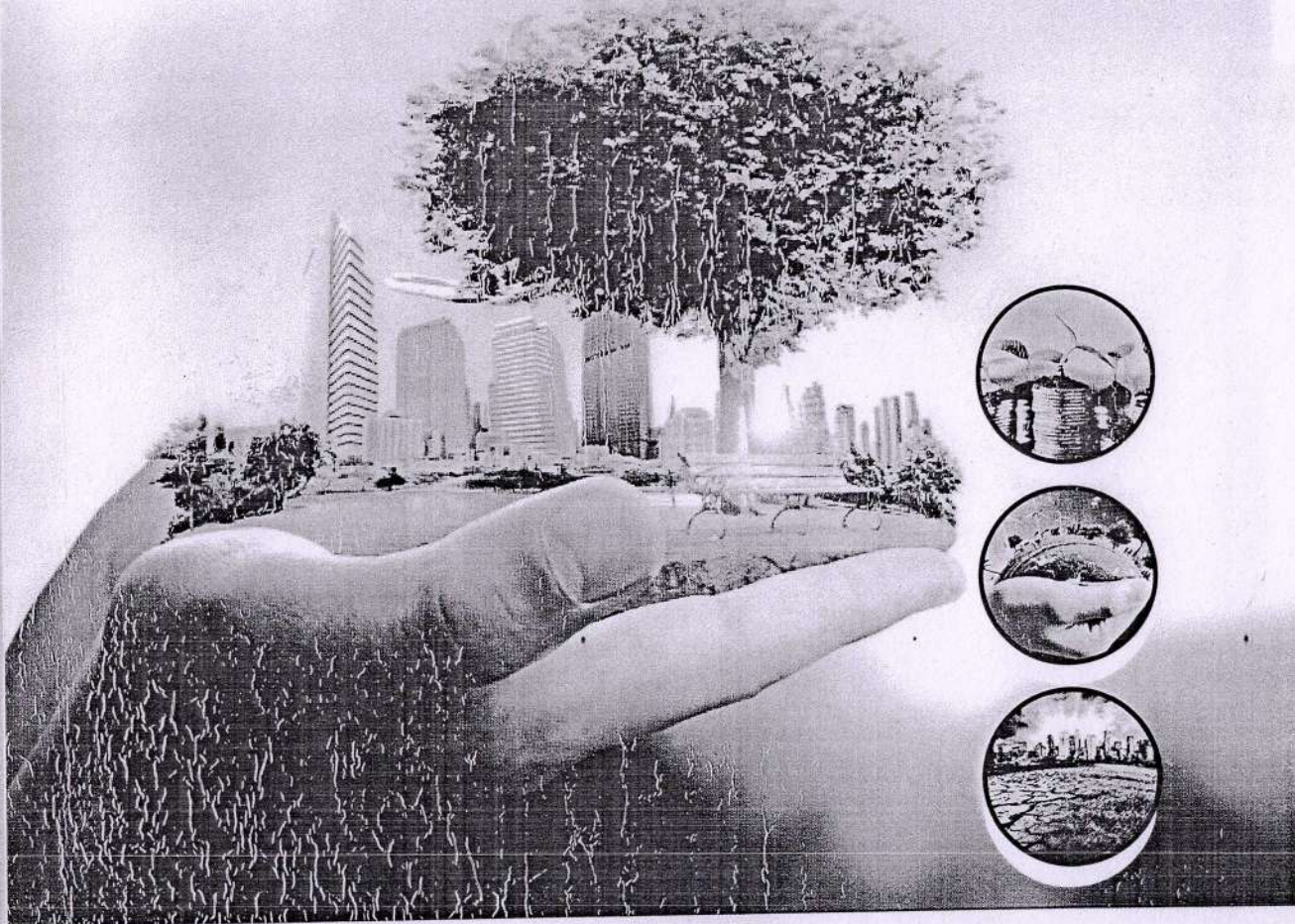
Result of the study encouraging use of Green HR practices in banking sector. Environmental issues have not been completely inserted in traditional HRM practices such as Recruitment to career planning, Reward Management. Analysis clearly depicts that various HR variables like a team, training, culture, rewards etc. Therefore Indian banks need to adopt ground breaking approach for implementing Green HR strategies to promote sustainability.

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SUSTAINABILITY: FOR A BETTER TOMORROW



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Dr. Hansraj Thorat
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Pimpri Chinchwad Education Trust's
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**A COMPARITIVE STUDY OF FINANCIAL HEALTH OF BRIHAN MUMBAI
ELECTRIC SUPPLY AND TRANSPORT (BEST) WITH PUNE MAHANAGAR
PARIVAHAN MAHAMANDAL LIMITED (PMPML)**

Ms. Jayasri Murali Iyengar

Ph.D. Scholar, S. B. Patil Institute of
Management, Nigdi, Pune
Email: jayasrimurali@gmail.com

Dr. D. B. Bharati

Director, Rajgad Institute of Management
Research & Development, Pune
Email: drdbbharati@gmail.com

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ABSTRACT

Urbanization has triggered the enormous potential for growth in the urban passenger transport undertakings. In India the road transport undertakings are blemished by the inefficient cost control systems, rising cost and increasing tax structure. Moreover, Poor capital structure increases cost of capital and creates a huge burden of interest and affects capital outlay decisions and working capital of the undertakings. The banks are at stake to finance these undertakings without viable business plans. This study focuses on the financial soundness of the two major urban passenger transport undertakings in Maharashtra in terms of revenue as well as no of passengers carried namely BEST and PMPML. To predict the financial solvency, Altaman's Z-Score (E.I) was used by analyzing the last five years financial statements.

Keywords: *Urban Passenger Transport, Financial health, Financial Soundness, Solvency and Z-Score.*

INTRODUCTION

In India, rail and roads are considered to be the dominant modes than air and water for passenger traffic. According to NTDP report "The share of roads in passenger traffic (billion passenger kilometer or bpkm) in total passenger traffic carried by rail and roads has increased from 32% in 1951 to 90% in 2011-12" (India Transport Moving India to 2032). Moreover total passenger traffic is expected to grow at about 15% per annum to reach 1,68,875 bpkm in 2031-32 from 10,375 bpkm in 2011-12 but expected growth road traffic is 15.4% per annum". This unveils a lot of growth potential for the urban passenger transport undertakings. But to tackle this enormous growth urban passenger transport undertaking are not capable because of their poor financial health. Both BEST and PMPML are suffering from huge losses due to poor operational efficiency.

"According to a government report, most SRTUs are unprofitable. The combined net loss of 47 SRTUs in 2015-16 was Rs. 11,349 crore, 7.2% higher than in 2014-15. Topping the list was the Delhi Transport Corporation (DTC), with a loss of Rs 3,411 crore. It was followed by the Brihanmumbai Electric Supply and Transport (BEST) at Rs 1,061 crore,

and the Kerala State Road Transport Corporation (KSRTC) at Rs 738 crore.” (How poor operational efficiency bleeds India’s public bus transport undertakings). In India State transport undertaking and Municipal transport undertaking contribute Rs.35928.73 crores to GDP and provide employment to 727,990 during 2011-12.

BEST

The Brihan Mumbai Electric Supply and Transport Undertaking is the civic transport and electricity provider public body based in Mumbai, Maharashtra, India. In 1926, the BEST also became an operator of motor buses. The Undertaking operates one of India's largest fleets of buses. The bus transport service covers the entire city and also extends its operations outside city limits into neighbouring urban areas. In addition to buses, it also operates a ferry service in the northern reaches of the city.

Table 1 – Descriptive Statistics of BEST for the period 2010-15

BEST					
Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
No of Buses	4652	4669	4259	4314	4247
No of Passenger in Lakhs	15352	14395	14096	13068	12216

Source: www.data.gov.in/physical performance for the period 2010-2015

PMPML

Pune Mahanagar Parivahan Mahamandal Ltd (PMPML) is the public transport service provider for the city of Pune and Pune Metropolitan region, which includes areas surrounding of Pune and Pimpri Chinchwad. PMPML was created following a merger between the Pune Municipal Transport (PMT) and Pimpri-Chinchwad Municipal Transport (PCMT) during 2007. Formerly, PMT was responsible for public bus operations in the Pune city limits and PCMT ran buses in the neighboring city of Pimpri-Chinchwad in Pune Metropolitan Area.

Table 2 – Descriptive Statistics of PMPML for the period 2010-15

PMPML					
Particulars	2010-11	2011-12	2012-13	2013-14	2014-15
No of Buses	1549	1634	1832	1841	2087
No of Passenger in Lakhs	4500	4496.98	4604.88	4248.94	4433.57

Source: www.data.gov.in/physical performance for the period 2010-2015

REVIEW OF LITERATURE

(Bhargava), in their paper has studied the financial distress in selected SRTUs using Logit Probability analysis. He found that SRTC under his study were not financially

sound and the probability of Gujrat State road transport Corporation, Rajasthan State Road Transport corporation, and Kadamba Transport Corporation is 1.

(Bhushan Pardeshi), in their research paper studied the solvency of Kingfisher Airline Ltd, Jet Airways Ltd, SpiceJet Ltd using Z Score. They found that the Kingfisher Airlines Ltd. is in a Gray Zone, Jet Airways Ltd was in a financially distress zone and SpiceJet Ltd. was in a safe zone.

NEED OF THE STUDY

NTDPC report predicts that 15% increase in the passenger population every year. This study is conducted whether these transport corporations are equipped to tackle the opportunity. Financial health check-up portrays whether the financial position is sound. Moreover the saying "Prevention is better than cure". Early detection of financial sickness will help the organization to formulate strategies so that they can revamp their financial strength.

OBJECTIVES OF THE STUDY

- To evaluate the financial performance of BEST and PMPML
- To assess the financial solvency using Z-Score analysis

HYPOTHESIS

H_0 : There is no financial distress in BEST and PMPML

H_1 : There is financial distress in BEST and PMPML

RESEARCH METHODOLOGY

The data were collected from CIRT 's State Transport Undertakings Profile reports and the physical and financial performance reports from www.data.gov.in. The researcher was interested to find out how these monopoly urban passengers lost their market share to Uber and Ola. The major reason was they did not equip themselves to increase the number of buses due to shortage of funds to buy new buses and replenish the existing old vehicles etc. Hence it threw the light to check the financial solvency position. The period of the study pertains to 01/04/2011 to 31/03/2015.

Z- Score Model

It was developed by Altman Z-score gauges the probability of becoming bankruptcy and portrays the financial health. It is based on five financial ratios that can be calculated from data found on a company's annual report. It uses profitability, leverage, liquidity, solvency and activity to predict whether a company has a high degree of probability of being insolvent.

38 crore." (How poor
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2015

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2015

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were not financially

"In its initial test, the Altman Z-Score was found to be 72% accurate in predicting bankruptcy two years before the event, with a Type II error (false negatives) of 6% (Altman, 1968). In a series of subsequent tests covering three periods over the next 31 years (up until 1999), the model was found to be approximately 80%–90% accurate in predicting bankruptcy one year before the event, with a Type II error (classifying the firm as bankrupt when it does not go bankrupt) of approximately 15%–20%" (Altman, 2000) (Wikipedia)

Z Score Bankruptcy Model		
<p>Public Manufacturing Companies</p> <p>Z-Score Bankruptcy</p> $Z' = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + 0.999X_5$	<p>Private Manufacturing Companies</p> <p>Z-Score Bankruptcy</p> $Z' = .717 X_1 + .847 aX_2 + 3.107 X_3 + .420 X_4 + .998 X_5$	<p>Private General companies</p> <p>Z-Score Bankruptcy</p> $Z' = 6.56 X_1 + 3.26 X_2 + 6.72 X_3 + 1.05 X_4$ <p>Emerging Markets</p> $Z = 3.25 + 6.56X_1 + 3.26X_2 + 6.72X_3 + 1.05X_4$
<p>Zones of Discrimination</p> <p>$Z > 2.99$ - "Safe" Zone $1.8 < Z < 2.99$ - "Grey" $Z < 1.80$ - "Distress" Zone</p>	<p>Zones of discrimination</p> <p>$Z' > 2.9$ - "Safe" Zone $1.23 < Z' < 2.9$ - "Grey" $Z' < 1.23$ - "Distress" Zone</p>	<p>Zones of discrimination</p> <p>$Z > 2.6$ - "Safe" Zone $1.1 < Z < 2.6$ - "Grey" zone $Z < 1.1$ - "Distress" Zone</p>
<p>X_1 = Working capital / Total assets X_2 = Retained earnings / Total assets X_3 = Earnings before interest and taxes / Total assets X_4 = Market value of equity / Total liabilities</p>		

Z Score Model was designed by Altman originally to check the bankruptcy of the manufacturing firm, since the sample companies he chose were engaged in manufacturing. The recent developments and evolution in the public service companies motivated him to design a second Z-Score model for non-manufacturing companies as follows

$$Z\text{-Score} = Z' = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4$$

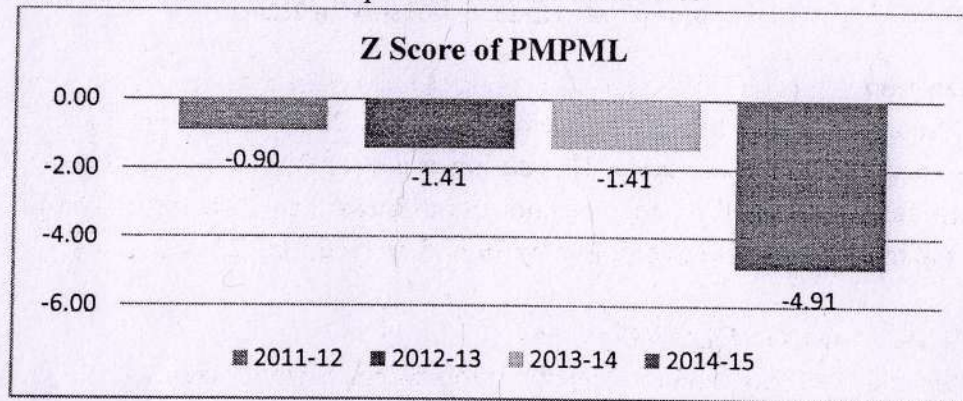
The first ratio X_1 indicates the ability of the company to repay its debt the next few months. The second ratio X_2 indicates the history of the profitability position. The third ratio X_3 is a measure of efficiency in that it indicates how the company generates revenue from the assets it owns. The fourth ratio is indicates the market's "confidence" in the company. (www.investinganswers.com)

Table -3 – Z' Score of PMPML for the period 2011-15

PMPML

	Weighing Factor	Working capital / Total Assets	Weighing Factor	Retained earnings / Total Assets	Weighing Factor	EBIT/ Total Assets	Weighing Factor	Market value of Equity / Total Liabilities	Z Score
2011-12	1.2	-0.38	1.40	0.00	3.30	-0.13	0.60	0.00	-0.90
2012-13	1.2	-0.67	1.40	0.58	3.30	-0.43	0.60	0.00	-1.41
2013-14	1.2	-0.67	1.40	0.58	3.30	-0.43	0.60	0.00	-1.41
2014-15	1.2	-1.59	1.40	0.30	3.30	-1.03	0.60	0.00	-4.91

Fig 1- Z Score of PMPML for the period 2011-12 to 2014-15



Interpretation

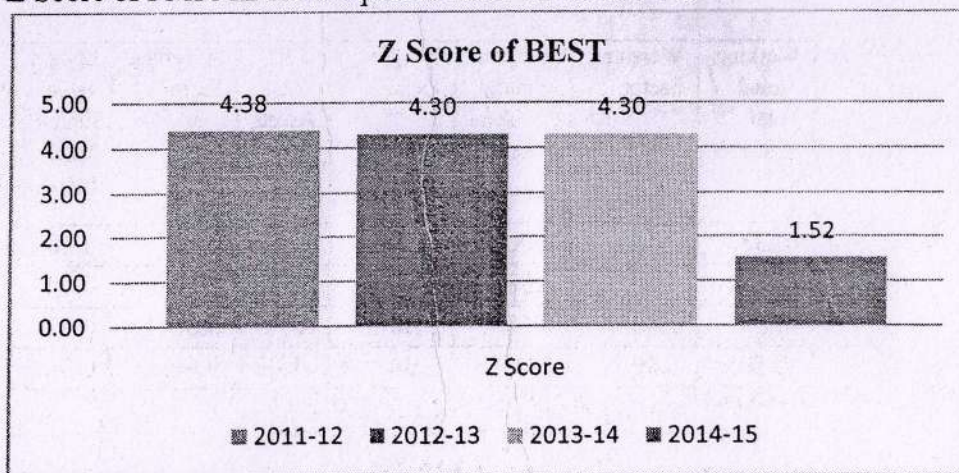
PMPML Z Score is less than 1.8 for the period 2010-15 and follows severe decreasing trend which implies that it at distress zone. The major reason is PMPML does not have sufficient capital. Moreover the working capital is negative. Because of the shortage of the funds, the transport undertakings could not function properly.

Table -4 – Z' Score of BEST for the period 2011-12

BEST

	Weighing Factor	Working capital / Total Assets	Weighing Factor	Retained earnings / Total Assets	Weighing Factor	EBIT/ Total Assets	Weighing Factor	Market value of Equity / Total Liabilities	Z Score
2011-12	1.2	3.24	1.40	-3.73	3.30	1.73	0.60	0.00	4.38
2012-13	1.2	0.49	1.40	3.47	3.30	-0.35	0.60	0.00	4.30
2013-14	1.2	0.49	1.40	3.47	3.30	-0.35	0.60	0.00	4.30
2014-15	1.2	-1.25	1.40	4.89	3.30	-1.16	0.60	0.00	1.52

Fig 2- Z Score of PMPML for the period 2011-12 to 2014-15



Interpretation

BEST Z Score is greater than 2.8 for the period 2011-12 to 2013-14 which depicts that its financial position is in safe zone. But during the year 2014-15, it was less than 1.52 which implies that BEST is stepping into the distress zone. The major reason for this shift is due to the Bank was overdrawn by 795.25 crore during 2014-15

FINDINGS AND CONCLUSION

It is found that PMPML financial health is too worst. State Government and Municipal corporations have to focus on this issue and infuse capital so that these corporations can invest properly in assets and working capital. This gap is grabbed by the Uber and Ola market. When compared to PMPML, BEST undertaking financial health is sound. But it is signaling that BEST is stepping into the distress zone. Hence the government should intervene and assist these undertakings to improve the capital. We have to learn the lesson from the Delhi Transport Corporation, if this issue is not addressed, unauthorized private vehicles and no of vehicles on the road will increase the pollution, traffic congestion and Maharashtra will not be good place to live in. As per the 135 of the companies act, Indian companies crossing the threshold limit should share are applicable to CSR Policy. Hence Government can open an avenue to divert the funds for strengthening the capital of these undertakings so that citizen can commute safely.

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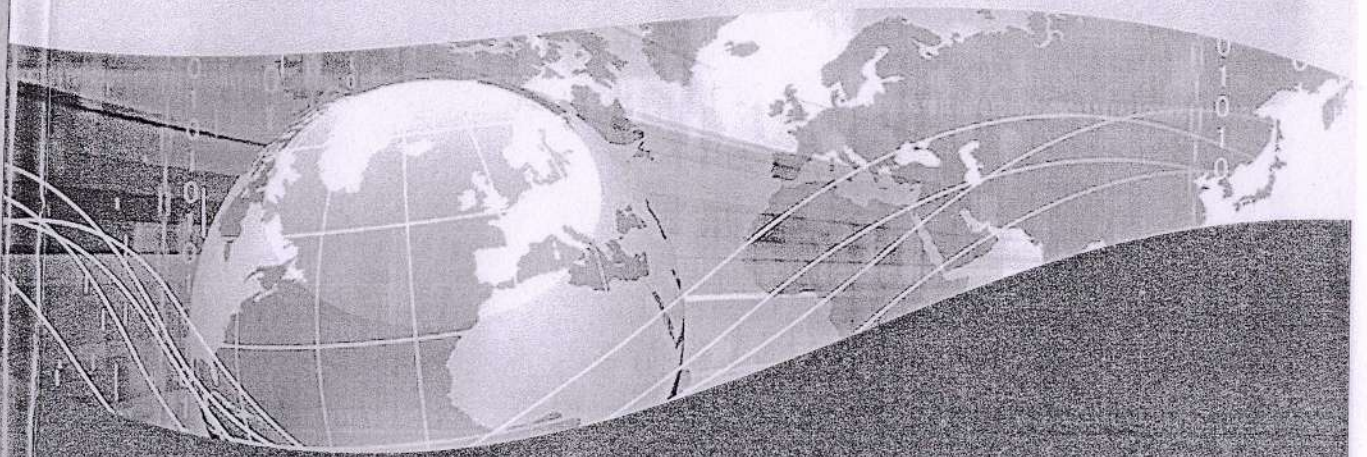
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ABOUT THE AUTHORS



Research. He has published and contributed in more than 18 national and international research papers. (rohandahivale@rediffmail.com)

Mr. Rohan P. Dahivale is working as HOD in Rajgad Institute of Management Research & Development, Pune. He is pursuing Ph.D. in Marketing Management from Savitribai Phule Pune University. He holds B.E. (E&TC) and MBS (Operations Management and Marketing Management) from SPPU. He is having total 13 years of experience (7 years of industrial experience in telecom sector and 6 years in teaching field). He is author of books on Convergence Technology, Industrial Management, Strategic Management and Marketing Management. His research interest is in the area of Decision Science and Operations



Dr. D.B. Bharati (B.Com., M.Com., MBA, M.Phil., Ph.D.) is working as Director in Rajgad Institute of Management Research & Development, Pune. He has completed his Ph.D. in Commerce from Savitribai Phule Pune University. He is approved guide for commerce and management faculty in SPPU. He has teaching experience over 33 years.

He is author of more than 20 books in the field of finance and accounting. His research interest is in the area of finance, accounting, direct and indirect taxation. He has published and contributed in more than 40 national and international research papers.



Mrs. Jayasri Murali Iyengar has completed B.Sc., MCA, MBA (Finance and International Business). She is serving at D.Y. Patil Institute of Management, Ambi. She has more than 20 years experience in Industry and Teaching. She teaches various subjects like Business Research, Management Information System, Decision Science, Corporate Finance, etc. Her research interest is in the area of Financial Management. She has participated, presented and published papers and case studies in leading national and international journals.

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Mr. Rohan P. Dahivale is working as HOD in Rajgad Institute of Management Research and Development, Pune. He is pursuing Ph.D. in Marketing Management from Savitribai Phule Pune University.

He holds B.E. (E & TC) and MBS (Operations Management & Marketing Management) from SPPU.

He is having a total 14 years of experience (7 years of industrial experience in telecom sector and 7 years in teaching field).

He has also authored 9 books. Notable among them are — Convergence Technology, Industrial Management, Strategic Management, Marketing Management, MIS and Operations Management.

His research interest is in the area of Decision Science and Operations Research. He has also published and contributed more than 18 national and international research papers. You can reach him on rohendahivale@rediffmail.com



Prof. (Dr.) D.B. Bharati, B.Com., M.Com., M.Phil., Ph.D. (Banking and Finance) has an outstanding academic background of 32 years. He taught various subjects to graduate as well as post graduate level students. He is currently working as Director at Rajgad Institute of Management Research and Development, Pune. He is approved Ph.D. and M.Phil. Research Guide for Banking and Finance, Financial Management and Foreign Trade Management of Savitribai Phule Pune University. He has vast and rich experience in the subjects of Advanced Accountancy, Management

Accounting, Costing and Direct Taxation. He was Chairman of Finance Board, Faculty of Management, Savitribai Phule Pune University and also the Academic Council Member of the University. He also successfully passed the M.P.S.C. main and oral examination during the year 1990. He has attended and participated in many State, National and International Seminars and Conferences. He also showed his massive contribution in paper presentation at refereed national and international journals. He holds reputed positions in various committees of Savitribai Phule Pune University. He is the author of many books of Accounting, Financial Management and Taxation.



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Dr. Pankaj A. Nandurkar

Associate Professor,
Sinhgad Institute of Business Administration and Research (SIBAR),
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About the Authors



Dr. Ramkrishna Dikkarwar – BE (Production Engineering), MBA (Marketing Management), PhD (Marketing Management) is currently working as Associate Professor at Sinhgad Institute of Management, Pune from last ten years. Prior to become full time faculty in 2006, he worked with Kitchen Appliances India Limited. Also he has worked for a brief period as a Subject Matter Expert (Strategic Management) with an e learning company - Knowledge Horizon Private Limited. Till date he has offered consultancy to various clients such as Ministry of Labor - Jordan, Knowledge Horizon and an ecommerce start up. He has written and published several research papers mainly in the areas of marketing of financial services, agribusiness management and rural marketing.

Apart from this book, he has authored various books titled Managing Sustainability, Strategic Management, Rural marketing, International Agribusiness Management, Retail Operations Management, Retail Marketing with Indian publishers. He also published book titled "Mutual fund distribution intermediation in India" with Scholar's Press, Germany. Apart from general management areas like sustainability and strategy, he teaches Marketing, Retail and Distribution Management. His research interests are Relationship Marketing, Marketing of financial services, and use of Information Technology in rural Markets. Please write your valuable suggestions. He can be reached through email ID - ramkrishna1979@rediffmail.com.



Dr. Pankaj A. Nandurkar

- Currently working as Associate Professor in Sinhgad Institute of Business Administration and Research (SIBAR) from more than 8 years.
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- Published more than 10 research papers in National and International Journals.
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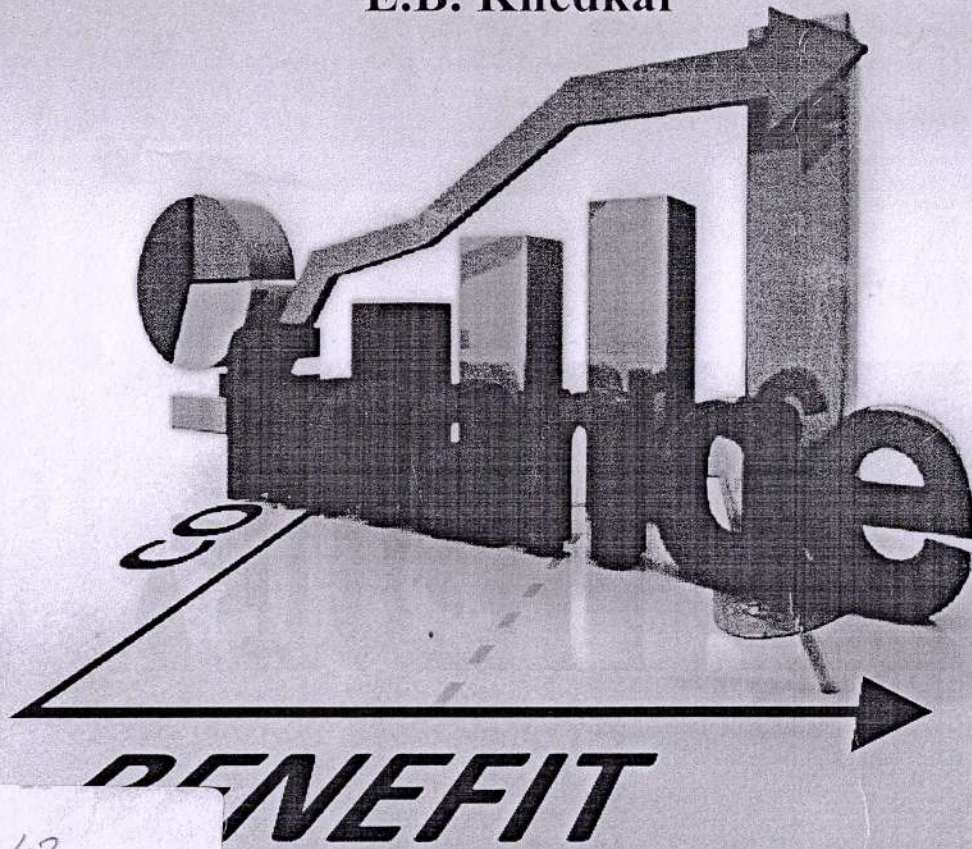
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ABOUT THE AUTHORS



Dr. D.B. Bharati, B.Com., M.Com., MBA, M.Phil., Ph.D. (Banking and Finance) has an outstanding academic background. His experience for Graduate as well as Post Graduate Level. He is currently working as director at Raigad Institute of Management, Research and Development, Pune. He is also an approved Research Guide for Banking and Finance, Accountancy, Financial Management and Foreign Trade under University of Pune. He has vast and rich experience in the field of Advanced Accountancy, Management Accounting, Costing, Direct Taxation and Marketing. He also holds variety for other crucial position like Chairman, Paper Setter, Examiner, Moderator and Senior Supervisor for various examinations conducted by University of Pune, MPSC and Bharati Vidyapeeth. He attended and organized many State and National Level Seminars. He also showed his massive contribution in Paper Presentation at referred National and International Journals and many of them get published too. He is author of many books of Accounting. He also successfully passed the M.P.S.C. Main and Oral examination held in 1990.



Dr. E.B. Khedkar, Ph.D. (Business Admn), Ex Dean of Faculty of Management, Padmashri Dr. D.Y. Patil School of Management, Lohegaon, Pune, Acting Vice Chancellor is working as a director of Padmashri Dr. D.Y. Patil School of Management, Lohegaon, Pune. He has lot of academic, industrial research and teaching experience. He is a recognised Ph.D. research guide of University of Pune. His number of research papers are published in National and International Journals. He organised and attended many national and international seminars. He hold reputed positions in various committies in Pune University.

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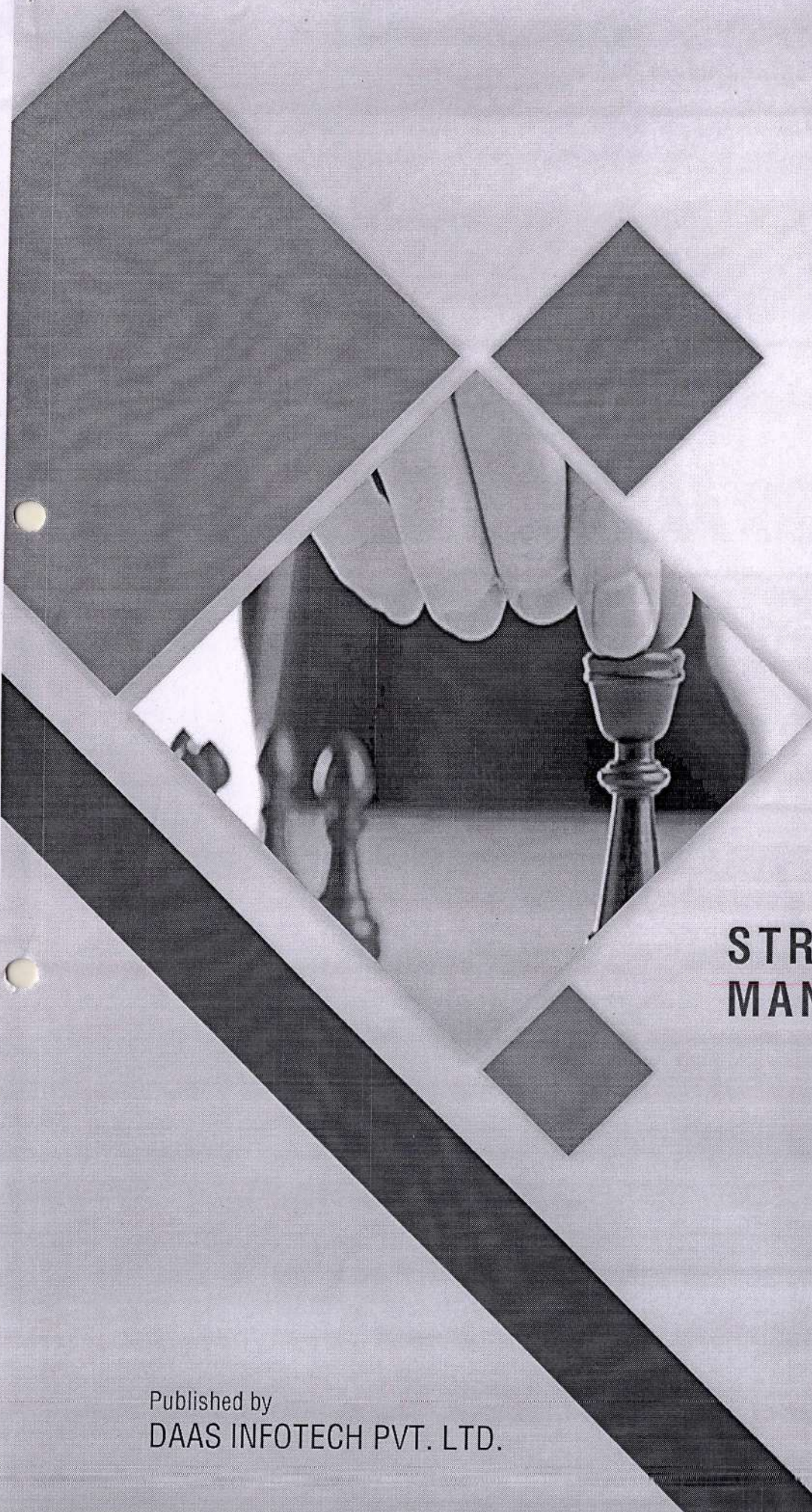
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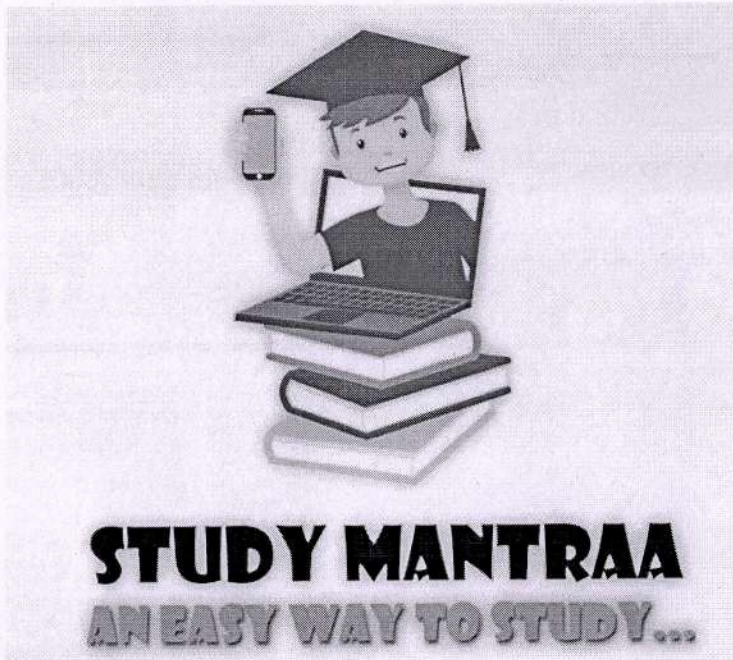
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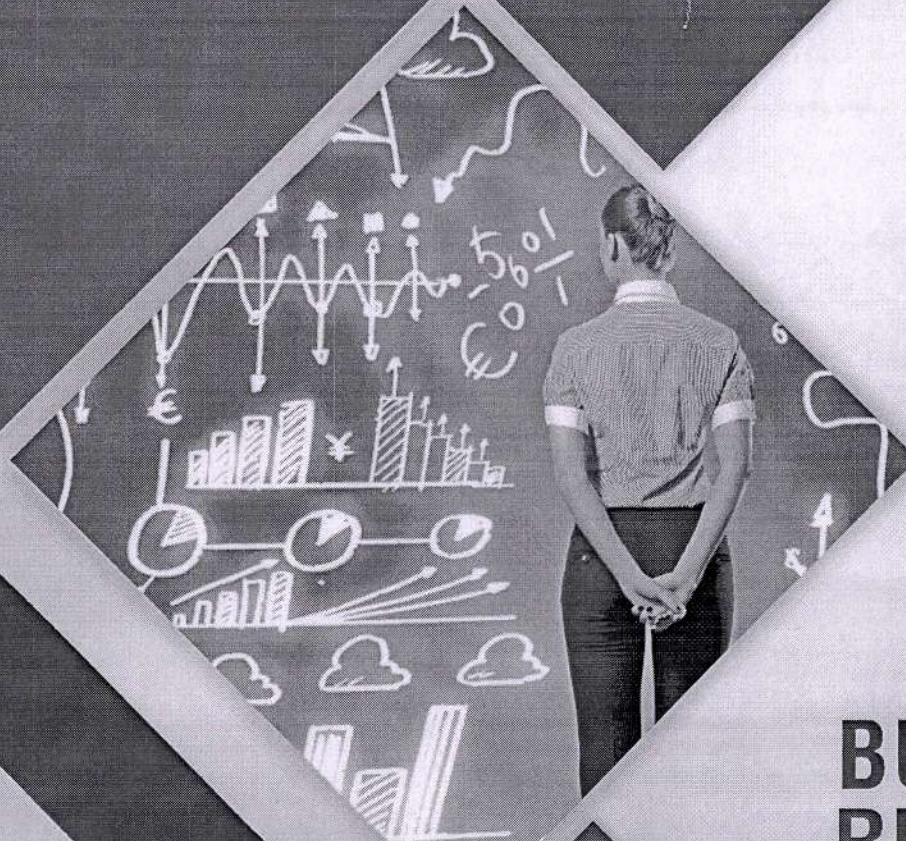
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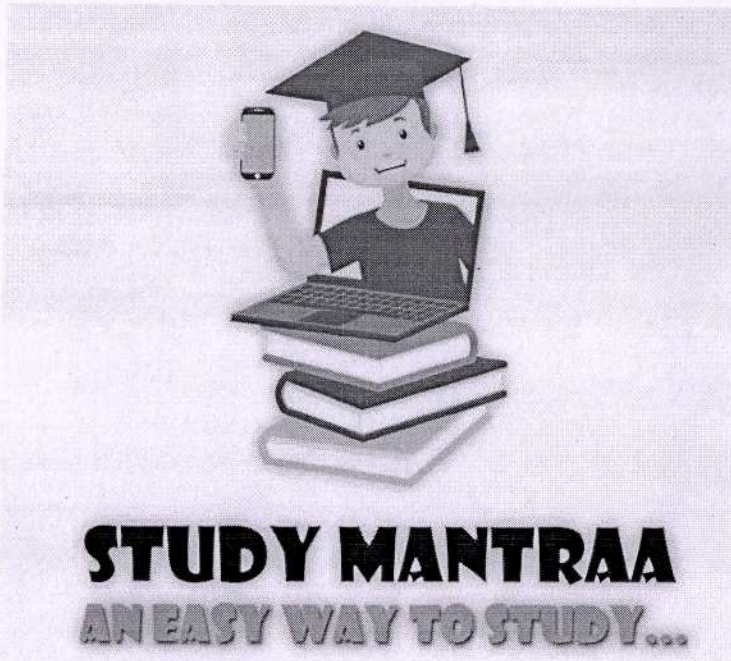
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**D Y Patil Knowledge City, Charholi Bk.
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"INCUBATION" - II

**"GLOBAL STRATEGIES FOR CHALLENGES
IN BUSINESS MANAGEMENT AND
IMPACT OF FDI IN ECONOMIC
DEVELOPMENT"**

on

17th and 18th Jan 2017

**In Association with
Ajeenkya D Y Patil University and
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Editorial:

The editors and editorial board have great pleasure to place before the readers, the proceeding of **“INCUBATION” – II “Global Strategies for Challenges in Business Management and Impact of FDI in Economic Development”** organized by **Ajeenkya D Y Patil University, Dr D Y Patil School of Management and Dr D Y Patil School of MCA; D Y Patil Knowledge City, Charholi Bk. via Lohegaon, Pune, Maharashtra, India** in association with **Savitri Bai Phule Pune University, Pune.**

The research contributions by the participants have enriched the proceeding of the conference book with the knowledge resources. The timely publication of conference book has been possible due to the collective efforts of our editors, editorial board and the technical staff. The Conference has diversified areas covered under its maximum option for the research scholars. We thank all the authors for their contribution and hope for continued contribution and academic interaction in the future from everyone.

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36. “A Comparative Study of Aggregate Production Planning With Lowest, Expected and Average Demands”

Rohan Dahivale,
(Research Scholar),
rohandahivale@rediffmail.com

Dr. Vikas Inamdar
(Director),
directorimcc@vsnl.net,
IMCC, Mayur Colony,
Pune 38

Suryabhan M. Patil
(Student),
Rajgad Institute of
Management Research
& Development

ABSTRACT

Aggregate Planning is concerned with matching supply and demand of output over the medium time range, this paper analyze 6 month expected demand and its three possible plan of actions for aggregate planning and material planning. The term aggregate implies that the planning is done for a single overall measure of output or, at the most, a few aggregated product categories. The aim of aggregate planning is to set overall output levels in the near to medium future in the face of fluctuating or uncertain demands. Aggregate planning might seek to influence demand as well as supply. The three plans are analyzed and compared. This paper will help managers to select appropriate plan according to their cases and situations.

Keywords: aggregate planning, lowest demand, expected demand, average demand

1] INTRODUCTION

Aggregate planning is an essential activity in production department with the help of this advance plan for the production process can be done. The time frame may vary from 6 to 8 months. Aggregate planning helps management about material planning and resource allocation and requirements for the future. Managers try to keep the total production cost to the minimum also to fulfill client's or market's requirements in time.

The total cost considerations include regular labor costs, inventory carrying costs, overtime labor costs, sub-contracting costs, hiring and layoffs costs.

Aggregate planning has some assured and predictable pre-required inputs which include:

- Available facilities in company
- Cost of various alternatives and resources.
- Resources availability in company
- Forecasted demand for the certain future period
-

2] OBJECTIVES OF THE STUDY

1. To study the basic concepts on aggregate planning.
2. To prepare production plans with average, lowest and expected demands.
3. To compare and suggest best suitable production plan.

3] RESEARCH DESIGN

S N	Parameter	Description
1	Type of Research	Analytical Research
2	Nature of Research	Quantitative
3	Survey period	November & December 2016
4	Method of data collection	Observations
5	Sources of data collection	Secondary & Primary sources
6	Secondary sources	Data Sheets, Books, Journals etc.
7	Primary sources	Observations and field survey
8	Data interpretation	Though Graphs & Calculations

4] DATA ANALYSIS & DATA INTERPRETATION

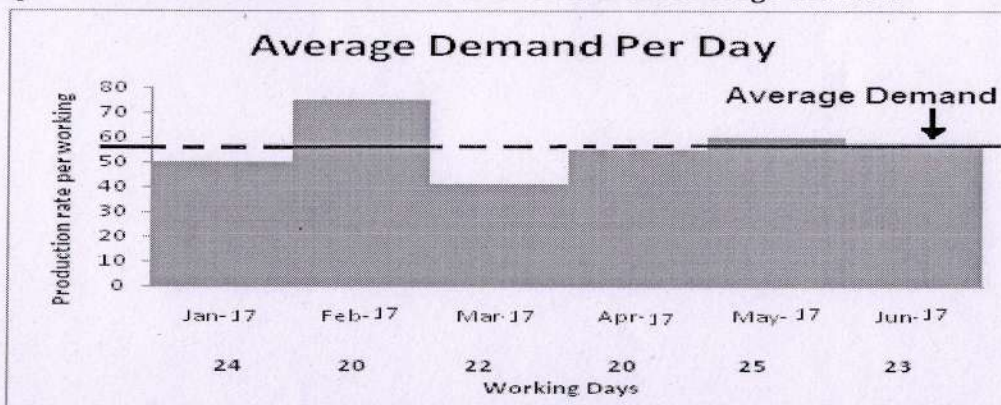
4.1 Forecast for six months

The company has forecasted demand for its product. Researchers have calculated production days and per day demand as follows.

Month	Expected Demand (Units)	Production Days	Demand Per Day (Units)
January 2017	1200	24	50
February 2017	1500	20	75
March 2017	0900	22	41
April 2017	1100	20	55
May 2017	1500	25	60
June 2017	1300	23	57
Total	7500	134	Average = 56 Units

Table 1: Forecast for six months

Graph 1 illustrates how the forecast differs from the average demand.



Graph 1: Average Demand per Day

4.2 The average requirement is calculated as:

$$\text{Average Requirement} = \frac{\text{Total Expected Demand}}{\text{Number of Production Days}}$$

$$\text{Average Requirement} = \frac{7500}{134} = 56 \text{ Units}$$

4.3 Cost information of Production:

Particulars	Details
Inventory carrying cost	₹ 10 units per month
Subcontracting cost	₹ 100 per units
Average pay rate	₹ 20 per hour = (₹ 60 per day)
Overtime pay rate	₹ 40 per hour (above 8 hours)
Labor hours to produce a unit	6 hours per unit
Cost of increasing production rate (hiring)	₹ 100 per units
Cost of decreasing production rate (layoffs)	₹ 150 per units

Table 2: Cost information of Production

4.4 Three possible plans:

Plan 1:	Maintain a constant workforce throughout the six month	Production = Average Demand
Plan 2:	Maintain a constant workforce at a level necessary for the lowest demand month (Here march) and to meet all demand above this level by subcontracting	Production = Lowest Demand
Plan 3:	To hire and lay-off workers as needed to produce the exact monthly requirements.	Production = Expected Demand

4.5 Analysis of Plan 1 (Production = Average Demand)

This is level strategy assuming 56 units to be produce per day. With constant workforce, no over time or idle time, no use of safety stock and no subcontractors. Beginning inventory is assumed to be 'nil' and planned ending inventory is 'nil'.

Month	Production at 56 units/ day (Units)	Demand Forecast (Units)	Shortage Recovery	Ending Inventory
January 2017	1344	1200		144
February 2017	1120	1500		-236 (shortage)
March 2017	1232	0900	236	96
April 2017	1120	1100		116
May 2017	1400	1500		16
June 2017	1288	1300		04
	7504	7500		376

Table 3: Operating Plan 1.

- There will be shortage of 236 units in February 2017. This shortage is planned to recover is first week of March 2017.
- The workforce required to produce 56 units/day = $(6 * 56) / 8 = 42$ workers.

Based on this calculation, cost plan 1 is calculated.

Plan 1 for Total Costs:

Costs	Calculations
Inventory Carrying	₹3,760
Regular time labor	₹ 9,00,480
Other	₹ 0
Total Costs	₹ 9,04,240

Table 4: Total Costs Plan 1.

4.6 Analysis of Plan 2(Production = Lowest Demand)

- Lowest demand in March is to produce 41 units per day. Total 31 workers are needed. All other demand is met by subcontracting.
- In house production = 41 units/day * 134 production days = 5494 units.
- Subcontracting units = 7500- 5494 = 2006 units.

Using this data, total costs of plan 2 are calculated.

Costs	Calculations
Subcontracting	₹20,060
Regular time labor	₹6,64,640
Other	₹ 0
Total Costs	₹6,84,700

Table 5: Total Costs Plan 2.

4.7 Analysis of Plan 3(Production = Expected Demand)

Formula: **Production cost = (Demand * 6 hrs/unit * ₹20 per hour)**

Month	Expected Demand	Prod Days	Daily Prod rate	Production cost	Extra (hiring cost)	Extra (layoff cost)	Total Cost	
January 2017	1200	24	50	₹144000			₹144000	
February 2017	1500	20	75	₹180000	50000 (₹100*25*20)		₹230000	
March 2017	0900	22	41	₹108240		112200 (₹150*34*22)	₹220440	
April 2017	1100	20	55	₹132000	28000 (₹100*14*20)		₹160000	
May 2017	1500	25	60	₹180000	12500 (₹100*5*25)		₹192500	
June 2017	1300	23	57	₹157320		10350 (₹150*3*23)	₹167670	
	7500	Grand Total Cost						₹11,14,610

Table 6: Total Costs Plan 3.

5] COMPARISON OF THREE PLANS

The three plans have been compared in following table.

Costs	Plan 1	Plan 2	Plan 3
	Production = Average Demand	Production = Lowest Demand	Production = Expected Demand
Inventory Carrying	₹ 3,760	-	-
Regular Labor	₹ 9,00,480	₹ 6,64,640	₹9,01,560
Overtime Labor	-	-	-
Hiring	-	-	₹90,500
Layoffs	-	-	₹1,22,550
Subcontracting	-	₹ 20,060	-
Total Costs	₹09,04,240	₹06,84,700	₹ 11,14,610

Table 7: Comparison of three plans

6] CONCLUSION

Researchers found that there is huge difference between the total costs for each action plans. The production as per average demand will increase inventory carrying costs. This plan also leads to shortage or excess inventory and thus can affect client's requirements.

Production as per expected demand will fulfill client's requirements but the hiring and layoff costs are more.

In this case researchers found that production as per lowest demand is more economic and cost saving as compared to other two plans.

7]REFERENCES

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16. “A Study of Production Planning & Control in Manufacturing Industry”

Prof. Rohan Dahivale,

RIMRD, Pune

rohandahivale@rediffmail.com

Prof. (Dr.) D. B. Bharati

RIMRD, Pune

drdbbharati@gmail.com

ABSTRACT

Production planning is an activity that is performed before the actual production process takes place. It involves determining the schedule of production, sequence of operations, economic batch quantities, and also the dispatching priorities for sequencing of jobs.

This paper deals with the Optimization Techniques in Production Planning and Control. With the exact analysis about cost which we pay to bring material in short time, and process that for finished product we can suggest solution to smoothen the operation. The research is related with the Production Department of a company.

The planning of the Raw material required for the producing the product which are demanded by customer. To achieve this Production Planning & control (PPC) Department must be strong enough to use the resources which are available to them to minimize the uncertainty in the delivering the product to customer. This study will provide suggestions to company so as to improve the work quality as well as reduce the cost incurred to complete the product in short time.

Keywords: Production Planning & Control PPC, MRP, ERP

1) INTRODUCTION

Production planning is the planning of production and manufacturing modules in a company or industry. It utilizes the resource allocation of activities of employees, materials and production capacity, in order to serve different customers. Production planning can be combined with production control into production planning and control, or it can be combined and or integrated into ERP.

Production planning is a plan for the future production, in which the facilities needed are determined and arranged. A production planning is made periodically for a specific time period, called the planning horizon. It can comprise the following activities:

- Determination of the required product mix and factory load to satisfy customers' needs.
- Matching the required level of production to the existing resources.
- Scheduling and choosing the actual work to be started in the manufacturing facility"
- Setting up and delivering production orders to production facilities.

In order to develop production plans, the production planner or production planning department needs to work closely together with the marketing department and sales department. They can provide sales forecasts, or a listing of customer orders.

The work is usually selected from a variety of product types which may require different resources and serve different customers. Therefore, the selection must optimize customer-independent performance measures such as cycle time and customer-dependent performance measures such as on-time delivery.

A critical factor in production planning is "the accurate estimation of the productive capacity of available resources, yet this is one of the most difficult tasks to perform well". Production planning should always take "into account material availability, resource availability and knowledge of future demand".

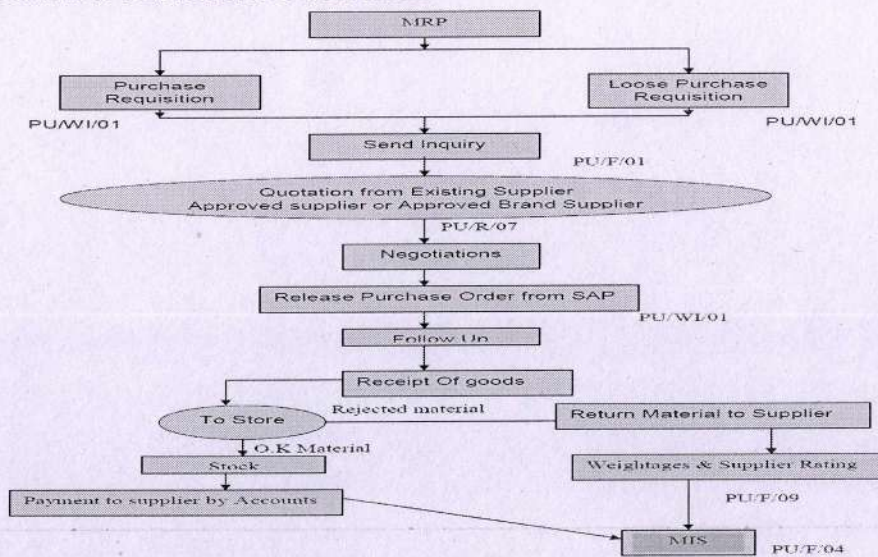
2) OBJECTIVES OF THE STUDY

1. To plan production facilities in the best possible manner along with the proper systematic planning of production activities.
2. To analyze cost estimation, work measurement, subcontracting, capacity planning and demand forecasting.
3. To increase productivity without increasing production cost for a product.

3) RESEARCH DESIGN

SN	Parameter	Description
1	Type of research	Analytical Research
2	Nature of Research	Quantitative
3	Survey period	September 2016 to November 2016
4	Method of data collection	Observations
5	Sources of data collection	Primary and Secondary sources
6	Primary sources	Observation and field survey
7	Secondary sources	Books, Journals, Articles, Magazines Company Data Sheets
8	Data interpretation	Mathematical Calculations using formulas

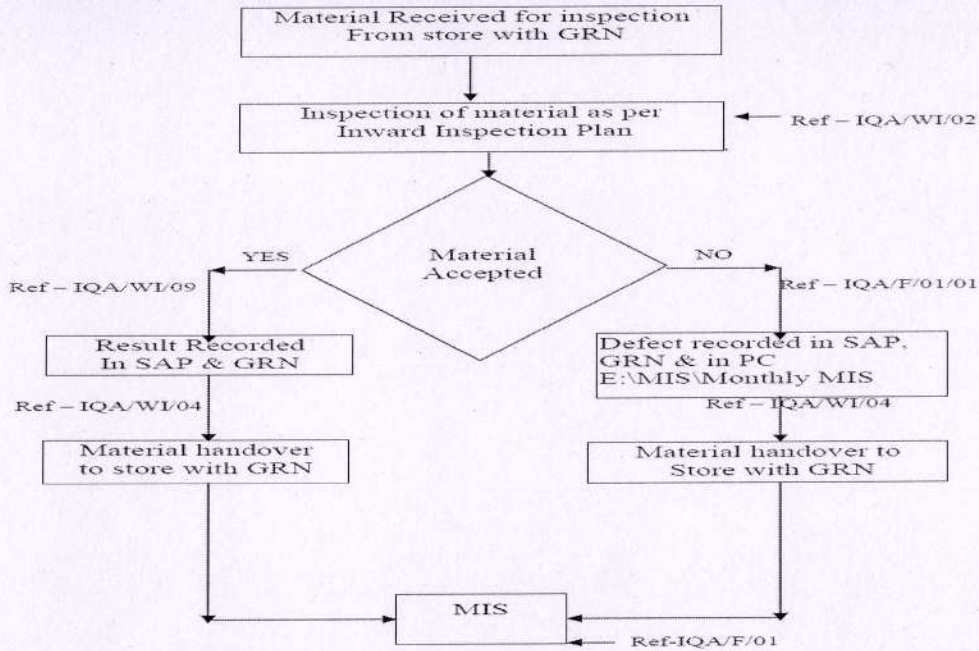
4) PRODUCTION PLANNING & CONTROL



Flow Chart 1: Production Planning & Control

(Source: Primary Data- Observations)

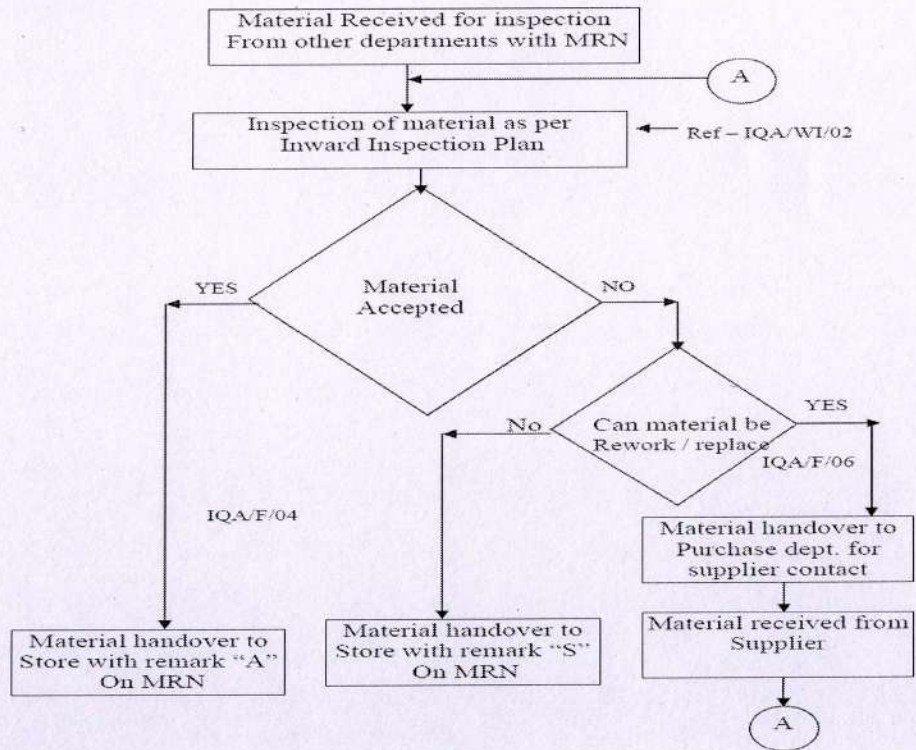
GRN Flow Chart:



Flow Chart 2: Goods Received Note (GRN)

(Source: Primary Data- Observations)

MRN Flow Chart:



Flow Chart 3: Material Received Note (MRN)

(Source: Primary Data- Observations)

Raw Material from the Store:

Raw material is issue of the product to assembly department against the production order released from PPC department.

Solder Printing:

Using solder printing we can mount SMD components on the PCB. It consists of an etched metal stencil. The metal stencil with the etched unblocked openings is in direct contact with PCB, during the entire printing cycle. Flooding of the solder paste is not necessary.

Solder paste is made from tin and lead. Using solder printing we can mount SMD components on PCBs. It consists of an etched metal stencil with etched openings is in direct contact with the PCB. Flooding of solder paste is not necessary.

Pick and Place:

It is a computer aided semi-automatic machine, which pick and place the SMD components according to the program fitted in PC. The program is done on the basis of the dimension of each and every component, which is to be mounted on PCB. Laser beam is then focused on the head of the machine; we can see the movement of head on the screen of PCB.

Reflow process:

The assembled PCB is placed on the re flow machine for soldering. The first segment of the system is PRE-HEAT zone, which is designed to drive off the flux volatiles in the solder paste to minimize solder splashes and part movement. These volatiles are removed from VENTED TRANSITION AREA. This is directly connected to the process zone, which typically consist of six individual controlled zones of top to bottom emitters.

Further, more inert gas such as Nitrogen can be introduced into the process area. Inert gas is used to reduce the amount of oxidation, which occurs with the solder paste, terminations, and component leads.

Hot convection air from nine zones melts and pastes. The PCB passes from nine different zones to avoid thermal shock. Soldering at pin is done at 230 degree C.

Process Inspection:

Above cleaned PCB goes for inspection. It is called as AOI (Automatic Optical Inspection). In this procedure we inspect dry solder, solder bridge, flux, spots etc. For this inspection stereo dymo-scope is used, in which we see 40 times magnified PCB, than real one.

If there is any fault found in PCB then it is send to the workstation, where rework is carried out. After rework the PCB is again inspected.

Glue Dispensing:

Glue dispensing machine is used when it is required to mount the component on double side PCB. Glue is made from “Lock Tight”. One drop of glue is placed in the center where we want to mount the components.

Curing:

Curing means bonding. Because of this component are not moved or dropped from place. Through Hole Component Assembly, Port Soldering and Cleaning: Components, which are gaining, to insert in to the hole of PCB are first formatted as per required grid.

Then the leads of formatted components are cut. If the leads are kept too long, then they may touch the solder bath pot or flux pot while passing over it during wave soldering.

Wave Soldering:

After the assembly wave soldering is done. Here all the components mounted on the PCB are soldered.

There are two types of wave soldering:

- a. Single wave soldering
- b. Double wave soldering.

Mechanical Component Assembly, Port Soldering And Cleaning:

In above soldered PCB mechanical components such as heat sink, fascia's etc. are fitted according to the design. After soldering process, PCB is cleaned by isopropyl alcohol and hybrid solvent cleaner to avoid flux, spot etc.

Process Inspection:

Above cleaned PCB goes for visual inspection. In this inspection dry solder, Solder Bridge, spot etc. are checked. All components should be mounted as per drawing.

If any fault is found then PCB goes to rework station where work is carried out. After rework, PCB is again goes for inspection.

Initial Electrical Card Testing:

For testing, jig is prepared. Testing is carried out according to the procedure. For each product there is separate test jig & its procedure.

Burn in Chamber Test:

Above tested electrical card is kept in burn in chamber. In this chamber PCB is kept in running condition for minimum of 8 Hrs. at 60 C. So this chamber is called burn in chamber. Purpose of this test is that the card should work at this much temperature at field.

Conformal Spraying:

Above card from burn in chamber goes in conformal spray bath chamber. Spray of CRC forms an insulation on card which protects PCB from moisture, conductive dust, shorts, humidity, fungus, corrosion and high voltage arcing.

Final Electrical Card Testing:

Above card after spraying goes for final testing. For testing electrical card, test jig is prepared. Testing is carried out according to procedure.

Sub-Assembly Store:

After the card is tested after chamber & spraying it given to sub-assembly store by SRN (Sub-assembly request Note) through SAP.

Product Integration:

This sub-assembly needs to integrate to make the final product. PMI order has to issue to store person to issue the material to integration section.

Final Q.A:

This integrated product must pass through the test carried out in final Q.A. so as to run successfully at customer end.

Finished Goods Store:

This Q.A. pass product kept in finished goods store so as to pick as per customers order.

Packing & Dispatch:

As per the ORF (Order Request form) received from marketing department sales coordinator issue the picking slip to store through SAP. This material is given to packing for dispatching to the customer.

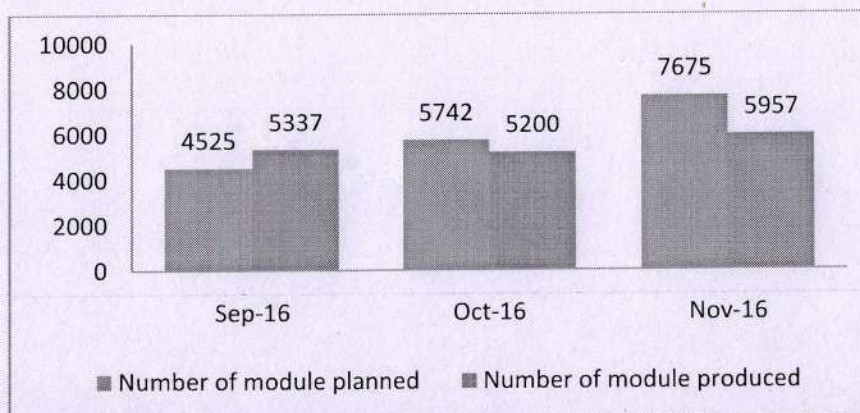
5) DATA ANALYSIS & INTERPRETATION

Production process here follows “Batch Type manufacturing system”. It is having very low volume & high product mix type production. Though we have very less no of products but variety was more. More than 400 numbers of sub products to be manufactured or sub-contracted from vendor to meet the monthly requirement.

In current process as per the forecast given for particular month the material was plan. Also from the past experience Production Manager is authorizes to plan for material which has highest requirement.

Particular	September 2016	October 2016	November 2016
Number of module planned	4525	5742	7675
Number of module produced	5337	5200	5957

(Source: Observations)



From the above detail about production, in the month of September 2016 as per the forecast number of module planned is 4525 quantity and actual produced module is 5337 quantity. So the material which is planned for next month was used.

As per last experienced in month of October 2016 number of module planned is 5742 quantity and actual produced modules are 5200 quantity. So material which was planned for customer, the order for same was not available for billing. The difference between planned and produced is small so inventory can carry by company.

But in the month of November 2016 from above figure the difference between planned and produced was increased which may create problem about liquidity.

Planning & control in our case is Batch Type production system

- Batch:
Produced once
Repeated at irregular intervals as needed
Produced periodically at known intervals
- Solution depends on:
External customer's orders
Internal consumption – sub-assembly

6) PROBLEM FACED

As per regular practice we have divided our production schedule in 3 parts of the month. That is till 10th of every month first part. From 11th to 20th of month there will be second part and third part will be till end of the month. Generally till 10th production rate is very slow. And in end of month extra work is needed.

Problem observed in current PPC:

- Material planning not as per schedule.
- Priority of jobs is not 'fix'. It is vary as per marketing requirement.
- As very slow production rate initially manpower & machines are not used as per their capacity.
- Due to high production rate n end of month, wages to operator are increase as he needs to work for longer time.
- Due to sudden requirement of products which are in queue for operation has to be performed on that, production set up need to be change, material need to bring faster than its schedule because of this cost increased.
- Quality may be differing than actual.

Though there is huge capital invested in carrying the inventory cost, proposed system give better result in future as the system is set. To set the system some time has to give.

But there should closed watch to be kept on the highly consumable item as it is totally depend upon the customers and their demand. So system should be such a flexible as the demand changes for the module, PPC department should take the necessary action to adjust the change.

7) LIMITATIONS OF THE PROPOSED SYSTEM

Shelf life of raw material should be considered:

- As there are many electronic component, PCB's which are supposed to be use before there expire date. As they may be malfunction after assembly we have to scrap about 200 PCB's on which many IC's are mounted because of air gap in PCB as they are more than 6 months old.

Blocking of capital:

- There are many items whose consumption is more, if this solution was applied then huge amount of capital is blocked in the inventory which cannot be use any ware.

This system goes wrong if Market demand changes:

- This system goes wrong if there is sudden change in the demand. In this case huge shortage of liquidity occurs. So to prevent this Market research has to been done n regular time interval.

Inventory cannot carry for all products:

- There are many products or modules whose consumption rate is very slow. It is not required to carry inventory for these modules. This can be done in JIT system.

8) SUGGESTION FOR OUR SYSTEMS

- If exact demand was unable to predict then the safety stock of most likely product & their material should be increase.
- It will increase inventory cost but it should be consider than loosing customer or business.
- Also f product quality was maintained then customer will be loyal.
- Because of loyal customer, they may wait if material will not available.
- Planning of material should be done for above three month i.e. for long time.
- Minimize product variety.
- Carried out detail Market research about the requirement in coming future.
- Increased quantity for most likely modules.

9) CONCLUSION

Researchers found that 150quantities modules each for the next month considering all lead time the total inventory cost for keeping these module in store is **13.5 lacks**.

But if there is plan to manufacture these modules in shorter time then company have to pay the prices higher than the actual price which given above.

Now if company plan to produce of 100 quantities of module for shorter time then the inventory cost increased to more than **18 lacks**. This cost is more than the

cost incurred by normal way of production. As that inventory was kept almost for 2 months, this can be affordable by the company.

Above solution is only for the modules which are highly consumed by market. It is not possible to carry such a huge inventory for longer time. If products which are not consumed in high rate then JIT manufacturing process can be adopted.

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30. “Comparative analysis and ranking of banks by using ratios”

Prof. Shekhar Chavan

(Rajgad Institute of Management
Research and Development, Pune)

Prof. Uma Pethkar

(Rajgad Institute of Management
Research and Development, Pune)

ABSTRACT:

Camel approach is significant tool to assess the relative financial strength of a bank and to suggest necessary measures to improve weaknesses of a bank. In India, RBI adopted this approach in 1996 followed on the recommendations of Padmanabham Working Group (1995) committee. In the present study, an attempt has been made to rank the 3 banks operating in India. The banks in India have been categorized into Public sector, Private sector, and Foreign banks. The sample of selected banks consists of Public Sector, Private Sector, and Nationalize banks. For the purpose of grading, CAMEL Model approach has been applied, incorporating important parameters like Capital Adequacy, Assets Quality, Management Efficiency, Earnings Quality and Liquidity.

Keywords: *CAMEL Model, Financial Soundness, Indian Commercial Banks*

INTRODUCTION:

Banking sector plays an imperative role in the development and growth of Indian economy; various reforms were taken place in banking sector which is followed by economic liberalization with aim to make the Indian banking industry more competitive, productive and efficient. It is with a view to follow international standards. In order to uphold contemporary competitiveness, banks must keep a center of attention on their performance. The present study attempts to scrutinize the financial soundness of the selected commercial banks by making use of some ratios from CAMEL Model.

Objective of the Study

1. To understand the financial position & performance of the banks.
2. To describe ranking, banking institutions, so as to analyze the comparative of various banks.
3. To analyze the banks performance through CAMEL model and give suggestion for improvement if necessary.

REVIEW OF LITERATURE:

Reliability and accuracy of banking system is intimately related to strength of economic development. Various researchers' investigate, academicians pointed out and policy makers have scrutinize several studies on financial performance of banking sector in different time. Prasunas view point (2003) the recital of 65 Indian banks as per the CAMEL Model and concluded that enhanced service quality, pioneering

products and more negotiations were beneficial to the banks because of the existing stiff competition.

Satish, Jutur and Surender (2005) says that Indian banking structure seems to be sound and due to the information technological progress will help the banking system acquire more strength in future.

Moreover, Siva and Natarajan (2011) empirically experienced the norms of CAMEL if applicable then its significant impact on the performance of SBI and its Groups.

Similarly, Tripathi and Meghani (2014) conducted a study and compare the financial performance of Axis and Kotak Mahindra bank (Private Sector banks).

The present study investigate some ratios of CAMEL Model in comparing the performance of Nationalize, Public and Private Banks in India which will be extremely useful to gigantic range of banks operating in India to draw a bird's eye-view on their performances based on ratio's and the recommendations for the mounting banks performances in India.

LIMITATION:

1. The study was limited to three banks only.
2. The study was completely done on the basis of ratios calculated from the balance sheets.
3. The method discussed pertains only to banks although it can be used for performance evaluation of other financial institutions.

METHODOLOGY:

Researcher chosen three banks for the purpose of analysis hence the sample size is three; one bank from private sector (AXIS BANK), one from public sector (SBI) and one Nationalize Bank (BOM). Researcher use selected ratios for ascertaining the financial performs of the bank. Some of the ratios form a part of CAMEL Model. Period for the study is Five years starting from 2012 to 2016. Entire study is based on the secondary data which is already published in the annual reports of the banks and annual reports of the RBI.

For the purpose of performance analyses following rations were considered:

1. Capital Adequacy Ratio.
2. Business per employee (Rupees in Million).
3. Profit per employee (Rupees in Million).
4. Net interest income to total assets (Net Interest Margin)
5. Return on Assets.
6. Return on Equity
7. Investment - Deposit Ratio
8. Return on investments
9. Net NPA To net advances
10. Interest income to total assets ratio

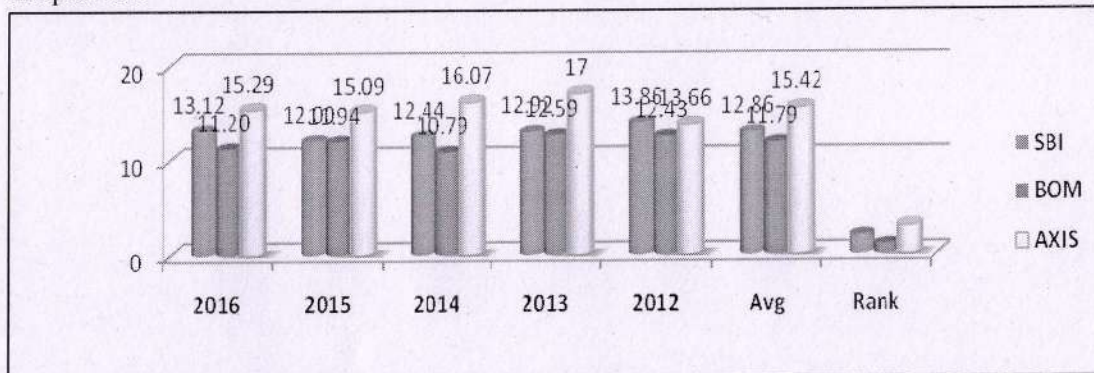
Data Analysis and Interpretation:

Researcher put an effort to compute the ratio and the same were verified to the annual report of RBI. The ranks are based on the average performance as per the ratio.

Table No.1:

Capital Adequacy Ratio	2016	2015	2014	2013	2012	Avg.	Rank
SBI	13.12	12.00	12.44	12.92	13.86	12.86	2
BOM	11.20	11.94	10.79	12.59	12.43	11.79	3
AXIS	15.29	15.09	16.07	17.00	13.66	15.42	1

Graph No.1



Capital Adequacy Ratio: The capital adequacy ratio ensure that banks have an ability to absorb a reasonable losses occurred due to operational factors. The ratio also determines the power of the bank in meeting the losses.

As per the latest RBI norms, the banks should have a Capital Adequacy Ratio of 9%. During the research period all banks shows the CRA more than 9%. Although during the research period AXIS bank ranked at the top then SBI at second rank and the BOM at the third rank.

Higher the ratio means better the position; the banks are in a comfortable position to absorb losses. The raising of this non-equity capital has helped the Bank continue its growth strategy has helped the bank continue it’s strengthened its capital adequacy ratio.

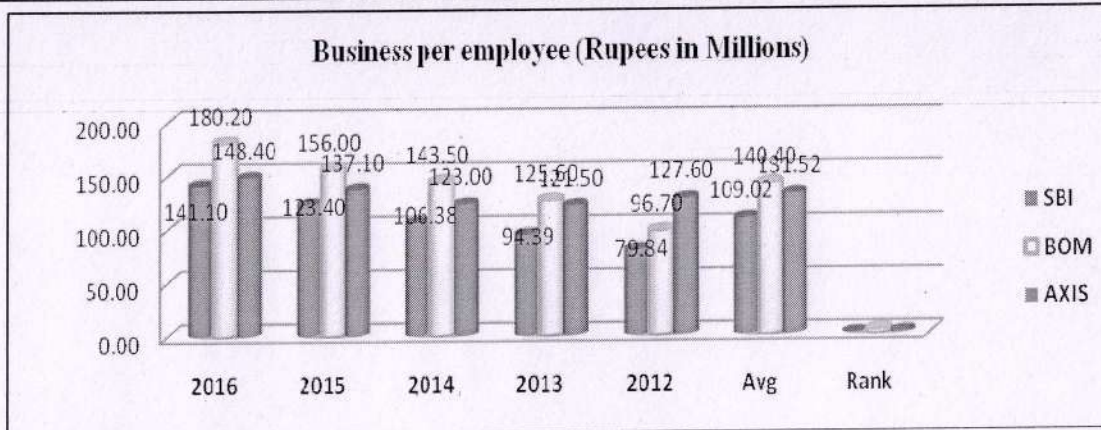
Business per employee (Rupees in Million):

Business per Employee (BPE) shows the efficiency of human force of the selected bank. It is used as a means to determine the efficiency of employees of a bank in creating business for the bank.

Table No. 2

Business per employee (Rs in Millions)	2016	2015	2014	2013	2012	Avg.	Rank
SBI	141.10	123.40	106.38	94.39	79.84	109.02	3
BOM	180.20	156.00	143.50	125.60	96.70	140.40	1
AXIS	148.40	137.10	123.00	121.50	127.60	131.52	2

Graph No. 2



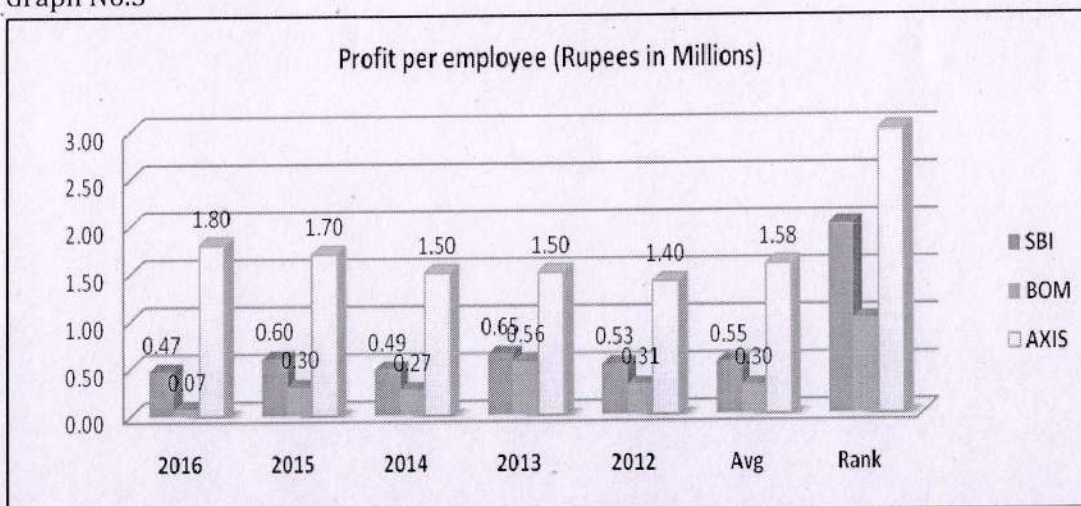
In general raising revenue per employee is a positive sign that suggest bank is finding ways to squeeze more sales out of each of its employee. Where BOM is in number one position, AXIS is at second and SBI at third position.

Profit per Employee (PPE) ratio shows the excess amount earned per employee. It is identified by dividing the profit after tax earned by the bank among the total number of employees.

Table No. 3

Profit per employee (Rs. in Millions)	2016	2015	2014	2013	2012	Avg.	Rank
SBI	0.47	0.60	0.49	0.65	0.53	0.55	2
BOM	0.07	0.30	0.27	0.56	0.31	0.30	3
AXIS	1.80	1.70	1.50	1.50	1.40	1.58	1

Graph No.3



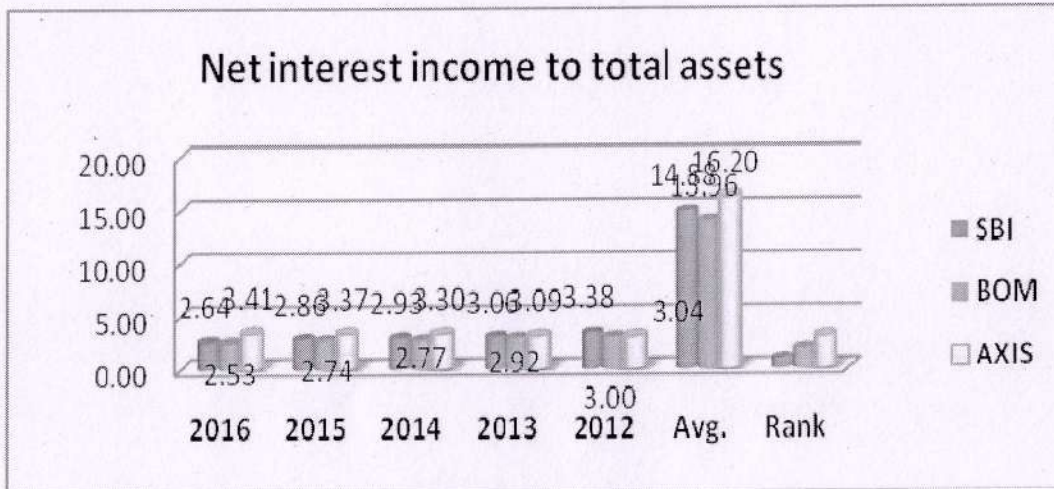
Profit per employee is a measure of how efficiently a particular bank is utilizing its employees. Ideally, a bank wants the highest profit per employee. Hence higher the ratio is better for the bank on this criteria AXIS stood first, SBI stood second and BOM stood third among the selected banks.

Net interest income to total assets (Net Interest Margin) Ratio: This ratio measures how efficiently the assets are use to generate profit. Higher ratio indicates that the assets are used in better way or not.

Table No. 4

Net interest income to total assets	2016	2015	2014	2013	2012	Avg.	Rank
SBI	2.64	2.86	2.93	3.06	3.38	14.88	3
BOM	2.53	2.74	2.77	2.92	3.00	13.96	2
AXIS	3.41	3.37	3.30	3.09	3.04	16.20	1

Graph No. 4



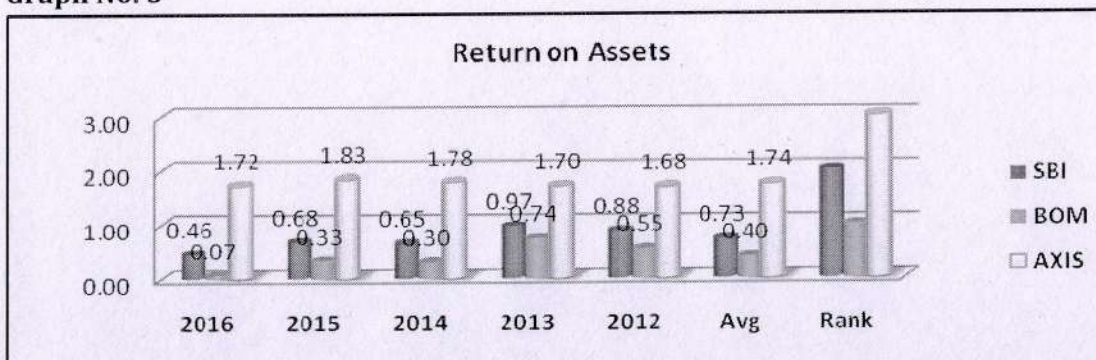
In case of utilization of assets in an efficient manner the AXIS bank acquire number one position, BOM at second and SBI at third position.

Return on Assets: This ratio indicates how much returns on assets are generated by the bank. Higher ratio indicates better position of the bank.

Table No. 5

Return on Assets	2016	2015	2014	2013	2012	Avg.	Rank
SBI	0.46	0.68	0.65	0.97	0.88	0.73	2
BOM	0.07	0.33	0.30	0.74	0.55	0.40	1
AXIS	1.72	1.83	1.78	1.70	1.68	1.74	3

Graph No. 5



While considering the return on assets as the basis for analysis AXIS ranked one, SBI ranked second and BOM ranked third for the study period.

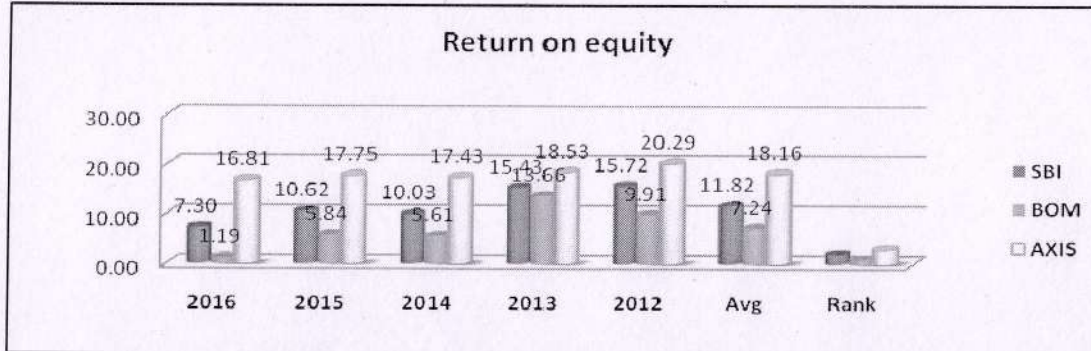
Return on Equity: The return on equity ratio or ROE is a profitability ratio that measures the ability of a firm to generate profits from its shareholders investments in

the company. ROE is an indicator of how effective management is at using equity financing to fund operations and grow the company.

Table No. 6

Return on equity	2016	2015	2014	2013	2012	Avg.	Rank
SBI	7.30	10.62	10.03	15.43	15.72	11.82	2
BOM	1.19	5.84	5.61	13.66	9.91	7.24	3
AXIS	16.81	17.75	17.43	18.53	20.29	18.16	1

Graph No. 6



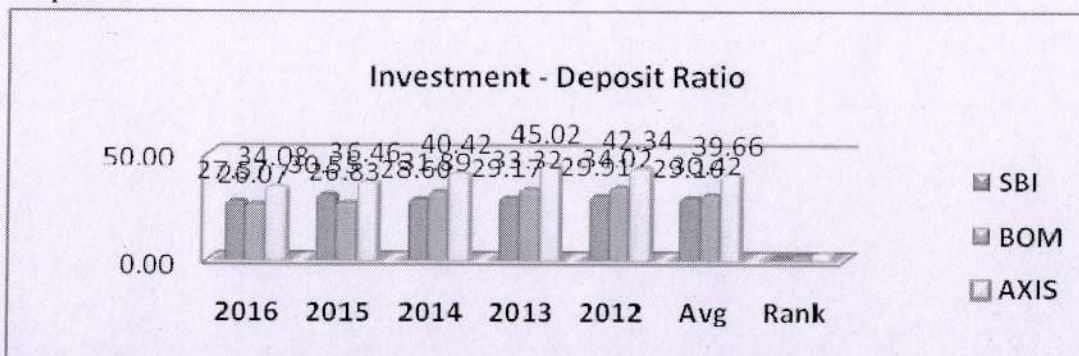
In case of return on equity AXIS bank ranked first, SBI ranked second and BOM ranked third. It indicates that AXIS bank is in good position in case of utilizing the equity capital.

Investment - Deposit Ratio: It point out that how much amount is invested out of the deposits collected.

Table No. 7

Investment - Deposit Ratio	2016	2015	2014	2013	2012	Avg.	Rank
SBI	27.57	30.55	28.60	29.17	29.91	29.16	3
BOM	26.07	26.83	31.89	33.32	34.02	30.42	2
AXIS	34.08	36.46	40.42	45.02	42.34	39.66	1

Graph No. 7



Considering the investment to deposit ratio AXIS bank ranked number one, BOM ranked number two and SBI ranked number three.

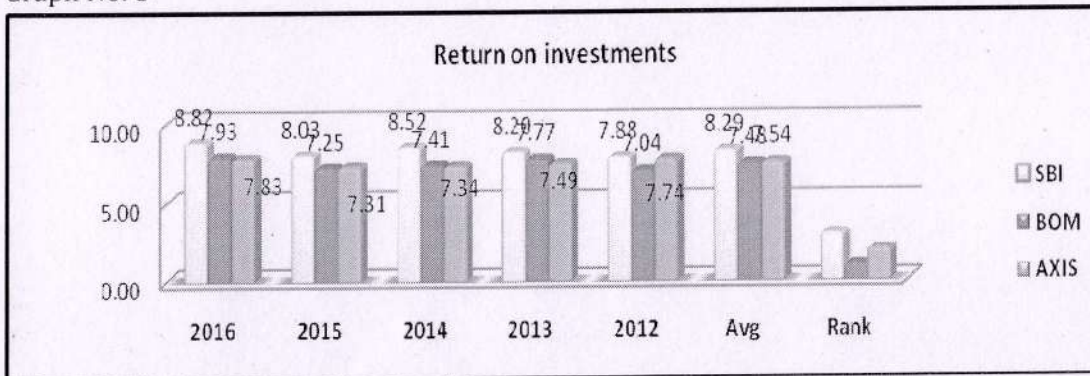
Return on investments: The ratio indicates the amount of return the banks are generated on the investment. Return on Investment is performance measure used to evaluate the efficiency of investment. If an investment has a positive return on investment and there are no other opportunities with a higher ROI, then the

investment should be undertaken. A higher return on investment means that investment gains compare favorably to investment costs.

Table No. 8

Return on investments	2016	2015	2014	2013	2012	Avg.	Rank
SBI	8.82	8.03	8.52	8.20	7.88	8.29	1
BOM	7.93	7.25	7.41	7.77	7.04	7.48	3
AXIS	7.83	7.31	7.34	7.49	7.74	7.54	2

Graph No. 8



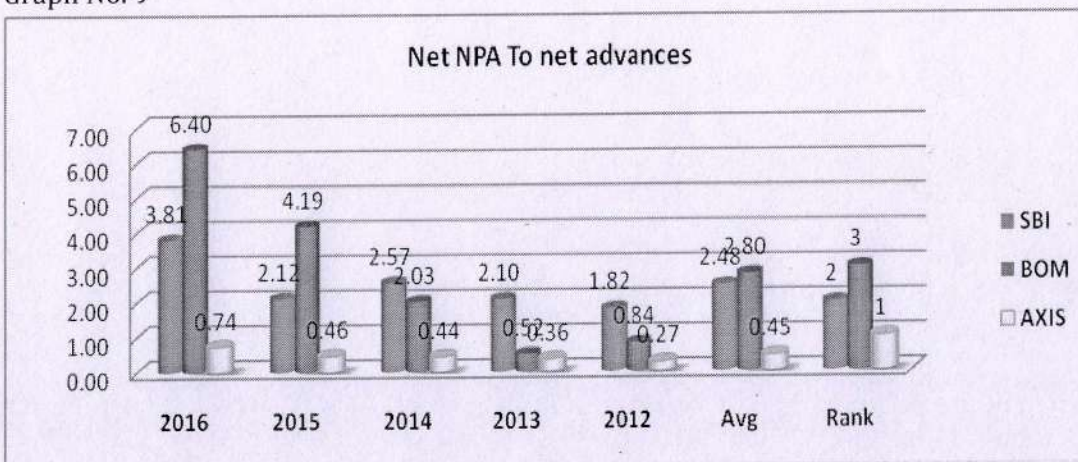
While considering the return on investment SBI ranked one BOM ranked two and AXIS ranked third.

Net NPA To net advances: It is the majority standard measure of assets quality measuring the net non-performing assets as a percentage to net advances. Low ratio indicates that minimum is the NPA.

Table No. 9

Net NPA To net advances	2016	2015	2014	2013	2012	Avg.	Rank
SBI	3.81	2.12	2.57	2.10	1.82	2.48	2
BOM	6.40	4.19	2.03	0.52	0.84	2.80	1
AXIS	0.74	0.46	0.44	0.36	0.27	0.45	3

Graph No. 9



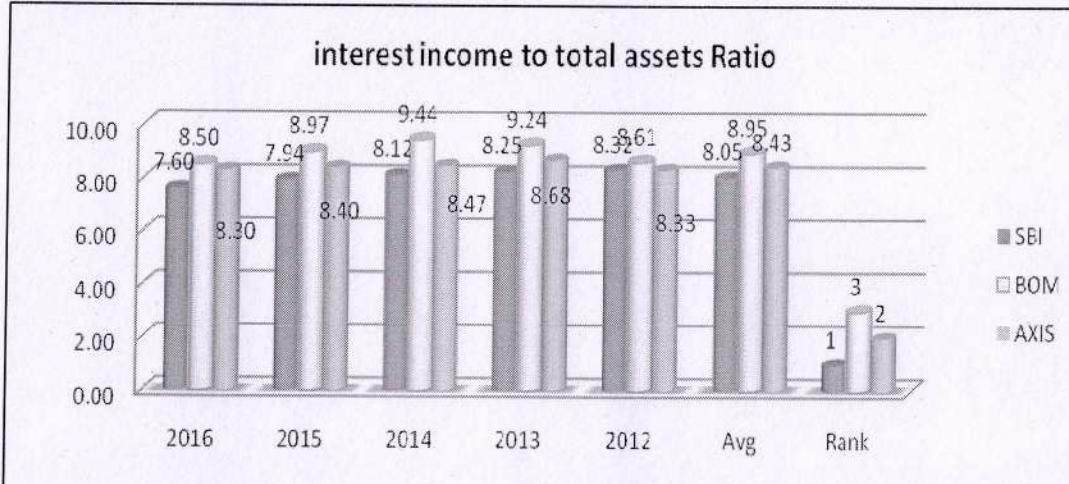
Base on this ratio AXIS bank stand in number one position, SBI stand number two position and SBI stand in number three position.

Interest income to total assets ratio indicates higher is the ratio indicates the higher income on the assets.

Table No. 10

Interest income to total assets	2016	2015	2014	2013	2012	Avg.	Rank
SBI	7.60	7.94	8.12	8.25	8.32	8.05	1
BOM	8.50	8.97	9.44	9.24	8.61	8.95	3
AXIS	8.30	8.40	8.47	8.68	8.33	8.43	2

Graph No.10



BOM is ranked one, AXIS bank is ranked two and SBI is ranked three based on this ratio.

CONCLUSION:

In present study create rank of various banks operating in India. The banks in India have been categorized into Public sector, Private sector, and Nationalize banks. The sample of selected banks consists of Public Sector, Private Sector, and Nationalize bank each. For the purpose of ranking, various ratios have been applied, incorporating important parameters like Capital Adequacy, Assets Quality, Management Efficiency, Earnings Quality and Liquidity.

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The research contributions by the participants have enriched the proceeding of the conference book with the knowledge resources. The timely publication of conference book has been possible due to the collective efforts of our editors, editorial board and the technical staff. The Conference has diversified areas covered under its maximum option for the research scholars. We thank all the authors for their contribution and hope for continued contribution and academic interaction in the future from everyone.

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24. “Impact of Cost of Holding Inventory on the Profits & Sales with the Help of ABC Analysis & EOQ - A Case Study”

Prof. Uma Bendr

RIMRD, Pune.

uma.pethakar@gmail.com

Prof. Shekhar Chavan

RIMRD, Pune

cshekhhar371@rediffmail.com

ABSTRACT

In existing situation adopted at manufacturing industry researcher found that fixed order quantity system is used for controlling the inventory. But there are some disadvantages like reviewing the inventory on daily basis is very expensive, absence of adequate data on stock levels & consumptions rates. This affects the evaluation of batch sizes for orders, fixed order quantity increases the holding cost and sudden change in the production plan also affects the extra stocks of raw material.

To overcome all problems there is need to introduce new system called fixed order period system. Method is based on “Order up to level”. In the fixed order period system, the period is fixed, but the order quantity is varies. In the fixed order period system, the order period is fixed, but the order quantity is varies with requirement. The quantity ordered each time depends on the current inventory level or inventory in hand and future inventory requirement.

The goals for raw material includes adopting good monitoring tool EOQ - Economic order quantity for controlling raw material inventory and to optimize reorder level for raw material.

The goals for Work in process material include four modules Section parts, HSFS parts, Intercompany parts, MSD parts. KANBAN concept for High consuming parts, for controlling ‘A’ type parts-Make to order system, ABC analysis for preparation of KANBAN systems and for controlling B & C type parts - KANBAN System

The expected result for the projects is achieving weekly basis purchases of raw material, Maintaining closing stock for Raw material, WIP & finish goods, Achieving optimal stock for the ‘A’ type parts, Easy control over monitoring inventory for WIP and achieving smaller lot size so as to minimize the production lead time.

Keywords: Inventory Management, Inventory Control, ABC Analysis, EOQ

1] INTRODUCTION:

In inventory management, economic order quantity (EOQ) is the order quantity that minimizes the total holding costs and ordering costs. It is one of the oldest classical production scheduling models. The model was developed by Ford W. Harris in 1913 but R. H. Wilson, a consultant who applied it extensively, and K. Andler are given credit for their in-depth analysis.

EOQ applies only when demand for a product is constant over the year and each new order is delivered in full when inventory reaches zero. There is a fixed cost for each order placed, regardless of the number of units ordered. There is also a cost for each unit held in storage, commonly known as holding cost, sometimes expressed as a percentage of the purchase cost of the item.

We want to determine the optimal number of units to order so that we minimize the total cost associated with the purchase, delivery and storage of the product. The required parameters to the solution are the total demand for the year, the purchase cost for each item, the fixed cost to place the order and the storage cost for each item per year. Note that the number of times an order is placed will also affect the total cost, though this number can be determined from the other parameters.

2] OBJECTIVES OF THE STUDY:

1. To study existing ordering levels for the raw materials.
2. To calculate economic order quantity (EOQ) for the selected raw material items.
3. To analyze inventory management methods with ABC, VED analysis & KANBAN.
4. To suggest the methods to improve current inventory management practices.

3] STATEMENT OF RESEARCH PROBLEM:

Defining the problem is often the hardest step in the research process. The manager must know the problem and causes of the problem.

- Develop tools for monitoring & control of raw material inventory (EOQ & Reorder level)
- Develop KANBAN tool for high consume section parts.
- Minimizing inventory of raw material & WIP parts through batch size.

4] RESEARCH DESIGN:

SN	Parameter	Description
1	Type of research	Analytical Research
2	Nature of Research	Quantitative
3	Survey period	September 2016 to November 2016
4	Method of data collection	Observations
5	Sources of data collection	Primary and Secondary sources
6	Primary sources	Observation, interview and field survey
7	Secondary sources	Books, Journals, Articles, Magazines Company Data Sheets
8	Data interpretation	Mathematical Calculations using formulas.

5] DATA ANALYSIS AND DATA INTERPRETATION:

5.1] TECHNIQUE OF INVENTORY MANAGEMENT

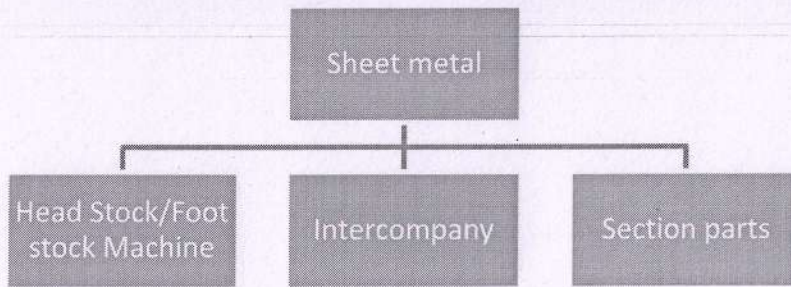
Main problems in inventory management are to answer

- What are Indus problems in managing inventories?
- Which inventory policy optimum for Indus? Why?
- Show calculations. What should be the over level?

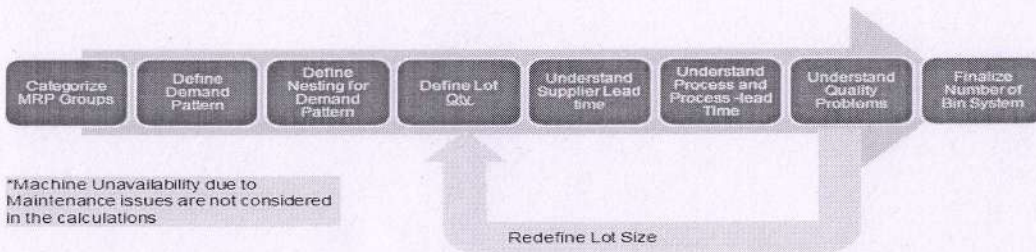
To answer these following techniques are used:

- * **ABC analysis**
- * **Kanban Management**
- * **Economic Order Quantity**
- * **Re-Order Level**
- * **Inventory Turnover Ratio**

Finish Goods Finish goods are managed by KANBAN system



Procedure on System design



5.2] HEAD STOCK/FOOT STOCK DOORS

SN	PART NO	PART DESCRIPTION	Qty/ Machine	Average Demand	Qty/ WEEK	Cost/Piece (Rs)
1	10728962	HEAD PCOCK DOOR	1	30	12	1501
2	10728091	FOOT PCOCK DOOR	1	30	12	1222
3	10727903	DOOR	2	30	24	1237
4	10728949	DOOR	1	30	12	1827
5	10314884	CAPE HOOD R	1	30	12	1112
6	10314854	CAPE HOOD L	1	30	12	1005
7	10628384	CAPE HOOD WELDED L	1	30	12	1058
8	10628383	CAPE HOOD WELDED R	1	30	12	1033

(Source: Observations)

5.3] MSD / DRUM DOORS

SR NO	PART NO	PART DESCRIPTION	Qty/Machine	Average Demand	Qty/WEEK	Cost
1	10314884	CAPE HOOD R	1	80	20	1112
2	10314854	CAPE HOOD L	1	80	20	1005
3	10394656	CAPE HOOD WELDED L	1	80	20	1181
4	10322306	CAPE HOOD WELDED R	1	80	20	1217

(Source: Observations & Calculations)

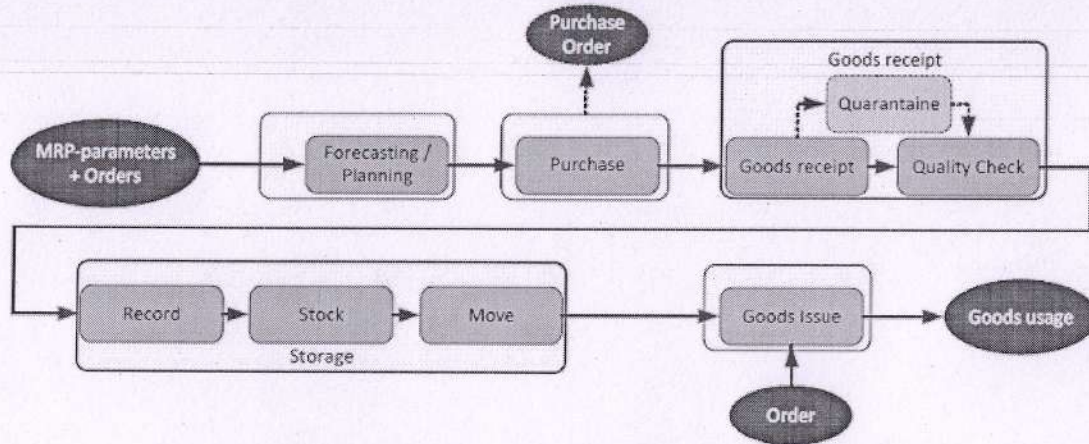


Figure: Inventory Management Process

5.4] LAYOUT CONCEPT

Layout of Sheet Metal Department is based on process flow. Initially it was on the basis of part wise but due to high range of varieties in parts it has become more complex then after a big discussion it has been changed to process flow layout. With the help of all these changes AMFR become more flexible to produce different varieties of parts with great utilization of equipment. On time deliveries of AMFR Sheet Metal also has been improved up to 95 % with this concept.

According to this concept following flow of work is monitored.

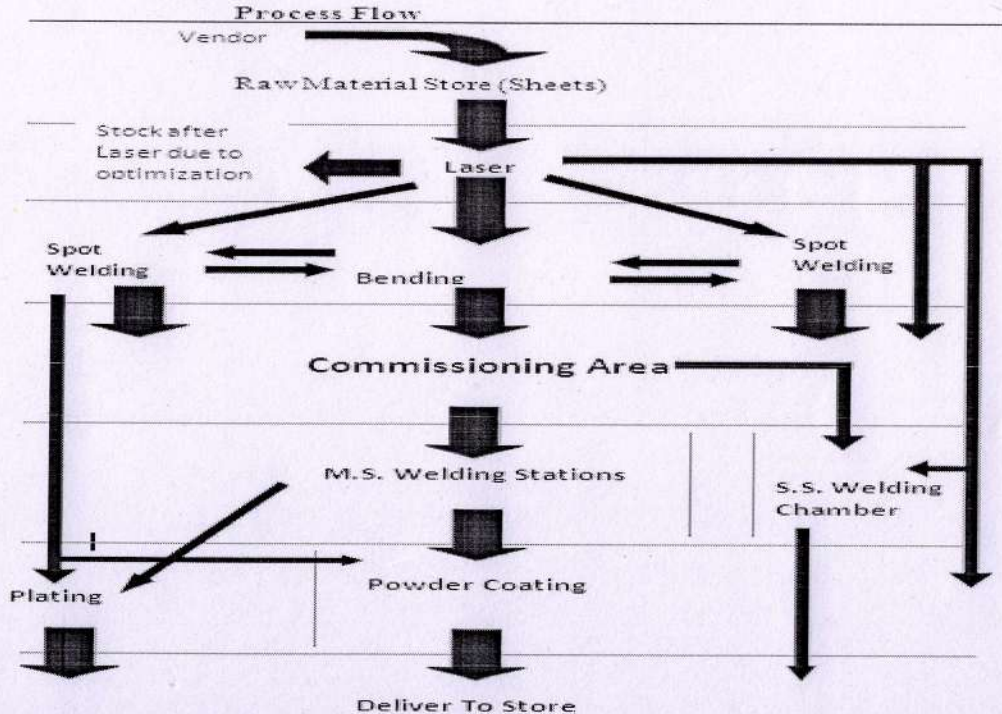


Figure: Process Flow Chart (Concept layout)

Remark

1) Raw and dispatch area are opposite to each other to make the smooth flow of material.

2) To optimize Laser cutting as per thickness for the purpose of cost reduction some time few thicknesses has to be cut before its requirement. An area has been specified for those components.

3) Spot Welding has been placed besides Bending for clear flow of components, which is not require Bending or Bending require after Spot Welding.

4) Welding chamber for stainless steel components has been made separately to prevent it from rust caused by M.S. dust while welding together in one room.

5.5] ABC ANALYSIS

(Inventory Management for Work in Process Parts)

Following is the detail part list of ABC parts for head stock/Foot stock, MSD & Intercompany parts.

Sr No	Project	'A' Type total parts	'B' Type total parts	'C' Type total parts
1	Head stock /Foot stock	15	25	35
2	MSD	10	20	30
3	IMD	8	15	25
4	Cylinder separator	10	20	30

- 'A' Types parts were manufactured four times in a month.
- 'B' Types parts were manufactured 2 times in a month.
- 'C' Types parts were manufactured one time in month.
- All those groups were nested collectively as per the thickness.

Inventory management for following raw material

Material No	Material Description	Weight in KG
10756705	Sheet 1mm X 1250mm X 1750mm	18
10709966	Sheet 1.5mm X 1250mm X 1750mm	25
10743838	Sheet 2mm X 1250mm X 1750mm	35
10640642	Sheet 3mm X 1250mm X 1750mm	52
10689329	Sheet 4mm X 1250mm X 1750mm	69
10689491	Sheet 8mm X 1250mm X 1750mm	196
10592145	Sheet 1.5mm X 1250mm X 2500mm	37
10592146	Sheet 2mm X 1250mm X 2500mm	49
10592148	Sheet 3mm X 1250mm X 2500mm	74
10557054	Sheet 4mm X 1250mm X 2500mm	98
10592150	Sheet 5mm X 1250mm X 2500mm	123
10557059	Sheet 6mm X 1250mm X 2500mm	147
10557252	Sheet 10mm X 1250mm X 2500mm	245

5.6] EOQ Calculations DURING SEPTEMBER 2016 TO NOVEMBER 2016

The firm requires below given units of material for manufacturing of steel. The following are the details of their operation during 2010-2011.

Material No	Material Description	Weight in KG	Req / MC(KG)	Req/Week (KG)	Cost / KG (RS)	A	D	H
10756705	Sheet 1mm X 1250mm X 1750mm	18	132	792	42	1500	38016	4.2
10709966	Sheet 1.5mm X 1250mm X 1750mm	25	325	1950	42	1500	93600	4.2
10743838	Sheet 2mm X 1250mm X 1750mm	35	175	1050	42	1500	50400	4.2
10640642	Sheet 3mm X 1250mm X 1750mm	52	728	4368	42	1500	209664	4.2
10689329	Sheet 4mm X 1250mm X 1750mm	69	1311	7866	44	1500	377568	4.4
10689491	Sheet 8mm X 1250mm X 1750mm	196	392	2352	44	1500	112896	4.4
10592145	Sheet 1.5mm X 1250mm X 2500mm	37	444	2664	42	1500	127872	4.2
10592146	Sheet 2mm X 1250mm X 2500mm	49	196	1176	42	1500	56448	4.2
10592148	Sheet 3mm X 1250mm X 2500mm	74	148	888	42	1500	42624	4.2
10557054	Sheet 4mm X 1250mm X 2500mm	98	1372	8232	44	1500	395136	4.4
10592150	Sheet 5mm X 1250mm X 2500mm	123	246	1476	44	1500	70848	4.4
10557059	Sheet 6mm X 1250mm X 2500mm	147	147	882	44	1500	42336	4.4
10557252	Sheet 10mm X 1250mm 2500mm	245	122.5	735	44	1500	35280	4.4

Calculation of EOQ

10756705 Sheet 1 mm X 1250 mm X 1750 mm

D= Annual quantity used in KGS = 38016 KG

A= Cost of placing an order = 1500 RS.

H= Cost of holding one unit = 4.2 RS

EOQ = $2 \times A \times D / H$; EOQ = $2 \times 1500 \times 38016 / 4.2$; EOQ = 5210 RS.

No of orders for the year = $D / EOQ = 38016/5210 = 7$ orders.

Carrying cost = Order Size X Average inventory

Order Size = $D / \text{No of orders} = 38016/7 = 5430$ RS.

Average inventory = Order size / 2 = $5430/2 = 2715$ RS.

Carrying cost = $5430 \times 2715 = 14742450$ RS

Ordering cost = Cost per order No X No of orders. = $1500 \times 7 = 10500$ RS.

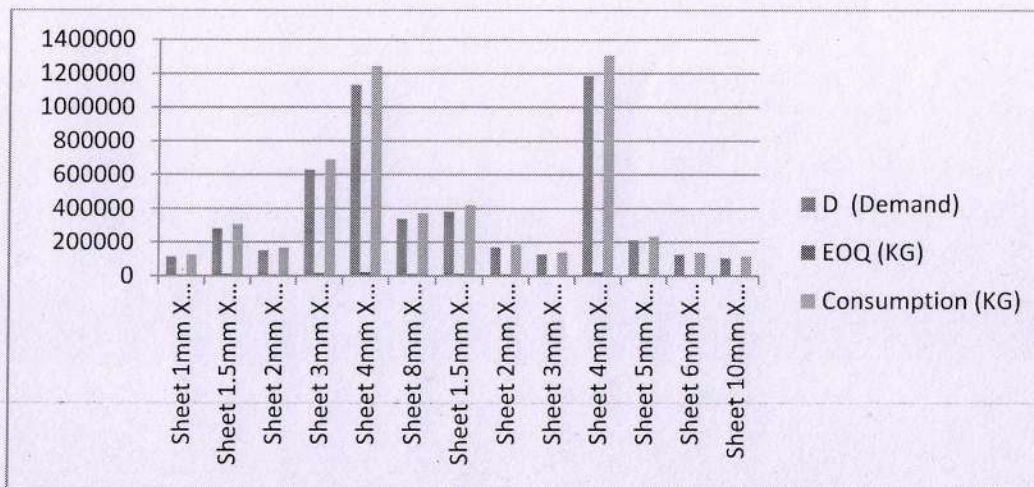
Total Annual Cost = Carrying cost + Ordering Cost

= $14742450 + 10500 = 14752950$ RS

Lead time 10 to 20 Days, period of safety stock 30 days, Total working days in year

Material No	Material Description	Weight in KG	D	EOQ (KG)
10756705	Sheet 1mm X 1250mm X 1750mm	18	38016	5210
10709966	Sheet 1.5mm X 1250mm X 1750mm	25	93600	8176
10743838	Sheet 2mm X 1250mm X 1750mm	35	50400	6000
10640642	Sheet 3mm X 1250mm X 1750mm	52	209664	12237
10689329	Sheet 4mm X 1250mm X 1750mm	69	377568	16422
10689491	Sheet 8mm X 1250mm X 1750mm	196	112896	8980
10592145	Sheet 1.5mm X 1250mm X 2500mm	37	127872	9557
10592146	Sheet 2mm X 1250mm X 2500mm	49	56448	6350
10592148	Sheet 3mm X 1250mm X 2500mm	74	42624	5518
10557054	Sheet 4mm X 1250mm X 2500mm	98	395136	16800
10592150	Sheet 5mm X 1250mm X 2500mm	123	70848	7114
10557059	Sheet 6mm X 1250mm X 2500mm	147	42336	5500
10557252	Sheet 10mm X 1250mm X 2500mm	245	35280	5020

Graph: For the year 2015 to 2016 (Demand, EOQ & Consumption)



6] FINDINGS OF THE STUDY

1. To control Inventory EOQ calculations are prepared & reorder level also maintain.
2. There is constant communication between suppliers for supplying raw material for replenishment of stocks.
3. Raw material format are reduced so that monitoring of raw material get easy.
4. KANBAN for section parts are well maintained. There is trolley trigger for replenishment of KANBAN bin.
5. For maintaining Finish goods stock of Doors there is trolley trigger. Trolley trigger is from laser section to assembly section.

7] SUGGESTIONS

- Company should prepare master nesting data for laser cutting, by reducing lot sizes.
- For each project like HSFS/MSD/INTERCOMAPNY/ there also can maintain trolley trigger methods.
- Always company has to release orders for phantom parts. This has to deliver in stores & then issued to higher assembly. But due to this always MIGO concept that is goods issue pending activity takes more time.
- Phantom parts can be removed from SAP & connected with higher assembly so that during laser cutting phantom parts also produced & go for production with higher assembly.
- Cost of monitoring WIP parts through SAP can be minimized through developing 2 BIN systems for all projects.

8] CONCLUSION

Holding cost of raw material & finished goods are much more so company should utilize those funds for proper productive functions. Inventory management concept is very crucial to maintain Working capital for any company.

Inventory management can improve through better monitoring & control over KANBAN system, 2 BIN systems, ABC analysis, and other inventory management tools.

One can maintain better control over inventory by maintaining targets for every month closing stocks.

Accurately maintaining figures on the finished goods inventory makes it possible to quickly convey information to sales personnel as to what is available and ready for shipment at any given time.

The ROI of Inventory management will be seen in the forms of increased revenue and profits, positive employee atmosphere, and on overall increase of customer satisfaction.

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"INCUBATION" - II

**"GLOBAL STRATEGIES FOR CHALLENGES
IN BUSINESS MANAGEMENT AND
IMPACT OF FDI IN ECONOMIC
DEVELOPMENT "**

on

17th and 18th Jan 2017

**In Association with
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22. “An Analytical Study of Perception about “MAKE IN INDIA” Amongst Engineering & Management Students, with Reference to Pune City Institutes”

Prof. Roshna Jaid

RIMRD, Pune

roshna.jaid@gmail.com

Dr. Ashutosh Misal

RIMRD, Pune

dr.ashutoshmisal@gmail.com

ABSTRACT:

Countries development, progress & growth are the most important factors. Rapidly increasing global competitions demands to made strong Economy, Import & Export business practices, optimum use of investment, use of Human Resources & currency exchange. To achieve & create maximum employment attracts maximum foreign investors / businesses Prime Minister Narendra Modi coined slogan on 25th 2014 launched the “Make in India”. Make in India is an international marketing campaign, which concentrated to fulfill the purpose of job creation, enforcement of secondary & territory sector, boosting national economy, converting India to self reliant country & give Indian economy global recognition.

This papers aims to understand the campaign aim, objectives, vision its effect on various fields of students. Research is done with help of stratified sampling method. Data analyzed with help of research tool & scientific technique. Research is limited to Pune city institutes.

Keywords: *Make in India, Indian Economy, Perception*

INTRODUCTION

India is known as strong competitor country at global level, which competes internationally in all fields. As we know India having natural resource, maximum youth to whom we called Human resources, strong useful environment for the competition. Make in India is International campaign of recent govt. which aims to make India the Manufacturing hub of the world. Idea of utilizing cheap labour, raw material, is potential high profit making markets. Govt. focusing on employment generation, boosting trade & economic growth, safe guard & sustain overall development. Major objective of campaign is to focus on 25 sectors of the economy for job creation & skill development, like chemical, automobile, IT, textile, Tourism hospitality, railways, pharmaceuticals, wellness, etc.

1. Response to Make in India :

Make in India launched on 25th September 2014 by PM Narendra Modi. Make in India means “Come & Make in India”. This moment is getting grate & positive responses from national & international level. Hitachi invested 100 billion currencies in auto component plant in Chennai. Huawei announces to invest US\$ 170 million in Telecom Hardware plant in Chennai, Spice Group invest US\$ 75 million in Mobile Phone manufacturing industry in uttar Pradesh, France offered to provide 36 fighter

jet air craft to India & participate in Make in India movement. Datawind, china announces to participate along with investment for Two manufacturing unit for mobile in Amritsar to assess & accredit institutions of higher education in the country.

In electronic sector near about 1.10 lakhs Cr. Investment proposals have been received in a year from 20 to 25 foreign & domestic companies.

1.1 Objective of Study :

- a. To understand “Make in India “campaign concept.
- b. To discover the perception about Make in India amongst Technical college students.
- c. To analyze the impact of Make in India concept on Students.

1.2 Hypothesis of the Study :

H₀: There is positive perception about Make in India campaign amongst Technical campus college students.

H₁: There is no positive perception about Make in India concept amongst Technical campus college students.

1.3 Scope, Area & Time of Study :

As we know youth are future of any Nations. India called as Highest Youth PowerNation in globe. Only youth can champions this concept in country. If youth understood this concept properly then only the aim, objectives of the campaign will get fulfilled. Researcher selected 30 Technical College Campus from Pune city of Maharashtra area. Research is to be done from August 2016 to November 2016.

1.4 Why Technical College Campuses:

Make in India theme is for job creation, employment generation, industrial development & use of optimum human resource. Our college youths are future of our nation. They are going to challenge the Indian economy in global markets through their innovations, inventions in industrial sectors, design sectors. For the same researcher selected technical college students for understanding perception & impact of Make in India campaign on youths in various angles.

1.5 Research Area:

Researcher selected Technical campus from Pune city. There are 595 no. of campus under Pune University. Selected 30 Institutes is from above no. Distributed questionnaire amongst 30 technical campuses & asked to take it filled with maximum students. 371 fully filled questionnaire feedback received.

1.6 Review of Literature :

GunjanBhagowaty, from Gurgaon in his research paper focused on various issues & creativity of make in India after 2014. In his research paper he tried to find some challenges in the path of development & recommend possible solutions. Researcher found the reality of the ground level, there are a lot of challenges that the govt. has to overcome in order to turn the vision of achieving a sustainable growth in

manufacturing sector. ([www.crisil.com/crisil-young-thought-leader/ dissertations](http://www.crisil.com/crisil-young-thought-leader/dissertations)) In Samridhi Goyal, Prabhojt Kaur, Kawalpreet Singh (www.iosrjournals.org) Researcher find out Role of HR & Financial Services in Making “Make in India” campaign a success. Researcher focusing on employment generation, trade boosting, economic growth, safe guard & sustain the overall development of India & its citizen. Researcher found & highlighted importance of the role of HR & financial services in make in India. There is need for financial service providers and advisors who could work for this industrialist right from the beginning.

Impact of Literature Review:

- a. India must take care at the time of turning Make in India vision about reality of ground level & overcome first challenges, e.g Land Acquisition, employability & infrastructure
- b. For Make India a manufacturing hub its human resource & financial assistance will play major role. Need to reforms industrial strategies to make in India.
- c. India needs to achieve mainly two objectives creating employment & shifting more workers into high productive sectors.

1.7 Make in India Vs Made in India :

1.7.1 Make in India :

“Make in India” is an attempt made by the Indian Government to invite Foreign MNCs to come to India and open their manufacturing hubs. This will ensure more jobs, infrastructural development, more foreign investments, and also we can get those products at a much lesser price. The end result is that India will be dominated by overseas global corporations and they will take all the profits while they create jobs in India and pay low wages to the workers in India who work in the factories.

1.7.2 Made in India :

“Made in India” is a label that accompanies all goods that have been manufactured in India. Made in India applies to any product that is fully manufactured in India. It applies to products of domestic or foreign based corporations as long as the product was made wholly in India.

2. Data Analysis :

Researcher prepared the questionnaire for technical college students and distributed it amongst the students in Technical & Management colleges in Pune city. After receiving the questionnaire researcher analysis done with help of scientific methods.

Table 1. Information of Questionnaire

S. No	Faculty Wise Group	Total Colleges	Questionnaire Distributed	Questionnaire received	Questionnaire Rejected	Sample Size
1	Engineering	21	280	264	06	258
2	Management	09	131	118	01	117
	Total	30	411	382	07	375

There were 264 questionnaire received out of which 06 were incomplete so rejected & only 258 was sample size from Engineering campus. 131 questionnaire distributed 118 received 01 rejected only 117 were from Management institutes. Total sample size was 375 students.

2.1 Testing of Hypothesis No 1

H₀ : There is proportion of college students whose perception about Make in India is positive is positive is 0.50

H₁ : There is proportion of college students whose perception about Make in India is positive is more than 0.50

Mathematically here level of significance is 0.05

Null hypothesis get rejected cause of the Perception about Make in India was positive is 0.50. Alternative hypothesis get accepted. From these once can say majority of college students are aware about Make in India. Means theme is growing & it's a beneficial for future. Our social development can possible, India can win global market, & quite confident that through Make in India can create jobs.

2.2 Testing of Hypothesis No 2

H₀: There is proportion of college students whose perception about effect of Make in India is positive is 0.50

H₁: There is proportion of college students whose perception about effect of Make in India is positive is more than 0.50

Mathematically here level of significance is 0.05

Testing of Hypothesis No 1										
Sr. No	Aspects	Positive Response	Mean	SD	H ₀	H ₁	Z Value	Z Table	P Value	Decision
1	Do you heard about Make in India theme	86.66	4.11	0.97	P= 0.5	P>0.5	21.13	1.64	0.00	Reject H ₀
2	Are you understood what is Make in India	81.6	4.03	1.048	P= 0.5	P>0.5	14.46	1.64	0.00	Reject H ₀
3	Do you agree Make in India is only Growth path for our country	74.93	3.96	1.2	P= 0.5	P>0.5	9.86	1.64	0.00	Reject H ₀
4	Is Make In India really Beneficial to each field	85.06	4.11	1.12	P= 0.5	P>0.5	18.64	1.64	0.00	Reject H ₀
5	Do you agree that we can be Superpower with help of Make in India Theme	77.6	3.81	1.19	P= 0.5	P>0.5	13.14	1.64	0.00	Reject H ₀
6	Are you agree Make in India theme can create Indian Brand in Globe	77.06	3.95	1.25	P= 0.5	P>0.5	13.21	1.64	0.00	Reject H ₀
7	Do you agree Make in India create Global	81.06	4.029	1.15	P= 0.5	P>0.5	13.94	1.64	0.00	Reject H ₀

	Opportunity for US.									
8	Can Make in India really Creates Employment for youth	84.26	4.06	1.04	P= 0.5	P>0.5	16.47	1.64	0.00	Reject H0
9	Are Make in India really boost entrepreneurship amongst youth	81.06	4.06	1.092	P= 0.5	P>0.5	14.34	1.64	0.00	Reject H0
10	Is it possible to develop society through Make in India theme?	93.6	4.36	0.84	P= 0.5	P>0.5	36.45	1.64	0.00	Reject H0
11	Can we win Indian Market through Make in India	82.66	4.085	1.096	P= 0.5	P>0.5	15.17	1.64	0.00	Reject H0
12	Do you agree that Make in India attracts Foreign Investment	91.46	4.18	0.906	P= 0.5	P>0.5	27.96	1.64	0.00	Reject H0

Table Interpretation 1: Our null hypothesis is rejected & alternative hypothesis accepted. It is clearly shows that, majority students are confident about Make in India theme will achieve the set object & create impact in international market. They are much aware about the Make in India theme.

Testing of Hypothesis No 2

Sr. No	Aspects	Positive Response	Mean	SD	H	H	Z Value	Z Table	P Value	Decision
1	Make in India theme will increase Import Export trades	85.067	4.11	1.12	P= 0.5	P>0.5	18.64	1.64	0	Reject H0
2	Make in India secures Indias Major Industries	91.46	4.18	0.906	P= 0.5	P>0.5	27.96	1.64	0	Reject H0
3	Do we make Indian Economy more strong through Make in India	77.6	3.81	1.19	P= 0.5	P>0.5	13.14	1.64	0	Reject H0
4	Do our Agriculture & allied sectors get secured through Make in India	77.06	3.95	1.25	P= 0.5	P>0.5	13.21	1.64	0	Reject H0
5	Do we increase foreign investment through make in India	82.66	4.085	1.096	P= 0.5	P>0.5	15.17	1.64	0	Reject H0

6	Do we Develop our nation's Infrastructure through Make in India theme	86.66	4.11	0.97	P= 0.5	P>0.5	21.13	1.64	0	Reject H0
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Table Intervention no. 2:

Students are confident about the import & export trade, infrastructure facilities through Make in India. Many students are worried about agriculture development.

CONCLUSION:

Many institutes from engineering & management students accept the theme Make in India. They are much confident that the PM Modi launched best strategy for the growth & development of Nation. We became economically strong from this theme. Employment opportunities are also hopeful. Majority only care about agriculture sector development.

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