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Impact of Partnership on Project management

Lakshmi Vishnu Murthy Tunuguntla *

Abstract
The purpose of this research is to understand and quantify the impact of Partnership on project management and strength of interaction among them. A theoretical framework is proposed regarding the constructs of partnership, and Project management (DIM) and the construct validity was established. The sample data from 65 firms were obtained through structured questionnaires. Structural equation modelling (SEM) was used to understand the impact and quantify the relationships between the constructs. Partnership had significant effect on project management.

Keywords: Project Management, Partnership, Knowledge Transfer, Relationship Building

Introduction
Business-IT alignment is defined as the extent to which the IT strategy supports, and is supported by, the business strategy. Venkatraman, et al. (1993) stated that during the last two decades, Information Technology (IT) has become very critical in providing support, sustaining the competitive position and enabling the growth of a business. However, the alignment of IT with business strategy has been consistently ranked as the most critical issue facing industry and IT executives across a significant part of the world.

Motivation for the Research
The fundamental motivation for this research is due to the consequences of failures of a lot of software applications implementation. Kaur & Sengupta (2011) indicate the reasons for the failure of the software in their research. Their findings suggest that majority of the projects fail to meet their objectives due to poorly defined applications, miscommunication between business and IT leading to poor relationships, poor requirements gathering analysis and management costing the businesses about $30 billion every year. The failure of these applications is affecting the business-IT alignment. The partnership and project management are a couple of essential constructs that affect the business-IT alignment. The relationship between partnerships (BP)-Business-IT alignment (BIA) (Gutierrez, 2011) is achieved by building relationships, exchange of domain knowledge. The relationship between Project management (DIM) and BIA states that proper project implementation would lead to better project results and better business results improving the business-IT alignment. The relationship between partnership and project management is not studied in the literature. This research focuses on this aspect and understands how a business would affect the project management.

This research contributes to body of knowledge by providing the structure of the constructs like portfolio management, partnership and business-IT alignment validated through a literature survey. In addition to the conformance from literature, the construct validity has also been

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established through content validity, reliability, discriminant validity, convergent validity and confirmatory factor analysis through Structured Equation Modelling (SEM).

**Method**
The following illustration describes the method followed to achieve the purpose of this research paper.

**Definitions of the Constructs**

*Project Management* is to manage the project like an investment thus generating the ROI for the stakeholders and the organization through collection of metrics that are linked to business benefits.

*Partnership (BP)* is essentially building relationships between business and IT areas, ensure knowledge transfer and relationship building.
Literature Review

Well and Ross (2004) state that governance is about specifying the decision rights and accountability framework to encourage desirable behaviour in the use of IT to manage the project like an investment thus generating the ROI for the stakeholders and the organisation through a collection of metrics that are linked to business benefits. Smith & Mckeen (2010) describe the issues concerning the communication between the business and IT. One of the most critical skills all IT staff needs to develop today is how to communicate effectively with business. Over and over, research has shown that if IT and business cannot speak the same language, focus on the same issues and communicate constructively; they cannot build a trusting relationship. Moreover, business is consistently more negative about IT’s ability to communicate effectively than it is. Even while IT collaboration is improving, business’s assessment of IT’s communication skills is declining.

According to Manfreda & Mojca (2014), it is essential to identify the key factors that are important in this relationship to improve the understanding of the relationship between top management and IS personnel. Two separate questionnaires were used for IS department managers and top management to identify critical factors in the relationship. In total, 221 CIOs and 93 CEOs agreed to participate in the research. The empirical investigation reveals the existence of nine factors that are important in the business-IS relationship. Seven factors (top management support to the IS department (top SUP), mutual trust between management and IS personnel (muTRUST), perceived value of the IS department (Isvai), managerial knowledge and skills of the IS manager (manKNL), technological knowledge and skills of the IS manager (techKNL), business knowledge and skills of the IS manager (busKNL), business role of the IS department (busROL), supporting role of the IS department (supROL), and technological role of the IS department (techROL)) are perceived differently by top management and IS management and thus causing the gap in the relationship, while two factors are similarly perceived. This paper presents the key areas that business and IS personnel should pay attention to. Therefore, it enables reducing the business-IS gap by considering the identified factors and dedicating significant effort to the factors with significant differences.

Zolper, et al. (2014) studied the impact of relationships at the application-change level and strived to identify and explain favourable social structures for useful business/IT dialogue at the operational level. They collected data in seven comprehensive case studies, including 88 interviews and corresponding surveys, and applied social network analysis to show that three social structures at the implementation level influence the degree to which IT applications are maintained and enhanced in line with business requirements: 1 interface actors connecting business and IT, (2) the relationships between interface actors and the corresponding unit, and (3) the relationships between interface actors and other employees in their unit. In three cases, less favourable structures are revealed that correspond to low application change effectiveness and software applications that do not meet business requirements. The other cases benefit from favourable social structures and thus enhance the fulfilment of business requirements and result in higher IT business value. This paper contributes to IS research by helping to explain why companies may not provide favourable IT services despite favourable relationships at the top management level and successful application development projects.

Maharaj & Brown (2015) examined the impact of shared domain knowledge (SDK), and strategic information systems planning on alignment. Data were gathered from management consultants in a large, global IT organization, through the use of a structured questionnaire, and analysed. SDK was also found to positively impact both the intellectual and social dimensions of alignment. Findings indicate that fostering a knowledge sharing environment in organizations would help improve alignment as well as the formal processes designed to steer alignment such
as on strategic information systems planning (SISP). Roses, et al. (2015) proposed a model of conversational competences for Business and IT managers aiming at the strategic alignment between their areas. The theory of this alignment highlights the importance of communication between Business and IT areas, which is explored in the social dimension of their managers’ relationship through conversational competences. A survey research was performed with Business and IT managers from public and private organizations in Brazil, whose data were analysed through multivariate statistical techniques - exploratory and confirmatory factor analysis and thematic content analysis. The results confirmed the constructs and most of the hypotheses of the proposed research model, which was expanded with new constructs and hypotheses.

Mapping of Practices with Literature
The research described above indicates the trends in partnership (BP) and project management (DIM). So, the literature has been surveyed to get the support from the literature for each of the factors considered under each construct and the same is provided in the form of tables below.

Table 1: Mapping between Partnership Practices and Literature

<table>
<thead>
<tr>
<th>Build Partnership (BP)</th>
<th>Cross referencing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishing the Connection between people from business side and people involved in</td>
<td>Bartholet, Budd and Turisco (2009), Masadeh, Raed, Kuk and George (2007), Heather,</td>
</tr>
<tr>
<td>Planning of IT applications/Software products</td>
<td>James and Satyendra (2007), Reich and Benbasat (2000), Yalta and Hu (2009), Nelson</td>
</tr>
<tr>
<td>Ensuring sharing of domain knowledge between business and IT executives leading to</td>
<td>Luftman and Brier (1999), Bartholet, Budd and Turisco (2009), Masadeh, Raed, Kuk and</td>
</tr>
<tr>
<td>understanding of business by people involved in IT application/software products planning</td>
<td>George (2007), Reich and Benbasat (2000), Yalta and Hu (2009), Nelson and Cooprider</td>
</tr>
<tr>
<td>development</td>
<td>(1996)</td>
</tr>
<tr>
<td>Ensuring close interaction between people involved in IT application planning &amp;Dev and</td>
<td>De Haes &amp; Van Grembergen, 2006, Sledgianowski (2006), Masadeh, Raed, Kuk and George</td>
</tr>
<tr>
<td>customers/end users to understand the expectations and issues</td>
<td>(2007), Ross (2003), Gutierrez (2011), Segars and Grover (1998)</td>
</tr>
</tbody>
</table>

Table 2: Mapping between Project Management (DIM) Practices and Literature

<table>
<thead>
<tr>
<th>Project Management (DIM)</th>
<th>Cross referencing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building required metrics (for e.g. based on balanced score card) based on the business</td>
<td>Jeffery and Leliveld (2004)</td>
</tr>
<tr>
<td>objectives</td>
<td></td>
</tr>
<tr>
<td>Collecting metrics related to Cost, Quality and schedule including the performance</td>
<td>Jeffery and Leliveld (2004)</td>
</tr>
<tr>
<td>indicators (for e.g. Billing accuracy in case of telecom billing products)</td>
<td></td>
</tr>
</tbody>
</table>
Project Management (DIM) | Cross referencing
--- | ---
Building the required governance processes for Project/Program/Account Management and Software Development based on the models like CMMI/ITIL/ISO 9001/ISMS/proprietary model | Gregor and Hart (2007), Steve Dehaes & Van (2009), Sharma, Merlin and Ekinci (2009)
Building needed Operational level agreements (OLAs) with the appropriate stakeholders within the organization to meet the SLAs | De Haes & Van Grembergen (2006)
Periodic verification of process compliance through external and internal audits to see if the processes are implemented in the intended manner | Gregor and Hart (2007), Steve Dehaes & Van (2009), Sharma, Merlin and Ekinci (2009)
Metrics are consolidated at the Program level and are translated into Program level metrics | Hauke, Hans, Mervyn and Maistry (2007), Jeffery and Leliveld (2004)
The program level metrics are mapped to the business benefits | Chad, Yu, Huang, and Wo-Chung (2005), Jeffery and Leliveld (2004)

Framework Development, Objectives and Methodology
The rationale for the framework is developed by identifying how BP impacts Business value planning and then the framework is designed.

Table 3: Rationale for the Research framework
<table>
<thead>
<tr>
<th>Paths in Research Design</th>
<th>Evidence from Literature survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIM</td>
<td>BP</td>
</tr>
</tbody>
</table>

Research Framework
Based on the above rationale, the research framework is developed and SEM is used further to model this in quantitative terms.

![Figure 1: Research Model](image)

Objective of the Study
To understand the impact of Partnership on Project management in the context of Indian IT Industry.

Hypothesis Design
Hypothesis (H₀): Partnership does not affect Project Management.

Research Design
The basic research design selected for this initiative is cross sectional survey conducted in the IT cover IT Industry in Chennai, Hyderabad, Pune and Noida who are in System Integration, through stratified random sampling from Middle and Senior Management executives with 5 plus years of experience. The questionnaire has been derived with factors of Partnership, and
Project management using a 5 point scale (1 – Strongly disagree, 2 – Disagree, 3 – Neutral, 4 – Agree, 5 – Strongly agree). The tools used for Construct Validity are Content Validity, Reliability, Content Validity, Discriminant Validity and Confirmatory Factor Analysis. Regression analysis has been used for testing of hypothesis. For framework validation Structural Equation Modelling has been used (herein after called as SEM). The constructs have been defined and their validity is established through a robust process.

Control Variable
Control variable here is "type of organization". The examples for types of organizations could be that it is a System integration business or product development business or Captive IT. In this research, the target population is only System integration business and it is constant throughout the research.

Content Validity
A widely used method to measure content validity was developed by (Lawshe, 1975). It is a method for gauging the agreement among the experts regarding the essentiality of a particular item. The computed content validity ratio is higher than the required values prescribed in the literature Piloting & Construct Validity.

Reliability
The pilot survey was conducted with 49 respondents and checked for its reliability (for all the three factors together) with Cronbach alpha test (Cronbach & Meehl, 1955) and found to be 0.81. Since the pilot survey has shown a significant reliability value, the survey was continued to collect the data. Cronbach reliabilities for the pilot study also had been done and they are greater than 0.75.

Convergent Validity
Bagozzi and Phillips (1982) conducted research on convergent validity to understand “if measures of construct that theoretically should be related to each other are, in fact, observed to be related to each other”. Convergent validity is “the degree to which two or more attempts to measure the same concept...are in agreement”. Item convergence was assessed through the calculation of the average variance-extracted scores. Scores greater than 0.50 support a case for convergent validity (Fornell & Larcker, 1981). According to results obtained, all of the “Average Variances Extracted” for constructs was greater than 0.50. Thus, convergent validity is evident. According to all the average variances extracted estimates were close to or greater than 0.50. Thus, convergent validity is evident.

Discriminant Validity
Discriminant validity is “the degree to which measures of distinct concepts differs” (Bagozzi & Phillips, 1982). Measures of different constructs should share little variance. Discriminant validity is important to the discussion of model fit because it establishes that two or more constructs are separate and distinct from one another. If constructs are separate and distinct from one another, then it can be established whether or not a predictive or causal relationship exists between them. The results support the existence of Discriminant Validity, as the Average Variance Extracted (AVE) for each of the constructs was greater than the shared variance between the construct and all other constructs.
Confirmatory Factor Analysis
Upon satisfactory results, Confirmatory Factor Analysis (CFA) was performed to confirm the findings using SPSS Amos 20.0. The factor loadings for each item under both the constructs ranging from 0.50 to 0.90. This shows that the loadings are significant.

Table 0: Summary of SEM model Values for Constructs

<table>
<thead>
<tr>
<th>Name of the construct</th>
<th>CMIN/DF</th>
<th>P</th>
<th>RMR</th>
<th>GFI</th>
<th>RFI</th>
<th>CFI</th>
<th>NFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partnership</td>
<td>0.95</td>
<td>0.41</td>
<td>0.01</td>
<td>0.99</td>
<td>0.98</td>
<td>0.99</td>
<td>0.99</td>
<td>0.025</td>
</tr>
<tr>
<td>Project management</td>
<td>1.27</td>
<td>0.25</td>
<td>0.011</td>
<td>0.99</td>
<td>0.86</td>
<td>0.98</td>
<td>0.95</td>
<td>0.032</td>
</tr>
</tbody>
</table>

Interpretation of CFA
The structural equation modelling approach using Confirmatory Factor Analysis (CFA) compliments traditional methods of evaluating reliability (like Chronbach alpha) and validity. The measurement model examines the relationship of observed indicators to their underlying constructs (latent variables) and provides a confirmatory assessment of convergent validity by evaluating the significance of the estimated indicators coefficients. After observing at the above data, we can conclude that the construct validity is established.

Data Collection and results
Questionnaires and interviews are a commonly used method of gathering data for research purposes. The major inputs considered for designing the questionnaire are the research objectives, hypothesis and the research framework and target population of research. The questionnaire is divided in to 2 sections with a total of 11 questions. 269 valid filled questionnaires have been received.

Results
Hypothesis Testing: AMOS 20.0 was used to model the framework and test the hypothesis. The probabilities associated with the effect of partnership on DIM are modelled using regression method in AMOS 20.0 through the analysis properties interface. The results are shown in the following path diagram and table.

Path diagram

![Path Diagram](image-url)
Discussion and Conclusion
Effect of partnership (DP) on project management (DPM): It is observed that Partnership (BP) affects the Project management (DIM). The effect of BP on DIM is 0.73 and is statistically significant at 1% level. The effect 0.73 indicates that when BP goes up by 1 standard deviation, "DIM" goes up by 0.70 standard deviations. So, the effect of BP on DIM is strong and significant statistically. So, the null hypothesis (H_0) is rejected and alternate hypothesis is accepted. This relationship signifies that higher levels of BP lead to higher levels of Project management.

Conclusion
The effect of Partnership (BP) on Project management indicates that establishing the connection between the counterparts in the context of IT and business areas, knowledge sharing and close interaction would enhance the mutual understanding, and expectation setting process during the project planning and execution and control phases leading to better business results and thus leading to project management excellence.

Research implications
Implications for theory base: The implications of this research towards the theory are to build a structure for the constructs Partnership and project management provide a framework. The construct structures are designed using the literature survey and tested through confirmatory factor analysis - single factor model using Maximum Likely hood method (ML) through Structured Equation Modeling (SEM). The confirmatory factor analysis showed very good relationships between the constructs and the items under each of the constructs. The model fit values match or exceed the expectations from the literature. The framework developed would add value to the theory base as it describes interaction between the BP and DIM.

Implications for IT Organizations: The study describes a very good correlation between Partnership and project management. The IT organizations could focus on the relationship building, knowledge transfer between the business and Information systems groups. This would provide very good value add to the organization and helps towards better execution of the business strategy as the projects are aligned to business strategy.

Limitation
- The size of the organization could play a role and thus focusing on Small/Medium/Large organizations may result in a different model/Interrelationships.
- In the current study, the maturity of the organization is not considered in the scope and the maturity of the organization could alter the findings.

References


Smith, H. A. & Mckeen, J. D. (2010). Developments in practice XXXVI: How to talk so business will listen ... And listen so business will talk. *Communications of the Association for Information Systems, 27* (13).


Unlocking Employability Potential:  
Enhancing Value of Employability Assessments

Kartik Dave* & Vidya M. Iyer**

Abstract
With changing employment needs and increasing job specific skills, assessing holistic candidate employability is crucial for selecting the right talent. Consequentially, the employability assessment tools have to fulfil multiple employability dimensions. The purpose of the paper is to analyse the trends in employability assessment and identify the suitability of the tools for present and future. The paper is based on literature, personal experiences of the authors, expert opinions from managers and academicians. Employability related literature developed over 20 years have been reviewed from human resources, psychology, sociology, economics and management domains. Employability assessments related literature has been analysed from theoretical and practical perspectives to identify possible solution to bridge the employability gap. The paper provides an understanding of the commonly adopted employability frameworks/constructs to measure employability among candidates. Predominantly the assessments are designed from the employer standpoint. The paper suggests that employability assessment tools could serve development needs of candidates better if assessment tools specific to industry and job categories were developed and catered. The tools would be robust if the constructs included candidate’s individual antecedent factors along with knowledge, Skills and Attitudes. This paper identifies the scope to strengthen existing employability assessment methods and proposes application of existing and new tools to bridge employability gap

Keywords: Skill Gap, Industry-specific employability, Employability Assessment, Employability Development, Employability Antecedents

Background
In a scenario where education was paramount, the universities and other training institutions were constantly challenged to produce the most suitable workforce for dynamic industrial needs. A majority of the employers and academicians viewed education as the requirement for employment. Higher the education qualification, higher was the expectation in employability levels. Employability assessment instruments are applied across college students in general at a large scale level to identify their suitability levels for jobs. Some others are used by specific industries/organizations to map employability of individuals for jobs and specific levels of careers. Since, the industry creates the demand for skills and workforce, the skill requirements and employability criteria are designed from the industry perspective. The employer estimates the competencies required and criteria for the employees that she would employ.

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While the generic assessment tools are devised to cater to larger amounts of soft skills, industry specific aptitude and skills, candidate traits and criteria play an important role in developing a niche human capital for organizations. With technology disruptions affecting businesses, job content is rapidly evolving. The challenge in identifying the suitable candidates is shifting from ‘skills’ to ‘talent’. The antecedents to developing employability play a crucial role in enhancing candidate employability from time to time.

With a view to understanding the challenges in assessing talent and employability, it is imperative for us to understand the prominent contents in employability assessment instruments and further identify the gaps to develop comprehensive instruments. This paper is an endeavour to evaluate the generic employability assessments and identify the scope for enhancement in the tools to derive higher value for employers. The latest trend in assessing employability and arriving at ways and means to measure is through psychometric modelled assessments run by large commercial organizations. One issue with this model of assessment is it is more evaluative rather than developmental. Such assessments coupled with developmental training modules and continuous development modules are required to improve employability among fresh entrants as well serving employees.

**Employability**

Employability is conventionally defined as the ability of an individual to succeed in securing and sustaining gainful employment. Knowledge of a particular concept is universal. The application of a concept or knowledge is based on the skilfulness of an individual. Transforming knowledge into skills depends on an individual’s experience and environment. Knowledge, Cognitive abilities, Skills and individual aspiration are predominant components of the popular models of employability. Employability constituents are ascertained by studying the literature for prominent employability models.

**The USEM Model**

Proposed by Yorke and Knight (Yorke & Knight, Embedding employability into the curriculum, 2004), this model was an outcome of the ‘Skills Plus’ project undertaken by the University of Lancaster to develop a model to embed employability skills in higher education curriculum. The model is based on the concept of ‘capability’ and combines with insights from cognitive and social psychology. USEM is an acronym for –Understanding – Skills (subject-specific and generic) – Efficacy beliefs (and self-theories generally) – Metacognition (including reflection).

**‘CareerEdge’ Model**

The design of the model reflects an assertion that each component is absolutely essential and one missing element will considerably reduce a graduate’s employability. A degree of overlap between some of the components is acknowledged and this is reflected in the visual presentation of the model. However, it is not suggested that these are the only areas of overlap, as this occurs at various points. For example, in addition to work experience being a valuable part of career development learning, it may, in some cases, directly inform subject learning relevant to the degree course being studied.

The model depicted illustrates the essential components of employability and also suggests the direction of interaction between the various elements. The mnemonic ‘CareerEDGE’ is used as an aid to remember the five components on the lower tier of the model. It is suggested that providing students with opportunities for them to access and develop everything on this lower tier and essentially, for reflecting on and evaluating these experiences, will result in development of higher levels of self-efficacy, self-confidence and self-esteem – the crucial links...
to employability. The first version of the model depicted the required skills and was framed in tiers. The developed version then was designed as per mnemonic to ‘Key’ for ‘Employability.’

Figure 1: CareerEDGE Model

Source: (Pool & Swell, 2007)

PERKINS Framework
Another very useful framework model for assessing and cultivating employability among students/candidates is the model developed and implemented by the US government. This model is a combination of three main components of employability—Applied Knowledge, Effective Relationships and Workplace Skills. The segments are further split into 9 distinct skills.

Bridgstock Model
Bridgstock model argues that in the rapidly changing information- and knowledge-intensive economy, employability involves far more skills than possession of generic skills listed by graduate employers. The graduates must be able to proactively manoeuvre the world of work and self-manage the career building process. The model acknowledges the importance of self-management and career building skills to lifelong career management and enhanced employability.

RAW Framework
Among the most recent works in developing framework is RAW framework (Fugate, Kinicki, & Ashforth, 2004). This model focuses on unifying psychological literature on individual differences in career success and the employers’ view of employability. It reviews what employers actually want in new hires. This model includes both perspectives by conceptualizing employability in terms of employers’ perceptions of job candidates’ ability to: (a) get along with co-workers—rewarding; (b) learn and do the job—able; and (c) be productive—willing. Besides the above discussed models, Mel Fugate’s framework of employability discussing personal
attributes, employment related generic skills and employability as a cumulative effect is noteworthy.

**Figure 2: RAW Framework of Employability**

![RAW Framework of Employability](image)

**Source:** R. Hogan, T. Chamorro-Premuzic, and R.B. Kaiser (2013)

**Framework for including employability in Higher education**

The Higher Education Academy of UK has devised models and definitions for application in various institutions in the UK as per the UK Skills Framework. ‘Framework for embedding employability in higher education’ (Figure 3) describes the inclusion of employability in higher education curriculum and fits into the context of this paper. Since employability is construed by many as an outcome of higher education, this model could be seen relevant to application during curriculum design and implementation.

**Figure 3 Framework for Embedding Employability in Higher Education**

![Framework for Embedding Employability in Higher Education](image)
The various layers and evolution of employability have been put together as ‘History of employability’ in the paper ‘What is employability?’ (McGrath, 2009).

The concept of employability has broadly grown in three phases so far (Chen, 2013) –

a. First phase (1950s-70s): the early concept of employability. In this period, the research level of employability lies in individual perspective. Dichotomous nature of employable or unemployable

b. Second phase (1980s-the end of 90s): the research on employability turned to enterprise or organization level. Facing variable external environment, enterprise must obtain adequate flexibility to accommodate the changes. Employability becomes a ‘meta-characteristic’ that employers require their employees to have.

c. Third Phase (Late 1990s onwards): Disabilities, organizing and coordination abilities and the adaptability of dealing with the changes in professional environment. Focus on development of college graduates as the future workforce which can adapt to business changes.

Universities, colleges and Higher Education institutions (HEI) have been the centres of employability studies. Various theories and models were evolved to define and measure employability criteria and dimensions based on analysing recruitment patterns, employer assessment of educational programs and candidate experiences on the jobs. A majority of employability research has been in the United States of America and the United Kingdom. Employability has been treated by different researchers from social, economic and psychological angles. Training, mobility and enhancement of skills among others (McQuaid & Lindsay, 2005) are a few critical factors.

**Employability Assessment Criteria: Knowledge, Skills, Attitudes and other Attributes**

The employability models developed have been employer centric. The models have arrived at prescriptive suggestions for employers and candidates to fulfil the job requirements. Commonly, employability is identified at the point of finishing college education, at the point of recruitment as ‘hitting the deck’ or identifying developmental needs and suitability in the future (Tuck). Most of the studies focused on student employability and especially those from Higher Education category as it was assumed that students from this category would aspire to grow professionally and their education would have prepared them to perform on a wide variety of jobs. Management students, engineers and students of other professional courses are expected to possess ‘job ready’ skills.

To measure the employability and job preparedness, it would be beneficial to identify ‘transferable skills’ and ‘job specific’ skills for futuristic suitability of the candidates (Fugate & Ashforth, 2003). A study on the employability in Banking Sector in India concluded that a candidate’s personal environment, motivation along with ‘generic transferable skills’ and ‘job related knowledge and skills’ (Iyer, 2017).

Ithaca group of Australia, in its effort to design framework for employability has arrived at framework based on knowledge, skill and understanding levels of employees for various skills required at workplace. The framework consists of ‘Employability Skills’ that are common across almost all types of jobs, ‘core skills’ required for specific work and ‘Technical or Discipline specific skills and knowledge’ that is imperative for learning and growing on a specific trade/job. The ‘core skills’ are defined in ‘Australian core skills framework’ as – learning, reading, writing, oral communication and numeracy (Core skills for work developmental framework, 2013).

In a study of the skills and employability status of Bio Science students in the United Kingdom a tool that would assess the skills required by employers in the field and possessed by graduate
students was developed (Zuzel, 2010). This study, they said, should enhance applicants’ potential for success in the recruitment process by producing ‘business ready’ graduates, able to make a dynamic start and rapidly adapt to change. The Measurement model developed by Misra and Mishra commonly incorporated skills to network, ability to impress the superior, willingness and ability to upgrade skills (Misra & Mishra, 2011). Few studies focusing on distinct employability requirements for specific functional requirements have been conducted.

Most researchers studying employability concluded that employability is affected by an individual’s indigenous and exogenous characteristics. While education, information about the job and training were the exogenous variables, motivation to learn, adaptability, mobility, gender, ethnicity, geographic location, academic competence, cognitive abilities were indigenous factors that affected an individual’s employability (Mishra, Kumar, & Gupta, 2017). Researchers have suggested predictive models, based on knowledge, skill and attitude characteristics that could be measured using psychometric and other measurement tools (Heijden & Notelaers, 2018). The influence of exogenous (environmental) factors such as geography, parental income, parental education, academic standards of the schools and college attended, mother tongue, language of education, geographical location of birth have been studied individually but an integrated predictive model based on one or multiple factors is the challenging gap. An integrated model or a tool that can be deployed to predict the employability of an individual – fresh employment candidate or an experienced employee will aid the policy makers, educationists, employers and individuals will aid predicting large scale initiatives for skill and development needs to alleviate the socio-economic conditions.

The attitudes possessed by the candidate bear the moorings of one’s knowledge levels, personal background and experiences, whereas the expected attitudes bear the requirements of the employer, the organizational and job needs which may be unknown to the candidate (McQuaid & Colin Lindsay, 2005). The match between the behaviour and attitudes of the candidate and employer are crucial in forecasting the suitability of a candidate/employee with the workplace. McKinsey Global (Barsh, Wang, & Jin, 2012) said that based on current trends in population, education, and labour demand, by 2020 the global economy could face the following hurdles:

- There is a possibility of supply of college or postgraduate degree holders overtaking the demand by a large margin. Almost about 13% of the current demand is a possibility.
- 15 percent of the demand for workers with secondary education.
- 11 percent enhanced demand for workers without even secondary education. We can assure ourselves that education levels, individual development and increased rate of earnings are correlated.

Sandra Alexander of North Texas University found a positive correlation between the cognitive abilities of an individual and workplace performance (Alexander, 2007). Basic forms of cognitive abilities are thinking, memory and attention (Eckhart, 1996) defines the function of mental abilities. Early stage child development has a huge bearing on later stage development of an individual (http://www.urbanchildinstitute.org/). Thus, it can be concluded that the basis to cognitive ability and skill development in adulthood lay in the initial years of a person’s life. Some of the most essential abilities for employment begin with childhood.

Physical abilities are equally important as the mental or cognitive abilities. The key physical abilities generally required for employment are static and dynamic. Various measures are deployed to measure the physical strength of an individual (Campion, 1983). The potential for employment of the disabled varies with industries, though it is true that the unemployment and underemployment of disabled is higher than able-bodied persons.
Overall, employment opportunities open up for those individuals whose physical and cognitive abilities fulfill the requirements for the jobs. A variety of physical, mental and socio-economic antecedent factors in the background influence the employability of an individual.

**Unlocking Candidate Employability Potential**
Tools developed by Aspiring minds, Wheebox and few other agencies are in vogue for broad spectrum application in India. Similar tools are applied in countries across the world. Generic employability assessment tools serve selection purposes in global organizations to identify future talent suitable to the organization. The tools are agnostic of culture and economic conditions. Additional tools to identify candidate suitability are applied to get a holistic view of the candidate. Tools for measuring employability have been developed over the past few years, especially in the UK. The measurement tools are generic and used across industries and sectors. While most of the tools cater to the Knowledge, Skills, Attitudes framework, the personality traits are assessed through a psychometric tool in most cases (Su & Zhang, 2015). A conceptual model suggesting the identification of present and future generic employability potential was suggested based on an empirical study conducted in India. (Iyer & Dave, 2016).

**Figure 4- Proposed 3-Phase Model For Unlocking Employability Potential**

(SOURCE: Proposed By Authors)

While a wide spectrum tool emphasizes on generic transferable skills, deploying the tool could yield erroneous results for large-scale application of employability measurement tools requires a wide spectrum tool. With the rapid changes in the job content, aspirations of people, evolution in the political environment, the gap in assessing employability could be reduced by developing a versatile instrument on job categories. Owing to the introduction of industry 4.0 and other technological developments, generic skills too could undergo a change in composition. Developing a job-specific tool would further require culture context assessment, personality profiling and psychometric testing.

Students and candidates preparing for jobs (specific jobs for specialized careers – e.g.: sales associate for a software business and sales associate for a retail store) could be educated with the appropriate quantum of skills and competencies that would be expected. Tools that uniformly educate and examine potential would lay out even playgrounds for candidates.
regardless of the personal background and upbringing, else including the effect of upbringing would make the selection process fair for a pool of candidates.

Conclusion: The Road Ahead
Retail, Hospitality, Banking, Manufacturing and Information Technology sectors are on the verge of undergoing transformation in the business models thus leading to changes in the careers and jobs. Sales, Customer service, operations, finance, analytics are some job categories that are rapidly changing in job content. Additionally, emerging markets witness rampant influx of businesses and witness VUCA (Volatility, Uncertainty, Complexity and Ambiguity) at a higher pace than other developed economies. Under such conditions of uncertainty, availability of holistic predictive selection tool can offer results to a great degree of business value.

Identifying the indices for the skills required to perform the job along with other attributes is a critical exercise. Unlike in the earlier decades, the future holds more creative, innovative, competitive, emotional challenges at work. The new-age skills emanate more out of intrinsic motivation, perception, life experiences and personal background. To identify the most suitable candidates with potential for future skills, it could be helpful to include the relevant antecedents to employability in the assessment. Attempts have been made to identify the influence of certain antecedents. Adolescent behaviour as an indicator adulthood behaviour, correlation between cognitive skills and emotional intelligence, mobility as a factor of socio-economic conditions have been singularly integrated in the past studies. The need of the future is to develop predictive tools for specific careers/jobs with multiple antecedents. Challenges in developing a holistic job category specific instrument would be identifying and measuring antecedent criteria pertaining to the job while considering the ethical dimension.

The employability perceptions of an employee and employer differ due to personal preferences. While the employee would develop knowledge and skills as per personal choice of profession, the employer would expect employability from a hiring perspective. It would be ideal for researchers and research agencies to develop employability assessment tools that could educate the candidates, unlock employability potential and bridge the workforce employability demand-supply gap.

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Consequences of Value Creation through Financial Manipulation

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Abstract
In the modern era of competition, the companies have to publicise their financial information for each fiscal year to provide evidence about financial position. The stakeholders take a variety of decisions related to the organisation, which are helpful to participate in the global economy. This trend pressurises managers to involve in creative accounting for achieving the target of wealth maximisation. It is fructified by increasing the market price of the share of the company. It also reduces the conflict between management and managers. The managers of companies are interested in displaying the profit at an inflated or deflated price as per the requirements of its condition. Accounting professionals of the company adopt different tactics for window dressing of financial statement. This paper examines different strategies of manipulating the financial report. Data have been collected from 50 accounting professional associated with large and small companies to identify a variety of techniques of fraud in the financial statement. This paper recognises two types of manipulation based on transaction and financial statement. These techniques are mainly used to conceal actual performance of company and government has to take rigorous steps to prohibit deceptive action.

Keywords: Financial Statement, Transaction, Stakeholder, Financial Year

Introduction
Accounting holds a critical position in a firm. With a large number of transactions recorded every day, the most important thing is to show the exact and real financial situation of the firm at any point in time. Financial statement manipulation is a very enduring problem in the corporate houses these days. Although the corporate regulating body, Registrar of companies has taken out many ways and means to stop and eliminate the corporate malfeasance. Investors purchasing the individual stocks and bonds should be already aware of such issues, warning signals and the tools at their end, to mitigate the adverse effects of these problems.

There are various studies dealing with the issue of motivation of management versus accounting manipulation. The size of tax payable, tax slab depends upon the size of declared income directing tax evasion. The real motivation for financial accounting and manipulation is the gap or the difference between the actual performances in comparison to the performance portrayed by the management. The aim of the paper or the objective of the study is to show the causes leading to accounting manipulation and effects of these manipulations on companies.

Literature Review
Accounting Manipulation also known as “creative accounting, reduction in income, earnings management, reduction in earnings, financial engineering, accounting cosmetics, window dressing, revenue management, income smoothing, creative accounting practices and

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aggressive accounting is a distorted presentation, a misstatement of the financial position/performance, creating a false impression of an organization's financial strength” (Jonada MAMO, Ada ALIAJ, 2014).

Value creation and financial information manipulation
“Value creation means different things to different people. To customers, it means products or services that are consistently useful. To employees, it entails being treated with respect, being involved in decision making, excellent reward opportunities and continuous training and development. To investors (shareholders and credit lenders), it means delivering consistently high returns on their capital, which generally requires strong revenue growth and attractive profit margins” (Fatai, 2015).

The main focus of corporate lies on profit maximisation for satisfying their objectives. This objective is directly associated with profits earned to meet the aspirations of shareholders. So higher profits are depicted in financial statements through financial manipulation or frauds. Rees (1995) opines that managers, in a bid to make their accounts look attractive, by judicious choice of accounting policies and applying bias where estimations are allowed. These financial manipulations are termed as fraud, which is performed intently. The frauds are classified as transaction fraud and financial statement fraud. Statement fraud may be defined as the intentional misstatement of specific financial values to enhance the appearance of profitability and deceive shareholders or creditors whereas transaction fraud is intended to embezzle or steal organisational assets. The fraud of financial statement is adopted as an operational tool despite corporate governance.

How financial statements are manipulated?
There are two general approaches to manipulate financial statements. The first approach is to inflate current period earnings on the income statement by artificially inflating revenue and gains, or by deflating current period expenses. This approach makes the financial condition of the company look better than it is in order to meet established expectations. The second approach of financial statement manipulation requires the exact opposite tactic, which is to deflate current period earnings on the income statement by deflating revenue or by inflating current period expenses.

However, there are many reasons to engage in such activity, such as making a company look bad in order to dissuade potential acquirers, pulling all of the bad financial information surrounding the company into one period so that the company will look stronger going forward, pulling all of the bad financial information into the current period when the poor performance can be attributed to the current macroeconomic environment or to shift good financial information to a future period when it is more likely to be recognized. (Case Study: Earnings Manipulation and the Role of the Media. 2016). According to Dr Howard Schilit, in his famous book "Financial Shenanigans" (2002), there are seven primary ways in which corporate management manipulates the financial statements of a company. Let's look at these seven general categories of financial statement manipulation and the typical accounting processes that facilitate the manipulation.

Recording Revenue Prematurely or of Questionable Quality
- Recording revenue prior to completing all services
- Recording revenue prior to product shipment
- Recording revenue for products that are not required to be purchased
Recording Fictitious Revenue
- Recording revenue for sales that did not take place
- Recording investment income as revenue
- Recording proceeds received through a loan as revenue

Increasing Income with One-Time Gains
- Increasing profits by selling assets and recording the proceeds as revenue
- Increasing profits by classifying investment income or gains as revenue

Shifting Current Expenses to an Earlier or Later Period
- Amortizing costs too slowly
- Changing accounting standards to foster manipulation
- Capitalizing normal operating costs in order to reduce expenses by moving them from the income statement to the balance sheet
- Failing to write down or write off impaired assets

Failing to Record or Improperly Reducing Liabilities
- Failing to record expenses and liabilities when future services remain
- Changing accounting assumptions to foster manipulation

Shifting Current Revenue to a Later Period
- Creating a rainy day reserve as a revenue source to bolster future performance
- Holding back revenue

Shifting Future Expenses to the Current Period as a Special Charge
- Accelerating expenses into the current period
- Changing accounting standards to foster manipulation, particularly through provisions for depreciation, amortization and depletion

Investors should understand that there are many techniques at management's disposal. However, what investors also need to understand is that while most of these techniques pertain to the manipulation of the income statement, there are also many techniques available to manipulate the balance sheet, as well as the statement of cash flows. Moreover, even the semantics of the management discussion and analysis section of the financials can be manipulated by softening the action language used by corporate executives from "will" to "might," "probably" to "possibly," and "therefore" to "maybe." Taken collectively, investors should understand these issues and nuances and remain on guard when assessing a company's financial condition. The main aim of this paper is to find out the various significant factors of financial manipulation in the financial statement in Indian Industry.

Methodology
This paper aims at examining the inside-out of the financial manipulation of firms. The primary data of 50 samples have been collected by questionnaire method from Charted Accountants, Accounting professional of different industries, whereas secondary data is also collected and extracted from the websites and journals; national and international related to the field of finance. The random samples have been taken.

Analysis & Interpretation
According to Graph 1, the bumpy track of earning is followed by 16% companies whereas 84% companies follow Smooth track of earning. Graph 2 unravels that 40% of the earning is affected
by Market price of share, 12% of the earning is affected by Credit rating, 15% of the earning is affected by Risk premium, 24% of the earning is affected by Future profits and 9% of the earning is affected by Potential Investors. Further, as in Graph 3, 27.5% of the profit is affected by Earnings, 12.5% of the profit is affected by Revenues, 32.5% of the profit is affected by Cash flow position, 7.5% of the profit is affected by Pro forma earnings and 20% of the profit is affected by Economic Value added.

As represented in Graph 4, 27% considers Price of Stock as earnings benchmark, 12% considers Credit rating agencies as earnings benchmark, 14.5% considers Debt instrument payment as earnings benchmark, 5.5% considers Employee turnover as earnings benchmark, 21% considers Analyst consensus as earnings benchmark and 10% considers Previous quarter earnings per share as earnings benchmark. Graph 5 provides insights on factors responsible for failure of achieving earning targets. Lack of market information holds 30% as a factor responsible for failure of achieving earning targets, in viability in accessing future trends holds 18% as a factor, Lack of flexibility holds 18% as a factor, Discrepancy in Management decision holds 16% as a factor and Lack of competencies in management holds 18% as a factor responsible for failure of achieving earning targets.

According to Graph 6, 76% of the respondents believe that the accounting treatment method allows the auditor to get opportunity for enhancing the incentives to obtain desired accounting report whereas 24% doesn't believe so. As indicated in Graph 7, 32% of the respondents focus on QIB investors for determining prices, 28% of the respondents focus on Anchor Investors, 12% of the respondents focus on HNI investors and 28% of the respondents focus on Rating agencies for determining prices. Graph 8 indicates that inventory holds 8% as a factor of source of window dressing in financial statements, Statement of Income and Expenditure holds 60% as a factor and Depreciation written as amortization expenses holds 32% as a factor of source of window dressing in financial statements.

Graph 9 reveals that 60% of the respondents believe in techniques of calculating the COGS as a factor of Inventory used in a financial statement, 16% believe in Cost of inventory as a factor and 24% believe in Fixing Reordering point as a factor of inventory used in financial statements. On the other hand, Graph 10 informs that 60% of the respondents believe in Prepaid Expenses as a factor of Statement of Income & Expenditure leading to window dressing, 8% believe in Accrued Income as a factor, 28% believe in Outstanding Income as a factor and 4% believe in Provisions as a factor of Statement of Income & Expenditure leading to window dressing. According to Graph 11, fixed asset holds 38.70% as a factor of fictitious transaction leading to window dressing, fixed payment holds 32.25% as a factor, Advances holds 25.83% and prepaid transaction holds 3.22% as a factor of fictitious transaction leading to window dressing. Moreover, as per Graph 12, 60% of the respondents believe that ‘IAS allows selecting an accounting policy’ leads to a financial change and 40% of the respondents believe that ‘IAS allows keeping the current assets at revalued amount or amortized amount’ leads to a financial change.

Conclusion
84% companies follow Smooth track of earning. 40% of such earning is affected by Market price of share. 32.5% of the profit is affected by Cash flow position whereas 27% considers Price of Stock as earnings for benchmark. 76% of the respondents believe that the accounting treatment method allows the auditor to get opportunity for enhancing the incentives to obtain desired accounting report and the lack of market information holds 30% as a factor responsible for failure of achieving earning targets wherein 32% of the respondents focus on QIB investors for
determining prices and fixed asset holds 38.70% as a factor of fictitious transaction leading to window dressing.

Statement of Income and Expenditure holds 60% as a factor of source of window dressing in financial statements. Wherein 60% of the respondents believe in techniques of calculating the COGS as a factor of Inventory used in financial statements also 60% of the respondents believe in Prepaid Expenses as a factor of Statement of Income & Expenditure leading to window dressing. And also 60% of the respondents believe that ‘IAS allows selecting an accounting policy’ leads to a financial change.

References
Graph 2: Most affected factors in case smooth track for earning is preferred

Graph 3: Kind of the earnings of company that respondents focus on for profit
Graph 4: Factors considered as a benchmark for earnings

- Price of stock/Volatility of stock
- Credit rating agencies
- Debt instrument payment
- Employee turnover
- Analyst consensus

Graph 5: Factors responsible for the failure of achieving earning targets

- Lack of market Information
- In viability in accessing future trends
- Lack of flexibility
- Discrepancy in Management decision
- Lack of competencies in management

Graph 6: Does the accounting treatment method allow the auditor to get opportunity for enhancing the incentives to obtain desired accounting report?

- Yes
- No
Graph 7: Which Class of Investors do you focus on for determining the price?

Graph 8: According to you which specific factor may be the source of window dressing in a financial statements (if happens)?

Graph 9: Which factor of inventory is usually used in a financial statement?
Graph 10: Which factor of ‘statement of Income & Expenditure’ can lead to window dressing?

Graph 11: Which factor of fictitious transaction of a balance sheet can lead to window dressing?

Graph 12: How can reclassification lead to a financial change?

- As IAS allows selecting an accounting policy.
- As IAS allows keeping the current assets at revalued amount or amortized amount.
Role of ATM Channel Management in Demonetization

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Abstract
This case study captures the supply chain strategy involved in ATM Channel management. The primary method of collection of data was from the published articles and data by bodies such as Reserve Bank of India and the information regarding ATM channel Management was collected from Head – ATM channel, with one of India’s leading private sector banks. ATM Channel was key part of bank’s structure that had to face and deal with the challenges presented by DeMO. This case study presents the structure and operations of ATM channel in banks. It deals in detail with the operations management involved in ATM management and it covers the challenges faced by ATM management teams during the DeMo.

Keywords: Demonetization, Currency Circulation, ATM Channel Management, Reserve Bank of India

Introduction
The government under the leadership of Prime Minister Mr. Narendra Modi has announced the initiative of Demonetization on Nov 8, 2016, with a view to contain the black money in circulation in Indian Economy. The announcement was a closely guarded secret was unknown to the economy in general and to the banking system in particular, only the information was made available in public domain on the same day evening at 8 pm. Through the announcement, the government has annulled the currency notes with denomination of INR 500 and INR 1000 as null and void. The total value of currency in circulation was INR 15.40 Lakh crores. The government expected that a significant portion of the cash in the circulation vide currency notes demonetized was unaccounted money. The rough estimates that the government has announced were INR 4 Lakh crore. However, at the end of exercise, as per the Reserve Bank of India, 99.3% of money flown bank into the banking system and only 0.7% i.e. INR 10,500 crore hasn’t returned to the banking system.

This implies that as against estimation of 30% of total money to be black money in circulation, only 0.7% money, which hasn’t returned can be presumed to be black money. The total cost of printing new currency notes was INR 15,000 crore. The nation had come to a standstill due to non-availability of cash. If we were to take into consideration the dip in economy growth, the total cost to the economy is around INR 2.50 Lakh crore. The banking system had to take a major brunt of this exercise, as they were interfacing with the people/citizens. This case study is aimed to helping the learners understand the logistics that banking system had to dealing with aspects such as accepting of retuning cash, issuing of alternate cash, calibrating of ATMs, tracking and ensuring cash availability in ATMs and more importantly, complying with RBI guidelines, which were issued on a daily/frequent basis.

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Overview/Analysis
The retail banking across the globe has undergone a sea-change post the introduction of ATMs. Initially ATM device/technology were developed due to simultaneous efforts in countries such as Japan, Sweden, UK and USA during 1960s. Banking till then dependent only on branch banking and slowly moved into a 24 X 7 format, thanks to ATM technology. The first ATMs have come into picture as mere cash dispensing machines in India. The first ATM was introduced in India by HSBC Bank during 1987 at Andheri East, Mumbai. Initially customers could only withdraw cash.

The Reserve Bank of India, as a part of its technology vision for banking Industry has set up IDRBT (Institute for Development & Research in Banking Technology) to work on technology initiatives that will help Indian Banking industry to align itself to the global trends in banking industry. One of the initial projects that IDRBT has taken up was setting up and operating of INFNET (Indian Financial Network). As a part of this project, the first initiative was connecting the ATMs of banks with ATM switch (part of INFNET). Each ATM had a VSAT dish mounted in proximity. However, customers had challenges in accessing ATMs, as they could access only their bank ATMs, as banks were not inter-connected. This is where IDRBT, as part of INFNET, had undertaken the project of National Financial Switch, which allows connectivity of ATM networks of individual banks, paving way for inter-operability and customers seamlessly accessing ATMs anywhere of any bank. Also thanks to evolution of leased line network in the country, the ATMs migrated from VSAT technology to leased line network, provided more bandwidth and thus enabling banks to provide added benefits through ATMs, such as cheque book request, password and pin changes, funds transfer, availing loan products etc. In a way ATMs have taken over 50% of workload of banks, and it made sense of banks due to operational and financial benefits. The cost benefit analysis of ATM vis-à-vis a bank branch weighs in favour of ATMs.

The other developments in ATM space include setting of ATMs away from branches called as off-site ATMs and ATMs located on the branch premises are termed as on-site ATMs. Subsequently, RBI experimented with white label ATMs (i.e., ATMs owned and operated by third party). However, this experiment has not been very successful in India, unlike rest of the world. The break-up of ATMs as per RBI records during 2018, for both the categories are Provided in Table 1.

ATM has been a major channel for banks especially with regard Retail Banking. The availability of ATMs and facilities provided through the ATMs is a major influencer in the decision of customer/potential customer to join/avail the retail banking services of a bank. In case of large public sector banks like SBI and private sector banks like ICICI, the ATM network supports in competitive differentiation. The banks as a part of the retail banking services policy offer free services through their network of ATMs and charge the customers, in case of usage of other banks ATMs, since they are required to pay usage charges to the other bank. It is for this reason customers prefer banks with large network of ATMs. The banks as a part of their competitive service differentiation offer free usage for premium customers, even for usage of other bank ATMs. Similarly foreign banks and new age private sector banks like Yes Banks are offering similar ATM services to their customers, due to their asset light policy. Considering this importance of ATMs, large banks have created a separate organization structure to manage the ATMs and services provided by the banks through ATM services. For example, the typical way in which the organization is structured in a bank with regard to the ATM functioning is presented in Figure 1.
Indian Banks are increasingly coming under pressure due to lower spreads (difference between cost of funds and income earned) and as result are looking at alternate channels to lower the cost of service design and delivery, by leveraging technology. This is where ATMs, Mobile Apps and Net banking have assumed importance.

Cost Structure of ATMs: The cost components of ATM channel are 1) Service cost for cash withdrawal which is INR 15/- per transaction plus GST and in case of cash transaction and in case of non-cash transaction, it is INR 5/- per transaction plus GST. 2) Infrastructure cost like lease rent, power, A/c, leased line/ATM and Security protection 3) Service Maintenance operations like cost of outsourced cash maintenance services. The total cost of operating/maintaining an ATM for a bank per month is around INR 40,000/- to Rs.50,000 per month. This implies that the bank needs to have average of 60 to 80 transactions per day (which is inclusive of both cash and non-cash transactions).

ATM Strategy of Banks: The banks decide on the set up of an ATM based on parameters such as average footfall at that proposed ATM site, nearest other Bank and their own Bank ATM, their own customer base in that area, rent and location with proper bike/car parking facility, etc. The introduction of ATMs has reduced the load on the bank branches. Currently 55% of banking services are being rendered through ATM channel. Banks have two options at their disposal (a) acquiring business (offering ATM services to other Banks’ customer ) and (b) controlling issuing transactions (ensuring own bank customers use maximum of their own Bank’s ATMs ). In order to capture Acquiring transactions, banks tend to increase their installation base in areas where other banks are not present and thereby acquire business from other banks. In case of issuance strategy, banks tend to keep a tab on their issuance.

Digital Strategy & ATMs: Indian banking has been quick to adopt to various forms of digital banking which is at par with the rest of the world. Internet banking was the first form, and then it was followed by initiatives like Appification, Social Networks based banking, payment wallets etc. The influence of digital banking is becoming pronounced with the advent of millennials, who prefer convenience and flexibility in banking, and banks are increasingly innovating in product and service design and delivery leveraging the digital channel. This is the reason why banks like ICICI have launched face-book banking. Further banks like Kotak and ICICI have launched WhatsApp banking India. The core strategic intent in digital banking is that, identify the forums where consumers are present, and reach to them products with services through the digital option.

Financial Inclusion and ATMs: The key influencing factor faced for banks in India is the coverage of banking services and unbanked population. Though banking system in India has been adding more customers into its folder adding customers, the system has a long way to go. Thanks to pet scheme of Prime Minister Modi i.e. Pradhan Mantri Jan Dhan Yojana, the percentage of banked population grew from 53% in 2014 to 80% in 2017. Yet there are 191 million Indians over the age of 15, are still without a bank account. The figure places the country next only to China where roughly 224 million Chinese above the age of 15 do not have a bank account. The growth of banked population has improved significantly during the period 2011 to 2017. The financial inclusion initiative by government of India, post launch of Jan Dhan accounts for unbanked India has thrown up the need to make banking services to rural and interior parts of India. This is where RBI has come with the policy of Banking Correspondents (BC’s) who are akin to “Bank on Feet”. These BCs are to provide gamut of banking services such as opening and operating of accounts, application and availing of loan services. More importantly have cash deposits and withdrawal. In a way, the BCs have become mobile ATMs.
Impact of Demonetization on Stakeholders: The decision to demonetize was taken by Govt of India and except for select top brass of RBI, rest of the banking system and service providers did not have any clue about the initiative of the government. The key issues/challenges faced various stakeholders involved in demonization exercise were dependent based on their roles. The Government had to brace the challenge of maintaining confidentiality, to achieve the so called objective of targeting black money. The Reserve Bank of India could not communicate to the banks for reasons of confidentiality, it could arrange for printing of large number of alternate currency denominations, since the arranging for the same would mean that the confidentiality of the initiative could be compromised. In case of commercial banks, they were clueless about the entire, as the central bank had kept the initiative confidential. As a result, the commercial banks were unprepared for the set of logistics involved, i.e., communication to their branch operations staff, the ATM channel management team, ATM operations outsourced vendors, and more importantly the communication the customers at large. The business world which includes corporates, merchant establishments were unprepared for the event. Given the fact that majority of business transactions both in wholesale and retail segments is carried out in cash format in India, absence of cash in the market place has crippled the world of business for over 3 quarters. As regards the consumers/citizens, they had to analysed from two dimensions i.e., Urban and rural segment. The consumers in urban context had relatively lower discomfort as they alternate forms of cash, such as cards, and electronic transactions are in vogue in urban India, while rural India is heavily cash dependent.

Impact of Demonetization on Bank Operations: The major impact faced by banks was on the front of branch operations apart from ATM operations management. RBI had issued close to 53 circulars during the period Nov 8, 2016 to Dec 31, 2016. The areas in which circulars issued are in the areas of 1) Withdrawal of banned notes and issue of alternate denomination 2) Closure and operations of ATMs 3) Operations of Bank Branch Operations on weekend and holidays to handle load and provide cash related services to public 4) Withdrawal Limit on cash withdrawal from ATMs 5) Recruitment of retired bank officials as temporary staff to manage additional work load 6) Collection of PAN card details of customers who are withdrawing and depositing cash beyond prescribed limits from the branches 7) Periodical communication to public at large on receipt of abolished currency of prescribed denominations 8) Withdrawals and deposits in Jan Dhan Savings Accounts 9) Operations of Currency Chests by major banks and distribution of cash between their own branches and branches of other banks 10) Waiver of charges for payments received by merchant establishments both through debit and mobile payments formats. Given the fact the banks have connectivity issues in terms of technology, the branches had challenges in receiving of e-circulars issued by their controlling offices, post receipt of communication from RBI. The problem has become compounded due to increased frequency of communication from RBI with respect to branch operations such as account and cash operations.

ATM Channel in Banks & Demonization Impact Management
The Indian Banks, as part of their operational efficiency have outsourced the cash filling operations to external vendors. There are several vendors currently operating in India and few to mention are 1) Writer Corporation 2) CMS Info Systems 3) SIS India 4) Secure value India. The operating system of ATM networks is presented in Figure 3. An ATM is basically a data terminal consists of two inputs and four output devices. Just like other data terminals, the ATM connects and communicates through a host processor. The host processor is analogous to an Internet service provider (ISP) gateway through which all the various ATM networks become available to the cardholder (the person wanting the cash). Most of the host processors are supported by either leased-line or dial-up machines. In case of Leased-line machines connect directly to the host processor through a four-wire, point-to-point dedicated telephone line. On
the other hand Dial-up ATMs connect to the host processor through a normal phone line using a modem and a toll-free number, or through an Internet service provider using a local access number dialled by modem, depending on the configuration.

Thanks to advances and cost factors, there days leased-line ATMs are preferred for very high volume location because of factors such as through-put capability. The dial-up ATMs are preferred for locations such as retail merchant sites where cost is a greater factor than through-put. The cost benefit analysis indicates that the initial costs for dial-up machines are less than half as compared to leased-line machines. At the same time, the monthly operating costs for dial-up are only a fraction of the costs of leased-line. As regards ownership of equipment, the host processor is owned by a bank/financial institution or by an independent service provider. Usually, bank-owned processors support only bank-owned machines, whereas the independent processors support merchant-owned machines. The process of refilling cash is presented in Figure 2. The average time taken to refill cash in an ATM is 10-15 minutes and in cash recalibration, the average time taken is 30-60 minutes if all stakeholders are present.

The ATM channel is the most impacted structure in banks, due to the fact that 60% of banking services are provided through ATMs. For the purpose of operational efficiency, banks have outsourced both the technology and cash management operations. The ATM channel operations of bank especially the large commercial banks are headed by officer (Head- ATM Channel Operations) who is of the level of Assistant General Manager and above, depending on the scale of operations. The responsibilities of the head include 1) Reviewing and monitoring the contracts and services of technology and cash management services 2) Track and monitor the efficiency of existing ATMs across the country in terms of profitability 3) Recommend for closure of non-profitable ATMs 4) Review the recommendations from branches on request for new ATMs 5) Conduct market research on new ATM request to determine viability of proposed ATMs 6) Track and monitor the technical problems and operational issues with respect to ATMs across the country 7) Track and remind the facilities team with respect to lease agreements of off-site ATMs 8) Track and monitor the complaints on ATM operations from branch staff and customers 9) Track and monitor the issue resolution 10) Work in collaboration with information technology team on new technology implementation in ATMs to improve security of ATMs 11) Ensure compliance to RBI and NPCI guidelines on ATM operations. The typical organization structure of ATM operations is presented in Figure 4.

The total HC (head count) in the ATM operations is approximately 70-75 members in a mid to large size Bank, depending upon the part of the cash management activity being outsourced. For example, Branch feeder ATMs and Off site ATMs can have separate agency or the same agency for cash replenishment daily. Some Banks prefer their onsite branch ATM be feed through their own excess cash available in branch by own branch staff and for Off-site only they employ the outsourced Cash Pick Up Agency to replenish the ATMs thereby reducing the overall cost of Cash Agency. Demonetization threw new challenges for ATM channel management teams with 86% of money in terms of value withdrawn from the economy. As a result of demonetization, ATMs were left with only 100 Rs. notes, probably the lowest denomination in ATMs became the only denomination to depend on for first few weeks. The introduction of new High denomination notes (HDN), new challenges emerged as every make of ATMs had different technology for note recognising new currency notes. The biggest challenge was to recalibration of ATMs to enable them in dispensing new notes with different sizes. Employees had over worked/ burnout and every day passing were a crisis management day and over to that, every now and then new RBI circular for Banks to adhere with immediate effect. There was a need for relaxation for genuine needs such as marriage, puja / rituals and other genuine needs of customers.
In addition, the banks (ATM Channel Teams) had to deal with media backlash as well. It added to the stress of the teams, as they had to review and respond to the criticism on a real time basis. Though the ATM teams had worked hard to meet the challenges faced by the DeMo, the Banks had incurred huge expenditure in the process of addressing the issues. As result, banks have not rewarded the employees properly, inspite of their hard work during DeMo. The ATM Channels had carried out following steps during the DeMo Process 1) Communicating to Cash Management Services Vendors on a) Emptying of ATMs of INR 1000 and INR 500 denominations b) Calibration of ATMs for INR 2000 denomination notes ; 2) Parallely communicating to the branches on the need to collaborate with ATM operations vendors 3) Establishing a war room to monitor the ATM operations on a real time basis 4) Trouble shooting of ATMs to ensure optimal uptime 5) Monitoring Media reports in coordination with corporate communications teams of the banks. It would be pertinent to state that, the banks did not focus on media communication, as they had pressure in managing day-to-day branch & ATM operations. The various factors impacting the ATM Channel and actions undertaken by ATM channel are presented Figure 5.

Conclusion
Demonetization happened in India almost after 4 decades, so almost all stake-holders had new experience, given the volumes and geographic spread, the entire exercise was well handled, however RBI should have planned more touch points and should have issued POS machines to all 1.57 lakhs post-offices in lines with what was done for petrol pumps, This would have resulted bit convenience especially to rural population. The key learnings from the exercise are as under:

- Proper Assessment of impact and planning of exercise could have avoided it being more painful
- Preparing the economy first for digital transactions by spreading the presence of PoS machines
- Incentivizing business for e-transactions
- Avoiding knee jerk reactions which had happened due to lack proper planning
- A project of this magnitude should have been approached through a Project Management approach rather than bureaucratic approach
- Resist issuing so many circulars in just few weeks’ time, it was very difficult for the Banks to keep track and follow
- Should have kept in mind various exigency handling scenarios, like marriage and rituals of across faiths and religions
- Overseas Indian faced lot of difficulties on exchanging their old notes, and many just travel once in a year or once in two years, for them it was real challenge to exchange their old notes within stipulated time.

The bank teams involved in ATM Channel management can do better co-ordination with all stakeholders and bind them all in agreement for all such instances in future and also have cost known for smooth execution. It took almost a year for many banks to come to the normal regular operational efficiency and customer service level. However, keeping in mind the huge task assigned to the Banks, with its limited man power and stipulated time, the DeMo was handled as per the prerequisite of the Govt. for which Indian Banking Industry deserve a huge round of applause ensuring we get the cash on time and every time i.e.24 X 7.
References

Table 1: Distribution of ATMs as per RBI Data

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Figure 1: Typical ATM Functioning

Figure 2: Cash Re-filling Process

Figure 3: The operating system of ATM networks
Figure 4: Typical Organization Structure of ATM Operations

Head - ATM Business

- Product Head (Revenue, Strategy & Deployment)
- Head - Operations
- Head - Compliance, Risk & Vendor Payment

Figure 5: Factors impacting the ATM Channel and actions undertaken by ATM channel

RBI

Media

Bank Management

ATM Channel Operations

Vendors

Branch Operations

Customers