A Comparative Study of Business Models of Indian Life Sciences Business Process Outsourcing Industry

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INTRODUCTION

Globalization has been defined by many authors in a variety of ways due to the varied approaches their definitions are based upon, such as economical, political, financial, technological etc., One common thread that comes out of the various definitions that exist for globalization is that globalization is primarily an economic phenomenon, involving the increasing interaction or integration of national economic systems all over the world through growth in international trade, investment and capital flows.

Advances in information technology, specially internet technologies has contributed very significantly to enable worldwide real-time interconnectedness and these technology based innovations and advances have triggered the process of achieving competitive advantage by businesses across the globe, irrespective of the size, nature of business or the geographical location/s of these organizations. In other words, the reality "Globalization forces everyone to compete with the cheapest producers" is brought into stark focus (Friedman, 2006).

To a business leader, this means that there are more challenges than ever from stakeholders such as competitors, customers, investors and regulators. The business also needs to survive, grow revenues, become more agile in the face of competitive and market pressures and provide customers with optimum service. One of the best ways to achieve this is through globalization of the organization. Successful businesses are responding to this phenomenon of "global competitiveness" by optimizing their "business services" through outsourcing and hence attain a differentiation leading to a competitive advantage, from the business perspective.

Outsourcing, primarily involves transferring ownership of an organization's business processes and activities to a external service provider. For a fee, the outside service provider carries out the activities and maintains responsibility for their outcomes (Chamberland, 2003). Creating value for a business in today's markets means transforming the organization into a focused, responsive, variable and resilient business and can primarily be achieved through the Business Process Outsourcing (BPO) Model.

In this study, the focus is on outsourcing of business processes leading to optimization in the Life Sciences industry. The term Life Sciences includes the biomedical, biotechnology, medical devices and the medical diagnostic industries. The generic model framework being evolved in this study creates and implements an effective model that predicts the essential, elemental critical success factors and their relationships which affect business performance of organizations in the Life Sciences BPO Industry.

It has become evident through the literature that over the past decade, biomedical and life sciences companies have entered a difficult period where shareholders, the market and regulators have all created significant pressures for change within the industry. From thinning product pipelines and skyrocketing operating costs to calls for lower prices and a greater regulatory burden, the industry is confronting unprecedented challenges that are expected to radically transform the business.

In an atmosphere of declining research and development (R&D) productivity, mounting pricing pressure and changing regulatory requirements, global biomedical and life sciences companies face increasing challenges to achieve and maintain profitable growth, (PwC, 2006). Global biomedical

business process outsourcing offers life sciences organizations an opportunity to overcome these challenges.

LITERATURE REVIEW

This research study is part of the new research stream on business models and focuses on a specific area not covered so well until now: specifying, conceptualizing business models, understanding the effect of business models on business performance. Most business model research stays at a non-conceptual, broad and sometimes even vague level and hence this work tries to dig into the details and define a generic model to describe business models and their effect on business performance. This approach becomes indispensable if one wants to provide effective business model framework to improve, manage business performancein a rapidly moving, complex and uncertain business environment of the Life Sciences BPO industry domain.

Authors	Summary	Study Objectives
Mintzberg (1979); Silverman, 1999);	Concept of Strategy and its effect on Businesses	Background of Business Models
Prahalad and Bettis (1986); Tushman and O'Reilly, (1997);	Manager path dependent behavior of business performance	Direction of research on Business Models
Chesbrough & Rosenbloom (2002);	Business model (BM)as a construct	Existence of Business Models
Genesereth and Nilsson (1987); Malone et al., (2006)	Definition of a business model	Definition of Business models
Timmers (1998); Amit & Zott(2001); Magretta, (2003); Grasl, (2008);	Importance of the business model for business performance and success	Business models affect business performance
Slywotzky et al., (1997) Kaplan et al., (2004);	Influence of business models on business performance	Business models and business performance
Chesbrough and Rosenbloom 2000; Pateli and Giaglis 2003; Rentmeister and Klein (2003)	New modeling methods in the domain of BM	Modeling methods in the domain of Business Models
Dess and Robinson (1984)	Conceptual framework and valid measures to organizational performance	Study approach
March and Smith (1995); Alan **M.** Rugman and Alain Verbeke , (2000);	Process for creation of a generic business model framework & constructs	Identify generic business model framework approaches
(Rockart and Bullen, 1986); Spector; (1992) Umble et al., (2003)	Critical Success Factors and identification.	Identify elemental critical success factors
Rappaport, (1986);Copeland, et al., (2000);	Market-based measures -the best possible measures	Best possible measures of organization performance
Ball and Brown (1968); Robinson (1995)	Return to stockholders provided the most power	Selection of RTS as business performance indicator

Based on literature review, it becomes clear that there exists a relationship between business models and business performance of organizations. It is also evident that there are no industry specific models, frameworks, tools which can be applied to create a business model, study effects of varying individual components on business performance and comparing different organizations with their own unique business models. Hence there is a dire need to create an industry specific generic business model framework which can predict business performance of an organization. This should also provide an option for studying the effect of the model on performance when constituent business model variables are manipulated.

RESEARCH METHODOLOGY

This part describes the methods and procedures used to identify and evaluate existing, common business model design elements (Critical Success Factors (CSF's)) and their relationships with reference to the external environment, conceptualize and create an empirical generic business model reflecting their relationship and effect on industry performance.

It describes how this generic / reference business model forms the basis to further compare the effect of business model designs on business performance of firms.

Research Gap

Based on literature review, there was no evidence of research which have studied the effect of business models on business performance in the Indian Life Sciences Business Process Outsourcing(BPO) Industry context.

To fill the existing knowledge gap and satisfy this unmet need, this research study focuses on understanding the effects of business models on business performance in the Life Sciences Business Process Outsourcing (BPO) Industry domain and construct a industry specific generic business model framework which can predict business performance in this specific business domain.

Research objectives

The primary purpose of this study is:

- To increase understanding of how business models can be constructed through the examination of its underlying processes.
- To increase understanding of the relationship between business models and business performance/success by taking into account elemental variables (Critical Success Factors - CSF) associated with the business model.

To achieve this purpose, the following major research objectives are addressed:

- Identify, constituent elemental critical success factors of business models in the Life Sciences BPO industry using survey questionnaire instrument.
- Identify a set of themes to classify the above identified constituent elemental critical success factors of business models and operationalize them.
- Propose or construct a generic business model framework based on the identified constituent elemental critical success factors and their relationships affecting business performance.
- Identify a business performance and success outcome measure that relates to organizational performance.
- Using the constructed generic business model framework identify and compare business model relationship to business performance of identified Indian Life Sciences BPO organizations.
- Test association of the relationship between proposed business performance values and factual business performance and success values obtained from the above objective.

Accomplishing these research objectives is expected to contribute both to practitioners, by

providing guidelines for creating business models which will enhance business performance/success; and to academic research by providing insight, and direction for future research.

Research Questions

Given the pervasive reference to business models in the industry and the dearth of rigorous study on the subject, the researcher believes that research on business models and how these affect and enable organizations to achieve improved performance results under different conditions can contribute greatly to the current body of knowledge. Although this research seeks to represent the proof of causal relationships between business models and business performance, it does not attempt to answer deeper questions about why the performance implications exist.

Based on the above, one primary research question to be addressed in this research is :

- How does business model design affect business performance in the Life Sciences BPO domain?

This primary research question in turn gets translated into four sub-questions as follows:

- What are the existing business model design elements in the Indian BPO context ?
- How can business models be described and represented in order to conceptualize, define and build reference or generic business model framework ?
- Can this generic business model framework be used to identify and compare existing business models OR Can an efficient business model design be determined by comparing models of different Indian BPO firms ?
- How can a specific business model with value constellations be built for the BPO domain?

Research Hypotheses

To achieve the objectives of this research, the following initial hypotheses were investigated.

- Null hypothesis (HO) : An organizations' business performance is independent of its business model.
- Alternate hypothesis (HA): An organizations' business performance d e p e n d s on its business model.

Due to dearth of research studies, the research was designed in such a way that on identifying elemental CSF's, themes and exposing the respondent data set to exploratory factorial analysis, working hypothesis could be formulated depending on the factor solution obtained after EFA. Based on the obtained four factor solution (post EFA), we arrived at the following set of working hypothesis (Null(HOn) and Alternate (HAn) where n = 1, 2, ...x) :

- HOI: An organizations' business performance is independent of "Customer Factor".
- HAI: An organizations' business performance depends on its "Customer Factor".
- H02 : An organizations' business performance is independent of "Organization Factor".
- HA2: An organizations' business performance depends on its "Organization Factor".
- H03: An organizations' business performance is independent of "Industry/Sectoral Factor".
- HA3: An organizations' business performance depends on its "Industry/Sectoral Factor".
- H04: An organizations' business performance is independent of "Environmental Factor".
- HA4: An organizations' business performance depends on its

"Environmental Factor".

Since the study was designed to compare two rank variables to measure the strength of association between business models and business performance, or lack of it, the following working hypothesis was also tested.

H05: There is no association between model based ranks and RTS based ranks of an Indian Life Sciences BPO organization.

HA5: There is association between model based ranks and RTS based ranks of an Indian Life Sciences BPO organization.

Research Design

The study was designed to start with an initial limited exploratory design (LED) phase and then move into the conclusive research design (CRD) phase. The initial, limited exploratory research design (LED) phase was adopted due to the need for rich data that could facilitate the generation of theoretical categories that could not be derived satisfactorily from existing data (Locke, 2001). In the LED phase secondary data was utilized initially to identify at least some of the elemental CSF's . Since this identified very few elemental CSF's, it was followed with collection of primary data through five pilot studies.

Data from this stage was used to identify elemental critical success factors (CSF) of business models in this domain and categorize them into themes. This formed the basis for creating the survey instrument which was used in the next stage of the study (large scale research survey). The final survey instrument with 46 elemental CSF's and 8 themes was arrived at after content validity and reliability analysis.

In the CRD phase, the causal research design was utilized to collect primary data through a large-scale research survey. Data was collected using a web-based survey questionnaire response system through organizational informants who participate in their organization's outsourcing initiative in various roles. Based on data obtained through this large scale survey, the 8 themes with their constituent elemental CSF's were reduced using exploratory factor analysis (EFA) to yield a more manageable four factor solution based on the relationships between these elemental CSF's.

The study was also designed to collect business performance metric data in the form of returns to shareholders (RTS) which was calculated from organization specific financial data collected using secondary sources. This business performance data and the four factor solution were used to construct a generic business model framework for Life Sciences BPO organizations.

The last and final Comparative study phase of this study was designed so that, primary data was collected through a limited survey using a set of respondents (working in Indian BPO/CRO Organizations) who were different from those who took part in the large scale research survey study.

Based on total respondent scores, arrived at after applying the individual four factor loading scores to individual survey instrument response, different business models were identified. In summary, 33 business models were identified and organizations were ranked on the total respondent score. Applying the generic business model framework on these 33 identified business models individually, yielded an organization specific business performance metric (predicted RTS). This organization specific predicted RTS value was used to compare the participating Indian Life Sciences BPO organizations. On completion of this phase a total of 21 unique business models were identified and compared.

In the final step, organization specific financial data from secondary sources which quantifies the identified business performance measure RTS were collected for the above specified Indian companies. The predicted RTS and the actual RTS were also analyzed for any association to determine the robustness of the proposed generic business model framework.

Population and Sample

Based on the primary objective of this research, the target respondents included outsourcing professionals from Business Outsourcing functions (Customers as well as service providers) at the organizational level are appropriate subjects. These participants are assumed to have direct experience with business process outsourcing and possess knowledge about their organization and service provider/customer performance. Further, as this research aimed to develop a measurement instrument that could be applied in to either private or public organizations, no restriction in types of organizations were applied.

Since there is no readily available database for this population, the purposive sampling frame was originally set to Life Sciences outsourcing organizations across all geographies. Considering the sample size required, costs and disadvantages of postal survey, it was decided that an electronic survey would be more appropriate, given that the target respondents would all have internet access.

The e-mail addresses of the respondents who satisfied the indicated criteria were identified online primarily on the LinkedIn Professional Group "Life Sciences Outsourcing" through the researcher's networks and several outsourcing online networks in LinkedIn to provide the required sampling frames for this study. All the professional groups selected in this study to complete the sample frame had specific entry gate criteria. For example, the LinkedIn group Life Sciences Outsourcing is a regulated group which has an entry gate criterion in the sense that this is an exclusive group for professionals in the outsourcing industry and has around 1495 members.

Data Collection Procedure

Elemental CSF Study Data Collection : In total, 2857 invitations were sent out and at the end of the survey window, 347 responses were submitted/received. The response rate was 12.15% considering that some of the respondents preferred not to participate or would not have received the e-mail itself due to an active/enabled spam filter in their e-mail program.

243 (71.67%) out of 347 received survey responses were considered for the analysis. This data was then analyzed using exploratory data analysis (qualitative) techniques and exploratory factor analysis to arrive at a four factor solution. This four factor solution identifies elemental critical success factors (CSF's), corresponding themes of these CSF's and their relationships which influence or affect business performance of Life Sciences BPO organizations.

Business Performance Parameter Data Collection : Out of the 243 useful responses received, a total of 117 respondents had indicated either the division in which they were working and or the organization to which they were affiliated. A total of 28 Customer organizations and 18 service provider organizations were selected from the above based on specific collection criteria, for this stage of data collection.

After selection of the organizations, factual secondary financial data were collected from standard financial resources, financial websites and the specific organizations' website to arrive at the business performance metric - Returns to shareholders (RTS) value for the specific organization.

This data was then analyzed using quantitative data analysis techniques (multiple regression analysis, Analysis of variance (ANOVA)), to construct a generic business model framework. This constructed framework depicts the identified essential elemental critical success factors (CSF's), their internal relationships and the effect or influence or relationship of these identified CSF's on the business performance metric returns to shareholders (RTS).

Comparative Study Data Collection : Based on the four factor solution arrived at, after exploratory factor analysis (EFA), a second questionnaire was created by utilizing elemental critical success factors identified. This

questionnaire was sent to pre selected organizations and respondents working in those specific organizations .

In total, 45 invitations were sent out to a much focused sample frame and at the end of the survey window, 36 responses were submitted/received. The response rate was 73.35 % as only 33 of the received responses were considered usable since 3 incomplete responses were Lost to follow-up.

Based on total respondent scores, arrived at after applying the individual four factor Loading scores to individual survey instrument response, 33 different business models were identified. Applying the generic business model framework on these 33 identified business models individually, yielded an organization specific business performance metric (predicted RTS). This organization specific predicted RTS value was used to compare and create a ranked List of participating Indian Life Sciences BPO organizat ions.

Of the 33 business models identified, 21 were unique business models in the sense that they had unique respondent scoring values. The 21 unique business models were analyzed to determine an association between generic business model framework predicted business performance (RTS) and actual business performance based on factual RTS (organization specific financial data from secondary sources).

Survey Instrument Development

Generally accepted principles of instrument design Hinkin (1998) was followed for development of the instrument. Based on Literature survey an initial one hundred and twenty one (121) items/categories/components and twenty six (26) significant themes were identified. To validate these identified significant themes and items / categories / components, multiple survey based pilot studies were undertaken. By grouping similar items/categories/components and applying the method of "Critical Success Factors (CSF)" (Rockhart, 1979; Rockhart, 1981; Richard, 2004) on data obtained from the above studies, fifty two (52) items / categories / components / "Critical Success factors (CSF)" (initial survey items) were identified. The CSF's so identified were content analyzed to identify and categorize them under eight (8) significant themes/"Sources of CSF" to guide the development of individual survey items.

In the final stage, the content and reliability of scales were evaluated through content validity assessment and reliability analysis. The final survey instrument consists of eight (8) Source of CSF's (significant themes) namely : Strategy, Human Resources, Operations, Marketing, Finance, Environment, Industry and Innovation. Under these Source of CSF's, a total of forty six (46) Critical Success Factors (business model elements) are included.

Data Analysis and Discussion

This study has utilized the techniques of descriptive statistics, validity testing, reliability testing, exploratory factor analysis, regression analysis and tests for hypothesis. Microsoft Excel 2007 was used for initial data collection and data cleaning. Statistical software program SPSSI7.0 for Windows was employed to analyze the data collected in this study. As indicated previously, analysis was performed on 243 usable respondents' data out of the received 347 responses from 2857 participation invites sent to potential respondents.

Methodology used in the survey, to identify critical success factors that affect business performance were based on a 5-point scale with preset response possibilities. The weighted average for each element under Critical Success Factor Themes were arrived at to understand the importance of each elemental critical success factor under a specific CSF theme (eg : Elemental CSF "Physical Infrastructure" under the theme "Strategic CSF's") and their relationships if any.

On summarizing (Table2), the weighted average of all themed critical success factors, Operations with a weighted average of 4.10 stands out as the most important CSF theme essential for business success. Next comes Innovation with a

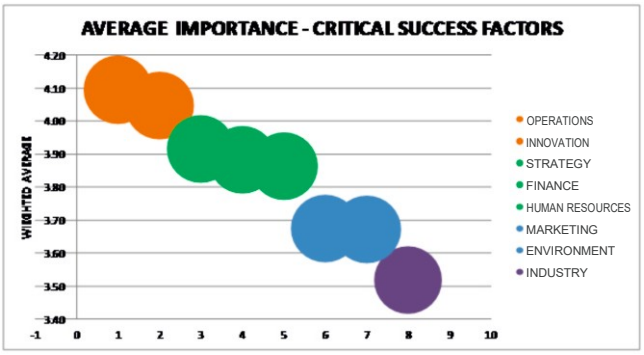
weighted average of 4.05 followed by Strategy with a weighted average of 3.92. The effect of industry related elemental CSF's have the least effect on business success.

Table 2 : Average of CSF themes ranked by degree of importance

SL.	Critical Success Factors	Weighted Average
1	**OPERATIONS**	**4.10**
2	**INNOVATION**	**4.05**
3	**STRATEGY**	**3.92**
4	**FINANCE**	**3.88**
5	**HUMAN RESOURCES**	**3.86**
6	**MARKETING**	**3.68**
7	**ENVIRONMENT**	**3.67**
8	**INDUSTRY**	**3.52**

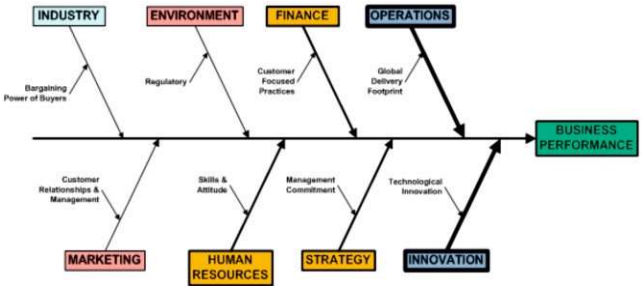
The representation given below (Figure A)helps us visualize the grouping of theme CSF's based on their weighted averages.

Figure A : Exploratory Generic Business Model Framework



In summary, we can conclude that the 46 elemental CSF's can be grouped into 8 Theme CSF's and based on qualitative analysis we can further categorize them into four groups based on their quantitative influence on business success of the Life Sciences BPO industry. Based on this we can create a qualitative or exploratory model which depicts the effect of CSF's on business success, through a cause and effect diagram (Figure 8).

Figure B : Exploratory Generic Business Model Framework



Exploratory Factor Analysis

Principal component analysis (PCA) was used for factor extraction to obtain estimates of the initial factorsthataccountforthe largest variance in the sample. The rule used to finally determine the number of factors to include was Kaiser criterion (all factors with eigen values greater than one) (Kaiser, 1974) and the scree test. For the critical success factors this resulted in a four factor solution which explains 100.00 percent of the variation. Subsequen tl y, varimax rotation with Kaiser normalization was chosen as the method of transforming the initial factors into a more meaningful configuration.

Factor loadings resulting from the varimax rotation were evaluated using the threshold of 0.35, level recommended by Churchill (1979). Only items with factor loadings of 0.35 and above were considered to be included under each of the factors of the four factor solution.

Based on results from the above procedure, and by logically grouping the identified critical success factors under the four factor solution we can name the identified four factors as Customer Factor (Factor Score : 22.039), Organization Factor (Factor Score : 11.109), Industry/Sectoral Factor (Factor Score : 4.097), Environmental Factor (Factor Score : 0.788).

Out of the 243 useful responses received, a total of 117 respondents had indicated either the division in which they were working and or the organization to which they were affiliated.

A total of 28 BPO and 18 CRO service provider organizations were selected and ranked from the

above 117 respondents for this stage of data analysis - for calculating the RTS value for specific organisations. RTS value was calculated using the standard formula [Return on share holder's investment = [Net profit (after interest and tax) / Share holder's fund} x 100] for individual organizations.

Table 3 : **Hierarchy list of organizations based on Business Performance**

SL	Organizations*	RTS Value	Ranking based on RTS Value
1	BPl	66.38	1
2	BPIO	64.38	2
3	BPll	60.42	3
4	BP2	58.44	4
5	BP3	49.53	5
6	BP4	48.38	6
7	BP5	46.79	7
8	BP6	44.72	8
9	BP7	42.44	9
10	BPS	34.91	10
11	BP9	32.99	11
12	Cl	32.68	12
13	ClO	30.44	13
14	C2	27.84	14
15	C3	25.79	15
16	C5	19.03	16
17	C1	16.17	17
18	C8	14.62	18
19	C9	13.28	19
20	Cll	11.46	20
21	C13	8.75	21
22	BP13	8.02	22
23	BP14	7.57	23
24	BP15	7.44	24
25	BP16	7.09	25
26	BP17	6.72	26
27	BP18	4.39	27
28	BP20	3.94	28
29	BP22	3.53	29
30	BP23	3.32	30
31	BP24	2.76	31
32	BP25	2.56	32
33	BP26	2.43	33
34	BP27	2.16	34
35	BP28	2.10	35
36	C14	1.86	36
37	C15	1.64	37
38	C16	1.39	38
39	C18	1.12	39
40	C17	-1.13	40
41	BP21	-3.93	41
42	BP19	-4.00	42
43	BP12	-8.73	43
44	C12	-11.30	44
45	C6	-17.75	45
46	C4	-19.80	46

*C = CRO; BP=BPO organizations

Generic Business Model Framework

On applying the multiple regression method using the "enter" option, with calculated business performance as the dependent variable and Customer Factor, Organization Factor, Industry/Sectoral Factor and Environmental Factor as the independent / predictor variables, the following significant model emerged:

F4,41= 21.952, p < 0.0005. Adjusted R square = 0.651.

In other words, the represented model accounts for 65.10 percent of variance (adjusted R square value) and the overall significance of the model is less than 0.0005 (p value).Based on the beta value, Brace et al., (2006)this, we can conclude that the independent variable Customer factor with a beta value of 2.486 and a p of < 0.0005 has the greatest impact on business performance. This is followed by the Organization factor (beta = 1.729; p < 0.0005) and the Industry/Sectoral Factor (beta = 1.164; p < 0.0005). It also emerges that the Environmental factor (beta = 0.548; p < 0.0005) has the least influence on business performance when compared to the other three.

The regression coefficients equation is constructed by using the "Constant" corresponding to the un-standardized "B" value and standardized coefficients "Beta" values for four factors (Fl, F2, F3, F4). The equation is represented below :

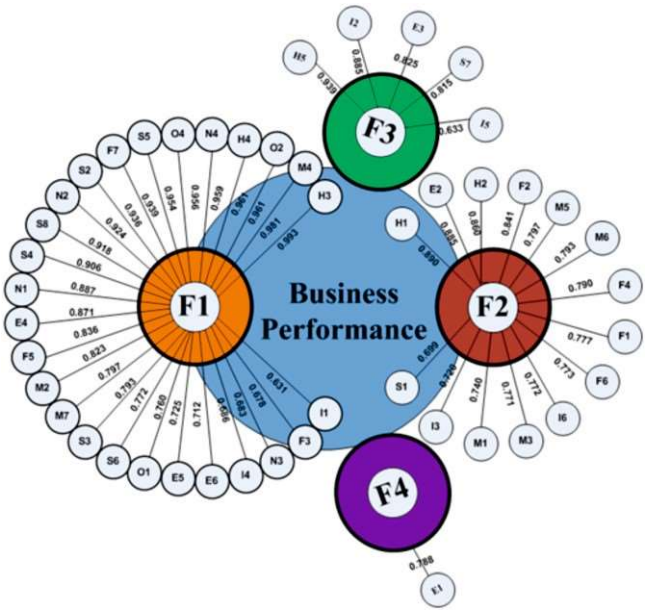
Business Performance (RTS} = -81.725 +

129.788 (Fl) + 105.812 (F2) + 99.756 (F3) + 105.134 (F4). (where Fl= Customer Factor; F2= Organization Factor; F3= Industry/Sectoral Factor; F4= Environmental Factor).

The model above (ordinary least squares(OLS) equation) represents the "quantitative influence" of the four individual factors in the four factor solution to predict business performance of organizations in the Life Sciences BPO industry domain. In other words, it also represents the generic / reference business model framework which reflects the relationships of elements (critical success factors) and their effect on industry performance of businesses in the Life Sciences BPO Industry Domain (illustrated below Figure C).

Figure C : Generic Business Model Framework for Life Sciences BPO Industry

Fl=Customer Factor; F2=0rganization Factor;



F3=1ndustry/Sectoral Factor; F4=Environmental Factor.

H3=Skills & Attitude; M4=Customer Relationships & Management; 02=Quality Systems;H4=Domain Knowledge; N4=Technological Innovation; 04=Global Delivery Footprint (Operational Flexibility, Customer Focused Delivery); S5=0rganizational Effectiveness; F7=Customer focused Practices; S2=Technology; N2=0perational Innovation; S8=Corporate ethics; S4=Management Commitment; NI=Service Innovation; E4=Technological; F5=Cash Flow Management; M2=Unique Positioning Advantage; M7=Customer Satisfaction Feedback; S3=Support Services / Systems; S6=Business flexibility (Strategic); OI=Process Management; E5=Global business cycle; E6=Regulatory; 14=Bargaining Power of Buyers; N3=Marketing Innovation; F3=Cost Structure; 11=Threat of Substitute Products / Services; HI=Availability; E2=Economic (Internal to the organization); H2=Employability; F2=Access to Capital markets; M5=Sales Force Size & Productivity; M6=Sales Force Geographic presence; F4=Revenue Stream; FI=Investment; F6=Sustenance; 16=Bargaining Power of Complementors; M3=Business Flexibility (Marketing); MI=Depth of Services; 13=Competitive Rivalry Within Industry; SI=Physical Infrastructure; H5=HR practices; 12=Threat of New Entrants; E3=Socio cultural; S7=Partners / Collaborators / Enablers; 15=Bargaining Power of Suppliers; EI=Political.

At the center of the above illustration lies business performance, illustrated as a huge circle. Big circles surrounding this with the descriptions of Fl, F2, F3, F4 (corresponding to Customer Factor, Organization Factor, Industry/Sectoral Factor, Environmental Factor respectively) represent individual themes arrived at from the EFA(four factor solution) stage of the study. Smaller circles connected through lines to these "big theme circles", with descriptions like HI, 04, F2 etc., represent elemental CSF's corresponding to elemental CSF's categorized / thematized under one of the four themes obtained from the four factor solution.

The numbers (values) on the lines connecting elemental CSF's to their parent themes represent the strength of influence of that particular elemental CSF on that specific theme. These numbers indicate the magnitude of influence a particular elemental CSF has on the theme and hence business performance and success. Stronger the theme's effect on business

performance and success, larger is its overlap with the business performance circle in the illustration above.

Hypothesis Testing

After identifying the critical success factors, their relationships and the nature of their effect on business performance, the hypothesis that "(HO) : An organizations' business performance is independent of its business model" was tested.

To test the above hypothesis, the strength of the relationship between two variables, RTS values obtained from factual financial data and scores obtained for organizational business models were tested. The scores for organizational business models were considered from responses of 46 individual respondents of organizations out of a total of 28 BPO and 18 CRO service provider organizations selected from 117 respondents.

Pearson's test for bivariate correlation was utilized to test for correlation between the above indicated variables. When one interprets results of the Pearson's correlation test it becomes evident that there is correlation between Business Performance (RTS value) and Business Models (Respondent Scores). We can observe that the correlation coefficient between Business Performance and Business Models is 0.689 and the p value for two-tailed test of significance is less than 0.0005. From this we conclude that there is a positive correlation between Business Performance and Business models at the significance level of 0.01. Due to this, we reject the null hypothesis HO which in turn means that Life Sciences BPO organizations business performance is dependent on its business model.

According to Gaur and Gaur (2006), if the null hypothesis states that there is no relationship (independent) between variables under study, (in this case business performance and "Customer Factor") the beta coefficient ((standardized regression coefficients)obtained using multiple regression analysis and ANOVA) should not be different from zero.

The beta coefficient value(2.486) for the Customer Factor (FI) is at a significance of <0.0005 (p value). Since the beta value is not equal to zero, we reject the null hypothesis and accept the alternate hypothesis. So, we conclude that the business performance of an organization is related to or dependent on its "Customer Factors".

Similarly, the beta coefficient and p values for Organization Factor (F2) are 1.729 and < 0.0005 respectively, due to which we reject the null hypothesis and conclude that performance of an organization is related to or dependent on its "Organization Factors".

The beta coefficient and p values for Industry/Sectoral Factor (F3) are 1.164 and < 0.0005 respectively. Due to this we reject the null hypothesis H03 and conclude that performance of an organization is related to or dependent on its "Industry/Sectoral Factors".

For Environmental Factor (F4) the beta coefficient value is 0.548 and p < 0.0005. Based on this we reject the null hypothesis H04 and conclude that performance of an organization is related to or dependent on its "Environmental Factors".

The above provides us with sufficient evidence that to conclusively conclude that business performance of any organization in the Life Sciences BPO Industry domain depends positively on Customer Factor, Organization Factor, Industry/Sectoral Factor and Environmental Factors.

Comparative Analysis

On completion of hypothesis testing, the next conclusive step in this study was to compare the values obtained by applying the generic business model to values of business performance obtained using factual data to individual organizations.

Rank based hierarchical lists were constructed using data collected through :

- Completed, useful comparative analysis questionnaire received from 33 respondents ("Hierarchy list of

organizations based on the Generic Business Model") and

- By obtaining market performance metric Returns to shareholders (RTS) based on factual financial data ("Hierarchy List of organizations based on RTS Market Performance Measure").

A second questionnaire was created by utilizing elemental critical success factors identified by the four factor solution arrived at through Exploratory Factor Analysis. These identified factors were placed in the same sequence as dictated by the four factor solution based on the individual factor Loading value of the individual elemental critical success factors. Essential verbal modification of these elemental critical success factors to ensure a better understanding of each of these elemental factors were only applied for creating this questionnaire for comparative analysis. The verbal modification was strictly enforced to introduce a more sentence based critical success factors description since the questionnaire was exposed to respondents as is, without further categorization under specific themes.

This questionnaire was sent to pre-selected organizations and respondents working in those specific organizations which were selected based on specific criteria. The organization selection criteria were defined to ensure that the researcher would have direct access to unbiased, statutory information to help evaluate business performance based on selected financial parameters. The respondents' criteria were defined to ensure that they have the best knowledge about the Life Science outsourcing industry and have direct experience with the outsourcing function and hence were capable of providing useful inputs.

The questionnaire was designed such that the respondents had to answer either YES or NO to each of the questions based on the availability of that particular factor, parameter, competency etc., in their organizations. Each YES was scored 1 and NO a zero. These values indicate existence or non-existence of specific essential CSF's which influence business performance and success of Indian Life Sciences BPO Industry.

Using the above described screening process, a total of 45 invitations were sent out to a much focused sample frame and at the end of the survey window, 36 responses were submitted/received. The response rate was 73.35% as only 33 of the received responses were considered usable since 3 incomplete responses were Lost for follow-up.

The quantitative generic business model framework was applied to the calculated response values as described to each of the 33 responses. The difference in these derived values indicate essential CSF's existing in an organization and hence the uniqueness of that specific organization's business model in this specific industry segment.

Out of 33 derived values depicting 33 different organizations specific business models, only 21 business models were identified as unique (non-duplicate derived business model values). Data presented below (Table 4) also helps us better understand the differences or uniqueness of the business models of specific organizations. For example, BMODl is Business Model type 1 and consists 11 essential CSF's out of 26 essential CSF's of the Customer factor(Fl) theme, 8 essential CSF's out of 14 essential CSF's of the Organization factor (F2) theme, 0 essential CSF's out of 5 essential CSF's of the Industry/Sectoral factor (F3) theme and O essential CSF's out of 1 essential CSF of the Environment factor (F4) theme. These characteristics of the business model are exhibited by Indian BPO organizations BP5; Bl3 and Bl7. Based on these characteristics, the generic business model framework value obtained for this specific business model was 2192.439.In other words, business models having the above characteristics would have a predicted business performance value (RTS) of 2192.439. So, a higher generic business model framework value indicates that the specific business model would help the organization perform better compared to other organizations with different business models.

Table 4 : Existing Business Modelsin Indian Life Sciences BPO Industry

Business Modelss	Organizations*	F1#	F2#	F3#	F4#	Predicted Business Performance Value
BMODl	BP5; B13; B17	11	8	0	0	2192.439
BMOD2	CR9; CR13	10	7	3	0	2256.107
BMOD3	CR7	11	6	3	1	2385.217
BMOD4	CR8	13	5	4	0	2533.603
BMOD5	CR6; CR12	15	7	0	0	2605.779
BMOD6	CR3	16	6	2	0	2829.267
BMOD7	CR4	14	9	2	0	2887.127
BMOD8	CR5; CR14	15	8	3	0	3010.859
BMOD9	CR2	18	6	3	1	3293.733
BMODl0	BP4; BP12; BP16	19	6	3	1	3423.521
BMODll	BP2; BP14	22	13	5	0	4647.947
BMOD12	BP6	23	11	5	1	4671.245
BMOD13	BP3; BP15	22	13	5	1	4753.081
BMOD14	CRl0; CRll	22	14	4	1	4759.137
BMOD15	BPlO; BP19	24	12	4	1	4807.089
BMOD16	CRl	25	11	4	1	4831.065
BMOD17	BPl	22	14	5	1	4858.893
BMOD18	BP8	23	13	5	1	4882.869
BMOD19	BPll	24	13	4	1	4912.901
BMOD20	BP9;BP18	25	13	4	1	5042.689
BMOD21	BP7	25	13	5	1	5142.445

*CR = CRO; BP=BPO organizations

=Fl=Customer Factor; F2=Organization Factor; F3=1ndustry/SectoralFactor; F4=Environmental Factor.

$ = BMODl=Business Model Type 1; BMOD2=Business Model Type 2; etc., up to BMOD21=Business Model Type 21

The above identified 21 unique business models were then compared and ranked based on the predicted business performance value to obtain a hierarchy list of organizations called - "Hierarchy list of organizations based on the Generic Business Model" (Table 5).

Table 5 : **Hierarchy list of organizations based on the Generic Business Model**

SL.	Organizations*	Business Model Type$	Predicted RTS Values	Ranking based on Predicted RTS Values
1	**BP?**	**BMOD21**	**5142.45**	1
2	**BP9; BP18**	**BMOD20**	**5042.69**	2
3	**BPII**	**BMOD19**	**4912.9**	3
4	**BP8**	**BMOD18**	**4882.87**	4
5	**BPI**	**BMOD17**	**4858.89**	5
6	**CRI**	**BMOD16**	**4831.07**	6
7	**BPIO; BP19**	**BMOD15**	**4807.09**	7
8	**CRIO; CRII**	**BMOD14**	4759.14	8
9	**BP3; BP15**	**BMOD13**	**4753.08**	9
10	**BP6**	**BMOD12**	**4671.25**	**10**
11	**BP2; BP14**	**BMODII**	**4647.95**	11
12	**BP4; BP12; BP16**	**BMODI0**	**3423.52**	**12**
13	**CR2**	**BMOD9**	**3293.73**	13
14	**CR5; CR14**	**BMOD8**	**3010.86**	14
15	**CR4**	**BMOD?**	**2887.13**	15
16	**CR3; CR12**	**BMOD6**	**2829.27**	**16**
17	**CR6**	**BMOD5**	**2605.78**	**17**
18	**CR8**	**BMOD4**	**2533.6**	**18**
19	**CR?**	**BMOD3**	**2385 .22**	**19**
20	**CR9; CR13**	**BMOD2**	**2256.11**	**20**
21	**BP5; BP13; BP17**	**BMODI**	**2192.44**	**21**

*CR = CRO; BP=BPO organizations

$ = BMODI=Business Model Type 1; BMOD2=Business Model Type 2; etc., up to BMOD21=Business Model Type 21.

From the above list it becomes clear that, on comparison of 21 unique business models of 33 different organizations, organization "BP7" (BPO Service Organization 7) with a business model of the type "BMOD21" would provide or exhibit highest business performance(Ranked 1) measured as RTS when compared to other organizations with different business models in this sample set.

Business model "BMOD21" exhibits the following characteristics:

- Consists of 44 elemental CSF's when compared to that of the required 46 elemental CSF's based on the generic business model framework.
- Consists 25 out of 26 essential CSF's of the Customer factor(Fl) theme.
- Consists 13 out of 14 essential CSF's of the Organization factor(F2) theme.
- Consists 5 out of 5 essential CSF's of the Industry/Sectoral factor(F3) theme.
- Consists 1 out of 1 essential CSF of the Environment factor(F4) theme.

- Predicted RTS value is 5142.445 out of the maximum expected (predicted) RTS value of 5378.045.

In this study, out of the 33 organizational business models compared, only 21 unique business models were identified with 4 organization in the CRO (Clinical Research Organizations) group and 8 organizations in the BPO (Business Process Outsourcing Organizations) group exhibiting similar business models with similar predicted RTS values. In other words all these similar organizations should have almost similar business performance (RTS) and business success outcomes.This is not surprising since identifying a USP for various organizations in this industry sector is quite difficult as organizations primarily differ more on quantitative terms rather than qualitative terms .

For the second part of this comparative analysis as all the organizations selected were publicly traded appropriate sources (annual reports and stock trading exchanges - when required) were used to collect factual data to carry out the process of generating the "Hierarchy list of organizations based on RTS Market Performance Measure".

Based on this, financial data obtained from legitimate sources for each of these 21 organizations with unique business models were analyzed by applying the RTS measure and ranked based on the results obt ai ned. The first organizations in the list of 33 organizations with similar, predicted RTS values were considered for analysis at this point. As the study focuses on comparing unique business models the above indicated procedure was utilized to generate the list named - "Hierarchy list of organizations based on RTS Market Performance Measure" (Table 6).

Table 6 : Hierarchy list of organizations based on RTS Market Performance

Measure

SL	0 rganizations*	RTS Value	Ranking based on RTS Value
1	BP7	90.33	1
2	BP9	45.46	2
3	BP4	44.76	3
4	BP6	33.68	4
5	BP8	26.42	5
6	C6	23.28	6
7	BPII	18.67	7
8	C8	14.96	8
9	ClO	12.7	9
10	Cl	12.43	10
11	BPl	11.22	11
12	BP5	-1.17	12
13	C3	-7.63	13
14	C5	-13.54	14
15	C2	-19.06	15
16	BPlO	-19.22	16
17	BP2	-19.26	17
18	C4	-20 .17	18
19	BP3	-30.48	19
20	Cl	-48.52	20
21	C9	-54.83	21

Understanding the association between predicted RTS value and factual RTS value would be helpful. Hence as the next step we compare rankings based on predicted RTS value (arrived at by applying the generic business model framework to respondent data) and rankings based on factual RTS value (obtained through secondary research).

Since we had to compare two rank variables to measure the strength of association or lack of it, the Spearman's Rank Correlation statistical test was applied to both the hierarchy lists ("Hierarchy list of organizations based on the Generic Business

Model"; "Hierarchy list of organizations based on RTS Market Performance Measure"). This was done to determine the association between the generic business model framework predicted RTS value conceptualized through this study and the factual market performance metric (RTS) to understand association between both these parameters if any through a hypothesis.

A Spearman's Rank Order correlation was run to determine the relationship between 21 organizations' generic business model framework predictedRTS value and factual RTS derived data. It was observed that there is a strong, positive correlation between generic business model framework predicted RTS values and factual RTS derived data, which was statistically significant ($rs(l9) = 0.526$, $p = 0.014$).

Since there is a strong statistically significant association between the two rank scores we reject the null hypothesis (H05) in this case and accept the alternate hypothesis. From the above it is clear that the predicted business performance and success metric values (RTS) have a positive correlation with factual business performance measure (RTS). Hence ranking of 33 organizations exhibiting 21 unique business models based on predicted RTS values obtained by applying the constructed business model framework clearly indicates comparison and ranking of organizations based on business performance.

In other words this test proves that there is an association between the generic model generated RTS values and factual RTS values for Indian Life Sciences BPO organizations. Hence this constructed generic business model framework can also be used to theoretically evaluate the success of a business model in the Indian Life Sciences BPO domain.

CONCLUSIONS AND LIMITATIONS

Overall, this research is aimed at improving the understanding of heterogeneity in business performance among organizations in the Indian Life Sciences BPO Industry. According to Slywotzky et al., (1997), Timmers, (1998), Tapscott et al., (2000) and Kaplan et al., (2004), this difference on why some firms do better than others is explained in the form of "business models".

Based on the work on various authors such as Magretta (2002), Petrovic et al., (2001), Timmers, (1998), Weill and Vitale (2001), Osterwalder and Pigneur, (2002), Ghaziani and Ventresca (2002), Rappa (2003) to name a few, the researcher defines a business model as "an essential conceptual structure that contains a set of elements (critical success factors) and their relationships that allows expressing an organization's unique strengths required to attain business success."

Hence, understanding the relationship between business models and business performance of organizations in the Indian Life Sciences Business Processing Outsourcing (BPO) Industry would help us better understand, explain and control the heterogeneity of business performance and success of various organizations in this specific industry segment.

From literature review, it is evident that there are no industry specific models, frameworks, tools which can be applied to create organization specific business models and compare these organizations based on their business performance. On comparison we can empirically understand the relationship between business models and business performance of organizations belonging to this specific industry.

Due to the lack of models or frameworks required to create business models, this study constructs a industry specific generic business model framework which is then used to identify existing business models, study, compare relationships and predict business performance of organizations.

Elemental Critical Success Factors

In conclusion, the research study finally lead to identification of 46 elemental critical success factors and eight themes under which these 46 elemental CSF were categorized.

1. The identified 46 elemental critical success factors include : Physical Infrastructure, Technology, Support Services, Management Commitment, Organizational Effectiveness, Business flexibility, Partners / Collaborators, Corporate ethics, Availability, Employability, Skills & Attitude, Domain Knowledge, HR practices, Process Management, Quality Systems, Global Delivery Footprint, Depth of Services, Unique Positioning, Business Flexibility, Customer Relationships, Sales Force Size, Sales Force (Geographic presence), Customer Satisfaction, Investment, Access to Capital markets, Cost Structure, Revenue Stream, Cash Flow Management, Sustenance, Customer focus, Political, Economic (Internal to org), Socio cultural, Technological, Global business cycle, Regulatory, Threat of Substitute Products / Services, Threat of New Entrants, Competitive Rivalry Within Industry, Bargaining Power of Buyers, Bargaining Power of Suppliers, Bargaining Power of Complementors, Service Innovation, Operational Innovation, Marketing Innovation, Technological Innovation.
2. The eight identified themes were: Strategy (made up of 8 elemental CSF), Human Resources (5 elemental CSF), Operations (3 elemental CSF), Marketing(? elemental CSF), Finance(? elemental CSF), Environment(6 elemental CSF), Industry (6 elemental CSF) and Innovation (4 elemental CSF).
3. Four groups containing specific themes were identified to influence business performance in order of decreasing magnitude. These include Operation and Innovation (GROUP 1), Strategy, Human resources and Finance CSF themes (GROUP 2), Marketing and Environment theme CSF's (GROUP 3), Industry CSF (GROUP 4).
4. Constituent elemental CSF which has maximum influence on the theme Operations is Global delivery competency of the organization, for Innovations it is Technological innovation, for Strategy it is Management commitment, for Human resources - Skills & Attitudes of the resources, for Finance - Customer Focused practices, for Marketing - Customer Relationship & Management, for Environment - Regulatory and for Industry it is Bargaining power of buyers respectively.
5. The elemental CSF and the themes identified are extensive as they include factors under industry view, firm/organizational view, environment factors, technology factors, marketing factors, corporate factors, finance factors and innovation factors. This study has identified and includes elemental CSF's under all categories of construct themes of business models which affect business performance as identified by various authors.

To the researcher's knowledge, this is a new contribution to the literature on identifying elemental critical success factors essential in business models of Life Sciences BPO industry and attempts to provide an empirical platform to understand heterogeneity in business performance of various organizations with different business models in this specific industry. As there are no similar precedents in the literature, comparing or contrasting this with other research findings is not possible. However, there is strong support in the literature with reference to the methodology which has been used to arrive at these results.

Business Model Framework Construction

The generic business model framework specific to the Life Sciences BPO Industry was constructed based on the identified elemental CSF's and their relationships influencing business performance and success.

1. The study identified a Four Factor Solution which included Customer factor (comprising 26 elemental CSF's), Organization factor (14 elemental CSF's), Industry/Sectoral factor (05 elemental CSF's), Environmental factor (01 elemental CSF).
2. Customer factor has maximum influence on business performance and success of an organization represented by Returns to Shareholders (RTS) followed by Organization factor, Industry/Sectoral factor and Environmental factors respectively.
3. The generic business model framework accounts for 65.10 percent of variance (adjusted R square value) with an overall significance of less than 0.0005 (p value).
4. This generic business model framework constructed with 46 elemental CSF's, clearly and quantitatively depicts business models and their influence on business performance and success of organizations operating in the Life Sciences BPO Industry .
5. This framework or tool can be used to identify and classify business models existing in the Life Sciences BPO Industry. It can also be used to study and predict cause effect relationships between business models and business performance of organizations operating in the Life Sciences BPO Industry domain.

Again, to the researcher's knowledge, this is a new contribution to the literature on constructing a generic business model framework specifically for the Life Sciences BPO Industry . This attempts to provide an empirical tool to identify, classify and predict the effect of business model components on business or organization performance. This also confirms to research by Roquebert et al., (1996), Brush et al., (1997), McGahan et al., (1997), Chang et al., (2000), Bowman et al., (2001), Amit et al., (2001), Lubatkin et al., (2001), McNamara et al., (2003), and Vilmos et al., (2006) which proposes and confirms the view that elemental components of business models influence business performance.

Hypothesis Testing

Overall, five hypothesis were identified in the study and were tested to determine the independence or dependence of an organization's business performance on its business model. In conclusion this research study demonstrates that :

1. Heterogeneity in business performance of organizations in the Life Sciences BPO Industry domain is positively influenced by the organizations' business model. Higher the business model score for an organization, higher is its business performance, measured as Returns to Shareholders (RTS).
2. The business performance of an organization in this domain depends positively and directly on Customer Factor, Organization Factor, Industry/Sectoral Factor and Environmental Factors - the identified elemental components of organizational business models in the Life Sciences BPO Industry sector.

Although no specific studies in this industry sector were identified during literature review, these results conform to research by Amit and Zott (2001), Chesbrough & Rosenbloom (2002), Martinez & Kennerley, (2005), Mausollf & Spence, (2008), Melkers and Willoughby, (2005), Osterwalder et al., (2005), Melone et al., (2006), which confirm that relationships exist between business models and business performance of organizations in general.

Comparative Study

Completion of the comparative part of the study yielded the following

1. 33 business models based on the constructed generic business model framework were identified which were specific to the Indian Life Science BPO

Industry.

2. Out of these 33 business models, 21 unique, Indian Life Science BPO Industry business models were identified.
3. Organizations having a higher number of elemental CSF's embedded in their business model perform better (on comparing and ranking organizations based on the identified business models and their predicted RTS values).
4. There is a direct and positive relation between the number of elemental CSF's present in a business model of an organization and its business performance in the Indian Life Sciences BPO Industry. Lesser the number of elemental CSF's in an organization, lesser is its predicted business performance value (RTS) and hence lesser is the organization capability to succeed in this industry segment.
5. There is a positive association between the predicted RTS values (based on the generic business model framework) and the factual RTS values (based on organizational financial data) of organizations exhibiting unique business models.

These finding confirm that a positive relationship exists between business model elements and business performance which is similar to finding of Amit and Zott (2001), Chesbrough and Rosenbloom (2002) and Osterwalder et al., (2005). The research of the indicated authors was in relation to other industries, sectors, segments and not specific to Life Sciences BPO Industry.

The results of this research study confirm that there is a strong, positive association between business models and business performance. This is empirically demonstrated through an association between business model predicted RTS values and factual RTS values of organizations operating in the Indian Life Sciences BPO Industry.

Study Limitations

The following limitations apply to this research:

1. This study confirms the existence of business model influence on business performance but does not help understand why this influence exists.
2. This study includes a maximum number non-financial and limited financial measures/factors in the generic business model framework.
3. The effects of different business model design frameworks have not been assessed in this research study.
4. This research did not attempt to investigate the effect of business models on all business performance measures. Additional business performance measures not studied in the current research could be investigated in future research .
5. There are a number of contextual factors that can influence a Business model and hence impact organizational performance (e.g., financial structure, leadership style etc.). This research did not seek to investigate all potential contextual factors. Additional factors not studied in the current research could be investigated in future research.

The above limitations provide an opportunity for further research to enhance knowledge in this area of management.

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Abstract

Employee engagement is based on integrity , trust, two way commitment and communication between an organisation and its members. It is an approach that increases the chances of business success, contributing to organizational and individual performance, productivity and well-being. It can be measured. It varies from poor to great. It can be nurtured and dramatically increased; it can lost and thrown away. Employee Engagement is important for the survival of any organization . From this study, it is found that majority of the workers were satisfied with the employee engagement practice. The sampling technique involved in this research is simple random sampling. The study throws light upon some important factors of reward and recognition, opportunities, team work, immediate supervisor, quality of life and recreational activities among the employees.

Key words: *commitment, organization, individual, performance, engagement, productivity.*

1. INTRODUCTION :

Managers want to know how to get the best out of their employees, while at the same time maintaining their health, wellbeing safety. The fact that reward and recognition, opportunities, team work, immediate supervisor, quality of life, recreational activities and physical and mental wellbeing of employees are predictors of key organizational outcomes such as effectiveness, productivity and innovation means there are multiple reasons to encourage such positive employee attitudes.

1.1 Employee engagement from the perspective of employees.

Employee engagement is getting up in the morning thinking, "Great, I'm going to work. I know what I'm going to do today. I've got some great ideas about how to do it really well. I'm looking forward to seeing the team and helping them work well today".

Employee engagement is about understanding one's role in an organisation, and being sighted and energised on where it fits in the organisation's purpose and objectives. Employee engagement is about having a clear understanding of how an organisation is fulfilling its purpose and objectives, how it is changing to fulfill those better, and being given a voice in its journey to offer ideas and express views that are taken account of as decisions are made.

1.2 Employee engagement from the perspective of employers.

Employee engagement is about positive attitudes and behavior leading to improved business outcomes, in a way that they trigger and reinforce one another. Employee engagement is about our employees feeling pride and loyalty working for our organisation, being a great advocate of the organisation to our clients, users and customers, going the extra mile to finish a piece of work.

2. REVIEW OF LITERATURE

Fatma Jaupi and Shyqyri Llaci (2015), They have focused on the relationship of employee engagement with organizational communication. The research shows that the communication satisfaction dimensions strongly impact employee engagement.

Dr. Iqbal Hakeem and Sumaira Gulzar (2014), They have attempted to reveal the existence of various conceptualizations of employee engagement, making the state of knowledge around employee engagement a little complicated to det ermine , as each individual research is undertaken under a different concept. Their review of research also identified the need to

identify the key dimensions of engagement to focus on key variables and streamline their practices for enhancing employee engagement.

Dharmendra Mehta and K.Mehta (2013), They identified that high levels of employee engagement may lead to improved employee commitment and involvement towards respective jobs and thus creating a motivated workforce-that will work together to achieve the common goals of the organization.

Solomon Markos and M.Sandhyasridevi (2010), They have found that employee engagement is closely linked with organizational performance outcomes. Companies with engaged employees have higher employee retention as a result of reduced turnover and reduced intention to leave the company resulting in productivity, profitability, growth and customer satisfaction.

Alan Axelson and William L. Bruning (2009), Their study examined the cumulative effects of engagement levels among workgroups and companies, and how such engagement is linked to overall business success and corporate financial performance.

Aaron Coben (2016), This study examines three models of relationship between commitment and work outcomes such as turnover intentions, actual turnover and absent eeism . This article concludes with implications regarding the continuing assessment of establishing an acceptable definition and measurement forms of work commitment. The finding here should be replicated in other samples and work settings.

Nildes Raimunda Pitombo Leite (2014), This study compared two different structural models regarding the direct or mediation role satisfaction has in the prediction of commitment bond, in the context of a public and traditional Brazilian organization, the Military Police . Evidence was found that satisfaction with relationships is an antecedent of commitment, which mediates its relationships with other variables, such as work and personal charact eristics .

Chung-Chieh Lee and Chih-Jen Chen(2013), The main aim of this study was to analyze the relationship between employee commitment and job attitude in the tour- ism industry and its effect on service qualit y.

Paul Ayobami Akanbi and Kehinde AdeniranItiola (2013), The findings of their study recommended that the management should try as much as possible to give constant attention to things that can enhance job satisfaction. Also, promotion and recruitment should be based on merit, performance on the job, initiative, educational qualifications and experience.

Karen K. Wollard (2012), This research is aimed at discovering the role of organizational commitment as a mediating variable between the relationship of job involvement and performance.

Mai Ngoc Khuong and Nguyen Hoang To Uyen (2016), This study aimed to measure the impact of some key factors of the job itself, namely career development, relationship with management, compensations and benefits, work environment, and teamwork on maintenance technicians' satisfaction and their job engagement.

Jian Ming Luo and, Shipan Tan (2015), The purpose of this paper was to examine the effects of contextual variables, which include career development planning, flexible welfare policy and employee involvement programs on employee engagement of new generation employees in China's manufacturing industry.

David Olusegun Aninkan (2014), Their findings showed a positive and significant relationships between work locus control, conscientiousness, openness to experience, leadership style, organizational climate, supervisory support; and employee engagement. The research used correlation analysis. The study recommended that managers should give attention to such factors that actually engender employee engagement towards organizational competitiveness.

Vijaya Mani(2011), The study attempts to investigate the level of Employee Engagement and

its predictors among the Executive level employees of a reputed Banking and Insurance Software Company in Tamil Nadu, India. The research concluded that the level of employee engagement in the organization is quite satisfactory. Four Factors namely Employee Welfare, Empowerment, Employee Growth and Interpersonal Relationships were found to be the predictors of Employee Engagement.

Silky Madan (2011), Organizations today are increasingly dependent on knowledge creation and human development for their optimal and sustainable growth. In order to face global competitiveness, they need to demonstrate world class performance and re-examine the drivers of organizational performance employee engagement. HR practices such as staff retention and talent management are always centered on this. HR experts are of the view that if an employee is not driven by motivation, he will not be able to give his best to the organization. In this paper an attempt has been made to develop an understanding of the concept of employee engagement.

3. OBJECTIVES OF THE STUDY

- To study the employee engagement practices in a private spinning mill in Tamilnadu.
- To analyse the issues and strategies to measure employee engagement practices.
- To study the impact of role performance, organization commitment, intention to stay, organizational citizenship behavior on Job engagement.

4. SAMPLING DESIGN

The sampling technique involved in this research is simple random sampling. Primary data is collected through questionnaires distributed to 150 respondents.

5. ANALYSIS AND INTERPRETATION.

Table No 5.2.IKMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.954
Bartlett's Test of Sphericity	Approx. Chi-Square	2244.629
	Of	276
	Sig.	.000

Inference

KMO value is .954 which is greater than 0.6 and the significant level of Bartlett's test value is 0.000. This shows that value is significant at 0.05 level of significance. Therefore it is appropriate to apply factor analysis.

Table No 5.2.2 Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	12.390	51.623	51.623	12.390	51.623	51.623	7.040	29.335	29.335
2	1.127	4.698	56.321	1.127	4.698	56.321	6.477	26.98	56.321
3	.948	3.950	60.271						
4	.863	3.594	63.865						

5	.819	3.414	67.279
6	.756	3.148	70.427
7	.732	3.050	73.477
8	.686	2.858	76.335
9	.571	2.379	78.713
10	.531	2.211	80.924
11	.497	2.071	82.996
12	.476	1.982	84.978
13	.430	1.790	86.768
14	.403	1.680	88.448
15	.397	1.653	90.101
16	.339	1.412	91.513
17	.325	1.355	92.869
18	.302	1.258	94.126
19	.283	1.178	95.305
20	.277	1.155	96.460
21	.252	1.048	97.508
22	.236	.983	98.491
23	.198	.823	99.314
24	.165	.686	100.000

Extraction Method: Principal Component Analysis.

Inference

The number of variables to be taken into considerations was chosen on the basis of Eigen value. Here the Eigen value is > 1.0. From the table variance explained by two factors are 51.623, 4.698. Together it is 56.321 % of the variance.

Table No 5.2.3 Rotated Component Matrix

	Component	
	1	2
Materials and equipment	.793	.234
Workload distribution to dept.	.786	.213
Performance reflects on salary	.740	.209
Handling of job	.684	.361
Comfortable of work	.639	.539
Aware of promotion opportunity	.608	.432
Company praises the employee	.603	.313
Giving Packages at company	.602	.367
Opportunity to share information	.600	.554
Comfortable with co-workers	.600	.438
Managers treats the workers fairly	.586	.568
Promotions	.548	.397
Employee turnover		.749
Recreational activities	.358	.688
Security and health	.375	.648
Recreational activities is better in the company	.229	.631
Opportunity to Learn and grow	.382	.627
Good communication	.419	.609
Best of co-workers	.464	.599
Approach to manager	.478	.588
Proud	.399	.568
Career Path	.455	.548
Transportation facilities	.488	.537
Handling of issue	.467	.530

Extraction Method: Principal Component Analysis.

Rotation Method : Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Inference

Rotated component matrix shows that table variables are included in these 2 factors. Variables 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 have combined to define the first factor "Work Environment". Variable 13,14,15,16, 17, 18, 19, 20, 21, 22, 23, 24 have combined to define the second factor "Welfare Measures".

Findings

KMO value is .954 which is greater than 0.6.So the factor analysis is performed. Using this analysis 24 variables are reduced to two factors such as work environment and welfare measures. The value of work environment is 51.623 and the value of welfare measures is 4.698.

5. CONCLUSION

Employee Engagement is important for the survival of any organization. The current study, finds that most of the employees were satisfied with the employee engagement practice. The study throws light upon some important factors of reward and recognition, opportunities, work environment team work, reporting superior , quality of life and recreational activities among the employees. The study gives suggestions which may be adopted by the companies for the benefit of employees and in turn the company itself. The study concludes that high levels of employee engagement lead to improved employee morale and involvement in their jobs there by creating positive motivation among the employees which in turn helps achieve the common goals of the organization. The companies have to conduct the similar type of research at regular interval to know the changing attitude of workers and to know about their improvement in order to motivate them. The result in their study clearly indicates that the majority of employees are attached and personally involved towards their jobs.

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FDI inflows and its impact on Indian GDP

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Abstract

Foreign direct investment (FDI) has been the single most important mode of going global in the recent decades. As compared to other modes which are not capital intensive, FDI is heavily capital intensive. It helps an economy to receive foreign exchange. In fact, 'FDI inflows' is considered as an important economic indicator. For a developing country like India FDI is very important.

The present study analyses FDI inflows in India during the years 2000 to 2014. The FDI policy, year wise FDI inflows, sector wise FDI inflows, country wiseFDI inflows, state wise FDI inflows, trends and patterns of FDI inflows in different sector have been analysed.

From the study it has been found out that total FDI inflows are estimated at 25526 crores during April 2013 to march 2014 and cumulative FDI inflows from 2000-2014 was 241085 crores. the services sector, construction, computer hardware and software, telecommunication, real estate, received maximum FDI inflows in India and Mauritius is the main source followed by Singapore, the USA , the UK, the Netherlands and the Japan for FDI inflows in India.

Key words: FDI, GDP. India

1. Introduction

FDI brings in many advantages like technology transfer, managerial skills, marketing expertise, exploring new markets, development of infrastructure in the country and creation of job opportunities. Hence every country welcomes foreign direct investment.

2. Review of Literature

Agarwal and Khanin (2011) found in their study that 1% increase in FDI resulted in 0.07% increase in China's and 0.02% increase India's GDP. They also found that growth of China is more affected by FDI, than the growth of India.

Kumar and Karthika (2010) in their study found that FDI provides a major contribution in the host country's economic development. Many countries have made use of foreign direct investment and foreign technology to boost the economic development. FDI brings in capital base, increased output and job opportunities.

Chien and Zhang (2012) studied the issues related to FDI in the North Central and South Central Area of Vietnam over the period 2000-2010. They found strong association between GDP and FDI. Their study also covered the impact of FDI on the socio– economic development of the host country.

Devajit (2012) the impact of FDI on Indian economy. He found that Foreign Direct Investment is needed by India by as a strategic component of investment toward the sustained economic growth and development of the country.FDI helps in job creation, expanding the manufacturing base, investments in the field of education, healthcare, research and development.

Sharma Reetu and Khurana Nikita (2013) studiedthe sector-wise distribution of FDI inflow over the period 1991-92 to 2011- 2012 to identify the trends in the post-liberalization period. They also discussed the problems associated the foreign direct investment and made relevant suggestions like allowing FDI in to the agriculture sector in India as agriculture still continues to be an important occupation in India, but it still employing preliminary methods the yield per hectare is one of the lowest in the world.

3. Research design

Statement of problem

There are many factors that influence the economic condition of a nation. One of themost

important onesis FDI. Hence there is a need to study the impact of FDI on change in Indian economy.

Objective of research

The study has the following objectives:

1. To study the trend and pattern of flow of FDI country wise, sector wise, year wise and region wise.
2. To evaluate the impact of FDI on the Indian economy.

Methodology and data collection

The present study is of analytical nature as the study focuses on understanding the relationship between FDI and GDP of Indian economy. The FDI in 10 countries is also studied to analyze the pattern of inflows in various sectors.

Sources of Data

Primary Data: - Not applicable in this research

Secondary Data: - This study makes use of secondary data and the relevant secondary data has been collected from report of Ministry of Commerce, Government of India, Center for Monitoring Indian Economy, RBIAnnual Reports.

Hypothesis

HO: - FDI inflows do not affect Indian GDP

HI: - FDI inflows in India affect Indian GDP.

Limitations Of The Study

There are several other factors such as FII, monetary policy and government policy that also impact GDP which have not been considered in this study.

Tools Used For Analysis

Trend analysis is used to study the trend and pattern of flow of FDI country wise, sector wise and region wise.

Correlation analysis is used to find out whether there is positive or negative impact of FDI on Indian GDP.

4. Data Analysis

Testing of Objective 1

1. To study the trend and pattern of flow of FDI country wise, sector wise and region wise.

Table 1: FDI inflows year wise in India

Amount in Rs. crores (US$ in million

Financial year (April to March)	Amount (US million)	% change from previous year
2000-01	2463	-
2001-02	4065	65%
2002-03	2705	-33%
2003-04	2188	-19%
2004-05	3219	47%
2005-06	5540	72%
2006-07	12492	125%
2007-08	24575	97%
2008-09	27330	11%
2009-10	25330	-5%
2010-11	19427	-25%
2011-12	46840	35%
2012-13	22400	-35%
2013-14	25526	13%
Total	241085	

Interpretation: The FDI inflow has registered highest growth of 125% in the year 2006-07, followed by 97% in 2007-08, 72% in 2005-06, 65% in the year 2001-02, 47% in the year 2004-05 and 35% in2011-12. Other years have negative growth as compared to the previous years.

Table 2: Analysis of country wise FDI inflows in India

Amount in Rs. crores (US$ in million)

Rank	Country	2012-13 (April-March)	2013-14 (April-March)	2014-15 (April-March)	Cumulative inflows (April'00-January '15)	% to total inflows (in terms of US$)
1	Mauritius	51654 (9497)	29360 (4859)	46663 (7662)	417148 (86187)	36%
2	Singapore	12594 (2308)	35625 (5985)	32152 (5262)	157959 (30707)	13%
3	U.K.	5795 (1080)	20426 (3215)	6902 (1148)	107791 (21911)	9%
4	Japan	12243 (2237)	10550 (1718)	9802 (1611)	90446 (17879)	7%
5	Netherlands	10054 (1856)	13920 (2270)	19094 (3136)	75393 (14371)	6%
6	U.S.A.	3033 (557)	4807 (806)	9646 (1582)	65376 (13510)	6%
7	Cyprus	2658 (490)	3401 (557)	3104 (513)	38834 (7959)	3%
8	Germany	4684 (860)	6093 (1038)	5018 (821)	36623 (7340)	3%
9	France	3487 (646)	1842 (305)	3617 (592)	22323 (4471)	2%
10	Switzerland	987 (180)	2084 (341)	1792 (293)	14895 (3009)	1%
Total FDI inflows from All countries		121907 (22423)	147518 (24299)	155489 (25525)	1199919 (243228)	-

Interpretation : The highest inflow of FDI inflow has been from Mauritius with a share of 36% in the total inflow into the country, followed by Singapore with 13%, UK with 9%, Japan with 7%, the Netherlands and the USA with 6% each, Cyprus and Germany with 3% each, France with 2% and Switzerland with 1%.

Table 2: Analysis of country wise FDI inflows in India

Amount in Rs. crores (US$ in million)

Rank	Sector	2013-14 (April to March)	2014-15 (April to March)	2015-16 (April to June)	Cumulative inflows (April'00 to June '15)	% age change to total inflows (US$)
1	Service sector	13294 (2226)	19963 (3253)	4036 (636)	209578 (43350)	17%
2	Construction development: townships, housing, built-up infrastructure	7508 (1226)	4582 (758)	216 (34)	113355 (24098)	9%
3	Computer software and hardware	6896 (1126)	13564 (2200)	16254 (2556)	89481 (17575)	7%
4	Telecommunications (radio paging, cellular mobile, basic telephone services)	7987 (1307)	17372 (2895)	2517 (395)	86609 (17453)	7%
5	Automobile industry	9027 (1517)	15794 (2570)	6914 (1094)	70906 (16477)	5%
6	Drugsand pharmaceuticals	7191 (1279)	9211 (1523)	1370 (215)	66652 (13336)	5%
7	Chemicals (other than fertilizers)	4738 (878)	4077 (669)	1598 (251)	50909 (10588)	4%
8	Power	6519 (1066)	3985 (657)	1717 (271)	48357 (9828)	4%
9	Trading	8191 (1343)	16962 (2761	5679 (897)	49479 (8958)	4%
10	Metallurgical industries	3436 (568)	2897 (472)	845 (133)	41992 (8680)	3%

Interpretation : The highest inflow of FDI inflow has been into the Service sector with a share of 17% in to total, followed by Construction development: townships, housing, built-up infrastructure with 9%, Computer software and hardware and Telecommunications with 7% each, Automobile industry and Drugsand pharmaceuticals with 5% each, Chemicals, Power and Trading each with 4% and Metallurgical industries with 3%.

Table 4 : Analysis of state wise inflow of FDI in India

Amount in Rs. Crores (US$ in million)

Sl. no.	RBI's regional office	State covered	2012-13 (April-March)	2013-14 (April-March)	2014-15 (April-January)	Cumulative inflows (April'00-January '15	%to total inflows (in terms of US$ amount)
1	Mumbai	Maharashtra, Dadra & Nagar Haveli, Daman & Diu	47,359 (8,716)	20,595 (3,420)	30,360 (4,983)	344,449 (71,740)	30
2	New Delhi	Delhi, Part Of UP And Haryana	17,490 (3,222)	38,190 (6,242)	35,433 (5,779)	242,204 (48,315)	20
3	Chennai	Tamil Nadu, Pondicherry	15,252 (2,807)	12,595 (2,116)	20,384 (3,340)	85,790 (10,536)	7
4	Bangalore	Karnataka	5,553 (1,023)	11,422 (1,892)	13,886 (2,258)	74,753 (14,934)	6
5	Ahmedabad	Gujarat	2,676 (493)	5,282 (860)	6,811 (1,112)	51,193 (10,622)	4
6	Hyderabad	Andhra Pradesh	6,290 (1,159)	4,024 (678)	7,621 (1,256)	48,536 (9,901)	4
7	Kolkata	West Bengal, Sikkim, Andaman & Nicobar Islands	2,319 (424)	2,659 (436)	1,229 (201)	14,393 (2,943)	1
8	Chandigarh	Chandigarh, Punjab, Haryana, Himachal Pradesh	255 (47)	562 (91)	234 (39)	6,360 (1,331)	0.6
9	Jaipur	Rajasthan	714 (132)	233 (38)	3,233 (540)	6,791 (1,264)	0.5
10	Bhopal	Madhya Pradesh, Chattisgarh	1,208 (220)	708 (119)	600 (100)	6,095 (1,216)	0.5
11	Kochi	Kerala, Lakshadweep	390 (72)	411 (70)	641 (105)	5,373 (1,086)	0.5

12	Panaji	Goa	47 (9)	103 (17)	208 (34)	3,864 (822)	0.3
13	Kanpur	Uttar Pradesh, Uttranchal	167 (31)	150 (25)	502 (82)	2,267 (454)	0.2
14	Bhubaneshwar	Orissa	285 (52)	288 (48)	51 (9)	1,957 (397)	0.2
15	Guwahati	Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura	27 (5)	4 (0.6)	9 (1)	361 (80)	0
16	Patna	Bihar, Jharkhand	41 (8)	9 (1)	66 (11)	265 (50)	0
17	Jammu	Jammu & Kashmir	0 (0)	1 (0.2)	25 (4)	26 (4)	0
18	Region Not Indicated		21,833 (4,004)	50,283 (8,245)	34,196 (5,673)	304,711 (61,412)	25.3
	Total		121,907 (22,424)	147,518 (24,299)	155,489 (25,526)	1,199,386 (243,107)	100.00

Interpretation : The highest inflow of FDI inflow has been into the region of Mumbai (Maharashtra, Dadra & Nagar Haveli, Daman and Diu) with 30% share in the total inflow, followed by New Delhi region (Delhi, Part Of UP And Haryana), with 20%, Chennai (Tamil Nadu and Pondicherry)with 7%, Bangalore (Karnataka) 6%, Ahmedabad (Gujarat) and Hyderabad (Andhra Pradesh) each with 4%. All other states have less than 1% of the total.

Testing of Objective 2

2. To evaluate the impact of FDI on the Indian economy.

Table: 5 Calculation of Karl Pearson' Coefficient of Correlation

year	FDI (x)	(x^2)	GDP (fc) (y)	(y^2)	x*y
2004-05	146.53	21471.0409	29714.64	882959830.3	4354086.199
2005-06	245.84	60437.3056	33905.03	1149551059	8335212.575

2006-07	563.90	317983.21	39332.76	1547066009	22179743.36
2007-08	986.42	973024.4164	45820.86	2099551211	45198612.72
2008-09	1426.98	2036271.92	53035.67	2812782292	75680840.38
2009-10	1231.20	1515853.44	61089.03	3731869586	75212813.74
2010-11	973.20	947118.24	72488.60	5254597130	70545905.52
2011-12	1651.46	2727320.132	83916.91	7042047784	138585420.2
2012-13	1219.07	1486131.665	93888.76	8815099254	114456970.7
2013-14	1455.18	2117548.832	104728.07	10967968646	152398192.9
Total	1044431	12203160.2	61791533	44303492803	70694798.2

Interpretation :

The Karl Pearson co relation(r) between the FDI and GDP over the study period is +0.724, that is high degree positive correlation. Hence it is concluded that increase in FDI inflow leads to increase in the growth rate of GDP.

5. Findings

- Foreign direct investment (FDI) inflows grew in 2014 to an estimated USD 241085.
- From 2004 onwards FDI in India increases tremendously and in 2006-2007 there was a growth of 125% in FDI inflow. The subsequent year was again very good, where investment inflows gained 97%, but due to global financial crisis FDI declined from 2008 onwards. In 2010-11 the decline was 25% due to decline in FDI in service sector because of debt crisis in Europe and US.
- Mauritius, Singapore, UK, Japan, Netherlands, U.S.A, Cyprus, Germany, France and among other countries, arc the major investors in India. Where India's 86% of cumulative FDI is contributed by ten countries while remaining 14 per cent by rest of the world.
- After 1991, Mauritius have always topped the position for FDI inflows in India with FDI on 2014-15 standing at US 86187$ million, consisting of 36% of total FDI inflows. The inordinately high investment from Mauritius is due to routing of international funds through the country given significant tax advantages; double taxation is avoided due to a tax treaty between India and Mauritius and Mauritius is a capital gains tax haven, effectively creating a zero-taxation FDI channel. This is the main reason why most of the countries invest in India through Mauritius.

- Singapore however was very behind among the major investor in India but during the year 2014-15 it came to second position because of CECA agreement between India & Singapore.
- Service Sector contribute maximum of FDI inflow in India of about 17% of total inflow which is followed by telecommunications, computer hardware & software, housing and construction activities.
- In telecommunication sector there has been increase in FDI inflows due to change in FDI limit from 49% to 74%.

  ŸDue to various government policies as to maintain minimum capitalization requirement. 3 yrs. lock in period minimum area requirement had led to decline in housing and real estate sector.
- However in construction activities due to relaxation of government policies and also due to improvement in infrastructure through agreement between India and Japan there has been increase in FDI inflows.
- Top three states which got the maximum FDI inflow are Maharashtra, New Delhi and Karnataka. The top 3 Indian Regions attracting the highest FDI (April 2000 to January 2015) have been Mumbai Region (representing with US$ 71,740 million (INR 344,449 Crores) followed by Delhi Region with US$ 48,315 million (INR 242,204 Crores) and Bangalore Region with US$ 10,536million (INR 85,790 Crores).
- The three states together have accounted for nearly 57% of the total FDI inflows received over the last 10 years, because of better infrastructure, more number of mergers and acquisition of companies in these regions, more number of software companies.
- More of FDI inflows are through automatic route because of government policies and enactment of SEZ Act which attracted a lot of foreign companies to India.

6. Suggestions

Thus, it's found that FDI as a strategic component of investment needed by India for its sustained economic growth and development. FDI is necessary for creation of jobs, expansion of existing, manufacturing industries and development of the new one. Indeed, it is also needed in the healthcare, education, R&D, infrastructure, retailing and in long- term financial projects. So, the study recommends the following suggestions:

- The policy makers should focus more on attracting diverse types of FDI. Design policies where foreign investment can be utilized as means of enhancing domestic production. Savings, and exports; as medium of technological learning and technology diffusion and also in providing access to the external market.
- Encourage more FDI into agriculture sector of India. Indian economy is largely agriculture based. There is plenty of scope in food processing, agriculture services and agriculture machinery.
- The government should invest more for improvement of infrastructure sectors, R&D activities, human capital, education sector, technological advancement to attract more of FDI.
- Government should ensure the equitable distribution of FDI inflows among states. The central government must give more freedom to states, so that they can attract FDI inflows at their own level. The government should also provide additional incentives to foreign investors to invest in states where the level of FDI inflows is quite low.

- India has a well-developed equity market but does not have a well-developed debt market. Steps should be taken to improve the depth and liquidity of debt market as many companies may prefer leveraged investment rather than investing their own cash.
- FDI should be guided so as to establish deeper linkages with the economy, which would stabilize the economy (e.g. improves the financial position, facilitates exports, stabilize the exchange rates, supplement domestic savings and foreign reserves, stimulates R&D activities and decrease interest rates and inflation etc.) and providing to investors a sound and reliable macroeconomic environment.

  ŸFDI can be instrumental in developing rural economy. There is abundant opportunity in Greenfield Projects. But the issue of land acquisition and steps taken to protect local interests by the various state governments am not encouraging.

7. Conclusion

This study has over viewed the evaluation of Indian government FDI policy and patterns and trends in Foreign Direct Investment inflows during 2000-2014. The LPG policy has led to an increasing trend in FDI inflows generally, i.e. over the study period, state wise, sector wise, and region wise. Indian economy is developing very rapidly, it shows unbelievable good indicators and now it has become the fourth largest economy in the world and one of the most developed economies on the continent of Asia.

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A study on the impact of Knowledge Management practices in MSMEs in Bangalore, India

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Abstract

The field of Knowledge Management is unexplored and not much researched, and thus its importance is still not realized. The field is still evolving and there is a lot to discuss on. As permany research papers and studies done the large organizations have understood the benefit upto a certain limit and so they have applied it, and are investing on it as they have the required resources, whereas on the other hand the most of the MSMEs have neither realized the importance of this area nor they have the resources required to implement it. Also as in India the SME sector is booming and is a contributor to the economy in a lot of ways there is a need for them to invest in this area. The research is focused on analyzing the impact of Knowledge Management (KM) practices in Micro, Small and Medium Enterprises, to know the level at which KM is within the MSMEs. A thorough analysis has been done to find the degree at which the SMEs get affected by Knowledge Management. Various statistical tools have been used to do so and from that various findings were done. It was found that the level at which awareness is there in the large organizations, it is not there among the employees of the MSMEs, also they have certain KM practices in place but in an informal way. There are no policies and procedures for it neither any standards are set.

1. INTRODUCTION

"Knowledge is power, which is why people who had it in the past often tried to make a secret of it. In post-capitalism, power comes from transmitting information to make it productive, not fromhiding it!" - Peter Drucker.

As per the above definition the more the knowledge is shared the more it becomes useful andso the need for a field which encourages people to share knowledge which can be used forma king the organization successful arose.

The importance of knowledge management was realized twenty decades ago and from then it has become a field of exploration and till now researches are being conducted and new discoveries are being done. It has been proposed as a method for the organizations to improve their productivity and get an advantage among the competitors.

The basic assumption of KM is that the organizations that manage organizational and individual

knowledge better will deal more successfully with the challenges of the new business environment. KM is seen as a key factor in realizing and sustaining organizational success for improved efficiency and innovation.

Knowledge management (KM) is the process of creating, sharing, using and managing the knowledge and information of an organization. It tries to make the best possible use of the knowledge available to achieve the organizational goals in the most efficient way. In other words,Knowledge management is a practical tool in any organization.

Knowledge Generation.

Knowledge Codification.

Knowledge Transfer.

Knowledge sharing has a significant impact on productivity.

2. OBJECTIVES OF THE STUDY

The main objective of the study is to identify the KM practices prevalent in SMES, to analyze the awareness among employees of KM practices and also know to what extent they are aware.

3. REVIEW OF LITERATURE

Salina Daud and Wan Fadzilah Wan Yusuf (2008) researched on Knowledge Management (KM) processes in Small and Medium Enterprises (SMEs). As per the paper the KM processes are a part of the organization's processes and the competitiveness of the SME sdepends on them.

The paper studies the daily business activities of the SMEs and analysetheir relation with KM. The KM processes are comprised of knowledge acquisition,conversion, application andprotection.

Pietro Evangelists, Emilio Esposito1, Vincenzo Lauro and Mario Raffa (2010) studied the adoption of Knowledge Management Systems (KMSs) in small firms. It was observed that most of the knowledge that is being shared is in the tacit form which requires the need of implementation of KM tools for getting exploited. The main focus of this paper is to throw light on the KM practices in small firms. The investigation was carried out in a cluster of 25 high technology SMEs and the methodology adopted was divided in two stages.

Sudha Venkatesh and Krishnaveni Muthiah (2012) studied the SMEs in India their importance and contribution. The literature focuses on the importance of SMEs in India. As the SMEs majorly contribute to exports and employment they have been included in the 5 year plan of the government but they still face many problems of finance, marketing and low quality.

Ingi Runar Edvardsson and Susanne Durst (2013) in their writings discussed the benefits of knowledge management in small and medium-sized enterprises. The paper studied that KM has been very useful for the SMEs in employee development, innovation, customer satisfaction and organizational success and so there is a need for them to establish KM practices in spite of the challenges they have as compared to the large organizations. The paper mentions that KM in SMEs is a poorly studied area and so notmuch researches have been done on it and thus there is no widely accepted measurement criteria for KM efforts. Also there is not a clear understanding of how knowledge creationis done and furthermore it's translation into the advantages it can provide.

4. RESEARCH METHODOLOGY

The research is focused on analyzing the impact of Knowledge Management (KM) practices in Small and Medium Enterprises, to know the level at which KM is within the SMEs.

Hypothesis

H0: Knowledge sharing does not have a significant impact on productivity in MSMEs.

H1: Knowledge sharing has a significant impact on productivity in MSMEs.

5. SCOPE OF THE STUDY

The study was conducted at 5 Micro, Medium and Small Enterprises in Bangalore city. Therespondents were workers and first line managers. The study was focused on analyzingthe impact of Knowledge Management (KM) practices in MSME's.

6. METHODOLOGY

Method of Sampling:

Convenience sampling method (Non-probability sampling) was used for this research Sample Unit was taken from Micro, Small and medium sized enterprises The sample size of the research was 30.

Data Collection:

Primary data was collected using structured questionnaires which was personally distributed and duly filled by the respondents.

Websites and Journals were consulted for the secondary data research.

Statistical Tool :

Chi square test is used for this research as a test to compare observed data with expected data to obtain according to a specific hypothesis. The test is applied when two categorical variables from a single population is tested for a significant association between the two variables.

LIMITATIONS

Sample size was limited to 30 respondents so the result could not be exhaustive Time to complete the study was less There was a problem of data collection as respondents were reluctant to answer.

7. DISCUSSION

It can be inferred from the hypothesis testing that KM practices differ significantly in their impacton productivity in micro, small and medium scale industries. The main idea driving KM is that knowledge must be managed like an asset. This involves creating, codifying and sharing knowledge. The KM tools support individual knowledge work, communication and collaboration. As a tool for KM, they most closely resemble a cross between a content management system andgroupware.

8. CONCLUSION AND RECCOMENDATION

Responses were collected from the employees working in small and medium enterprises in Bangalore. It can be concluded that the people are aware of the concept also they know that knowledge is a very important element in an organization but they are not familiar with the terminology "Knowledge Management". They create, share, capture and apply knowledge but in an informal way. Majority of the medium organizations don't have written policies and procedures for it and all the researched small scale enterprises don't have at all. Majority of the organizations try to capture the knowledge of their experienced, exiting and retired employees through several methods, but again not in a standard way. The experienced employees are asked to give training to the subordinates in several areas that they know of. Then before any employee leaves the organization, may it be voluntarily or involuntarily it is tried to document their knowledge or they are asked to explain their roles and responsibilities clearly to the employee who will be taking up their place. The MSMEs should have KM responsibilities clearly defined so that a team can handle all the created knowledge efficiently so that it can beused when needed.

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Technical Analysis of Banking Stocks

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Introduction

Banks are one of the most important organisations in any economy. They provide the life blood to the industry. Not only do they need a strong fundamental support from the primary market but also an equally good support from the secondary market. Banking sector has been growing at impressive rate attracting equity investors.

Technical analysis has evolved as in important tool of security analysis. It uses the stock prices and volume data for identifying trends and patterns. Such trends and patterns will be used for predicting direction of movement and the price. It is suitable for short term. It uses recent past data for predicting the near future. Several toolsof technical analysis are in use like candle sticks, moving average, rupee cost average, point and figure chart, RSI, RSA, line charts etc.

Statement of the problem:

While investing in shares and securities, it is worth to consider the proportionate amount of investment on these. Therefore when a trader takes decision to invest he has to consider some factors which play equally an important role. Investing in stocks needs systematic analysis and evaluation before buying the stock. Investment needs a disciplined approach, else loss is sure. Objectives of the study:

- To do technical analysis of banking stocks.
- To compare the performance of banking stocks vis-à-vis index (Nifty50).
- To evaluate the utility of technical analysis in trading.

Scope of the study:

- Time period taken is 60days from 1st of September to 30th October.
- Ten Public sector banks which are taken are State Bank of India, Bank of Baroda, Punjab National Bank, IDBI Bank, Canara Bank, Central Bank, Union Bank, Bank of India, Syndicate Bank, And Indian Bank.
- Tools used are Trend analysis:- Charting and Relative Strength Index (RSI).

Hypotheses :

Hypothesis 1

H0: Bank shares have not been bullish under period taken.

H1: Bank shares have been bullish under period taken.

Hypothesis 2

H0: There is no significant difference in the performance of stocks of selected banks and the index.

H1: There is significant difference in the performance of stocks of selected banks and the index.

Hypothesis 3

H0: Technical analysis is not useful in trading.

H1: Technical analysis is useful in trading.

Methodology :

DATA COLLECTION SECONDARY SOURCES: In order to meet the objectives of the study, data were collected from secondary sources mainly from NSE, capital line of MSRIM and business journals, and newspaper.

Plan of Analysis :

Tools applied:

The analysis of data is carried out for secondary data by the following methods:

- Trend analysis
- Charting
- Candlesticks charts

Literature review

Technical Analysis Of Share Price Movement With Special Reference To Public Sector Bank,

A.Jayakumar and K.Sumathi. The authors have studied trend analysis in public banks. Closing prices of selected stocks have been taken from data bank of NSE India. Using chart patterns, line charts indicators , exponential moving average & relative fitting trend analysis on the two selected banking stocks the authors identified the trends and signals.

Nithya and others studied the effectiveness of candlestick charts and indicators. Theyalso used descriptive method to analyse the trend of 15 randomly selected stocks using RSI and MACDtechniques for the January 2013 to February 2014.

Technical Indicator: Predict the Share Price, Basavaraj Nagesh Kadamudimatha has tried to analyse the performance of selected listed banks and to predict the future trends in the share prices through Technical Analysis and see how useful technical indicators are to investors in making investment decisions.

Technical Analysis In Select Stocks Of Indian Companies, C. Boobalan has studied the relevance of technical analysis in Indian capital market by analyzing the performance of select companies in Indian stock market and to predict the future trends in the share prices through Technical Analysis. Buy- Sell signals are identified using 1. Stock (Candlestick) chart, 2. Exponential moving average (EMA), 3. Moving average convergence divergence (MACD), 4. Relative strength index (RSI) over a period of 3 years from 2011 to 2014 for stocks of 1. WIPRO, 2. SBIN (State Bank of India), 3. GAIL (Gas Authority of India Limited), 4.ONGC (Oil & Natural Gas Corporation Ltd.), 5. ITC (Imperial Tobacco Company of India Limited)

The study was conducted covering a period of 3 years from February 2011 to March 2014.

Varshney analysed stocks of Indian pharmaceutical companies using daily price movements of the selected companies over 3 years i.e. 01.02.11 to 01.02.14 .The selected stocks were Dr. Reddy Laboratory , Cipla, Lupin, Ranbaxy Laboratory, Aurobindo Pharma, Cadila Health, Sun Pharma, Wockhardt. The tools used included A. Relative Strength Index: B. Moving Average and C. Beta:

Chitra studied selected stocks using RSI and SMA to catch the buy and sell signals and also to compare if the risk involved with the scrip was on par with market using Beta. The time period of the study was 01-April2007 to 31-March-2010 for the stock Oil and Natural Gas Corporation. (ONGC), TATA Power, National and Thermal Corporation (NTPC),Gas Authority of India Ltd(GAIL),CAIRN, Bharat Petroleum corporation Ltd(BPCL), Power Grid Corporation of India Ltd, Reliance Power, Reliance Industries Ltd, Suzlon.

Findings and Conclusions

The analysis revealed that the public sector bank by their share price according to the study state bank of India, Punjab national bank, Canara bank, and Indian bank are performing good. By using technical analysis one can easily predict the future price of share and share market movements. line chart, candlestick chart and trend line analysis will give clear idea about the shares.it helps the investors to minimise the loss and to maximise the profit.

Suggestions

The following are the suggestions that can be taken into consideration drawn through technical analysis that has been done

1. All the investors using technical analysis should have adequate knowledge to study the graphs and charts.
2. The prices taken for the analysis should be genuine and from proper source.
3. For short term along with trend we must also look for what the confirmatory indicator say.
4. Investor should have knowledge regarding the market terms so that they can take maximum return from maximum investment.

5. Along with technical analysis, one must keep track records of fundamental analysis as it makes overall analysis more precise.

Limitations of the study :

- The analysis is focused on only ten public sector banks. So the findings of this study may not be applicable to other banks.
- Only two technical analysis tools are taken.
- Time period taken is 60days. Findings of this study cannot be applied for other time period.
- The study is only for academic purpose.

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Book Review

Author of the Book : TERESA AMABILE, STEVEN KRAMER

Title of the Book : THE PROGRESS PRINCIPLE

Publisher : HARVARD BUSINESS REVIEW PRESS

Reviewers :

1. Bala tripura Sundari Penmetsa
2. Prem Sai K.

The book "PROGRESS PRINCIPLE" is mainly about how an employee and his performance are influenced by his routine life within the his organization. Initially, this book is focusing on individual creativity, individual productivity, team creativity and organizational innovation. The book provides an inspirational reading to all such aspiring leaders who are curious about inner work life and what they can do, day by day, achieve the best performance of employees in the organization. The single most important thing business leaders can do to improve determination is to make employees feel they are making progress in their work. The Progress Principle provides an understanding of how one can set in place two forces that enable progress. These are 'Catalysts', the events which facilitate project workdirectly, like clearly stated goals and autonomy. The second one being 'Nourishes', which involves events of interpersonal characteristics that motivate employees, including enhancements work culture like mutual respect and cooperation among colleagues .

The book describes how a person can eliminate common obstacles to progress in work place, such as worthless responsibilities and cold wars, and highlights how such issues can cause disruption to workers and their 'Inner work lives'. The book focuses on the recent study that looks at 7 companies studying the routine activities that moved inner work life of their people. Throughout this book, we observed many instances of inefficient management ultimately leading the companies to wrong end. The authors have shared research discoveries which are surprising and throwing insights about the right track for every leader who is eager to bring maximum benefit to employees and to the companies. This book focuses on "Inner work life effect" of the employees in an organization. Employees do better work when they are positive and internally happy. They have positive opinions on the organization and co-workers and feel motivated by the work itself.

The book explains the following in detail:

- ★ The type of events, what we call key three, "Perception, Emotion, and Motivation".
- ★ The important progress among the key three impacts on the inner work life of employees. Of all the progressive events, most powerful is a progress in meaningful work that influences inner work life.
- ★ In the lack of key three events strongly weakens the inner work life which involves "Setbacks in the work, Events that directly delay project work, Interpersonal events that undermine people doing the work".
- ★ Everything else being equal, negative events have a more powerful impact than the positive events.
- ★ Even seemingly routine events such as minor setbacks and small wins can potentially influence inner work life.

Authors identified 7 effective catalysts such as define goals clearly, provide resources, allow autonomy, give enough reasonable time, render help with the work, take lessons from problems and successes, and encourage employees to contribute ideas and appreciate the good ones.

In our point of view, the book has provided a very helpful daily progress checklist which helps to review one's daily managerial actions and plans. We think its brilliant and agree with the authors. An important contribution of this book which we felt was, that it not only tells you about factor, but also extensively demonstrates it. The "Tips for

managers" section provides the 'Do's and 'Don'ts for team leaders to enhance the positive emotional support to the subordinates. The book makes a strong case about how a leader can chart a culture that enhances and supports growth of organization, himself and employees effectively by helping employees progress and thrive.

A manager has to first understand why people come to work every day, what makes them stay- and what drives them to perform the best. According to the authors, a good leader are takes care to build a team of people who have satisfying inner work lives, highly self motivated, positive in attitude and good opinion about the organization, the work, and the coworkers. This requires that one creates a forward drive in the meaningful work. Through rigorous analysis of nearly 12000 diary entries made by hundreds of workers in different organizations, Amabile and Kramer explored how one can stand-in progress and enhance individual's inner work life every day- in the progress boosting the long-term productivity creatively.

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