MEASURING THE IMPACT OF TALENT MANAGEMENT ON EMPLOYEE BEHAVIOUR: AN EMPIRICAL STUDY OF OIL AND GAS INDUSTRY IN INDIA

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ABSTRACT

Oil and Gas being the most important source of energy is considered the life line of any economy. Today the sector is at cross roads. On one hand the demand for oil and gas is constantly increasing and on the other hand there are certain issues (such as green house gas emission and climate change, pricing, security of supply and constantly increasing budgets of exploration and production) that are pressing the industry severely. But high on the list are the workforce related issues. Such a scenario has put oil and gas companies into war for talent. In countries like India the situation is very complex. The oil and gas companies in India are finding it very challenging to locate and attract the right skills. Probably the reasons may be lack of awareness among people about the importance and attractiveness of the sector, declining interest of the people towards science and technology, high degree of risk associated, lack of institutions offering specialised courses specific to oil and gas industry etc. The challenge for them is to develop rigorous talent management system which will ensure the availability of the right people for the industry and thus enhance productivity and profitability.

The present paper has been divided into four sections. In the first part, the changes occurring in the business environment and in particular the challenges faced by the oil and gas industry have been discussed. The second section explores the concept and reviews the available literature on talent management (TM). On the basis of review of literature the factors of talent management were identified and objectives and hypotheses were formulated. In the third section research framework and research methodology finds mention. The fourth section is about results and discussions.

KEY WORDS: Talent, Talent Management, Competency Development, Organizational flexibility, Career Development, Commitment and Motivation

INTRODUCTION

Stop losing out on lucrative business opportunities because you don’t have the talent to develop them. Ready, D.A and Conger, J.A. (2007)
Energy being the key for achieving the high rate of growth in all the sectors of economy is considered as life line of any country. It has been instrumental in fuelling the growth of India since independence and will remain as the key antecedent of economic growth during 21st century also. Primarily Indian economy is dependent on two major sources (coal and oil and gas) of energy. Oil and gas make up a sizeable share (around 45%) of our energy basket and would continue to be a significant constituent in the economic development of the country. Today the Indian hydrocarbon sector is at cross roads. On one hand the demand for oil and gas is constantly increasing and on the other, issues such as green house gas emission and climate change, pricing, security of supply and constantly increasing budgets of exploration and production are pressing the industry severely. But high on the list are the work force related issues. Such a scenario has put oil and gas companies into war for talent.

The challenge for them is to develop rigorous talent management system which will ensure the availability of the right people for the industry and enhance their productivity and profitability. While going through the literature available it has been observed that nearly every writer (consultants, business leaders, technology providers, industry experts, academics etc.) have unanimously highlighted the talent management as the most important and pressing issue.

It is pertinent here to quote few studies related to oil and gas. A survey (2008) conducted by Ernst and Young and Rice University reveals that nearly 90 percent senior human resource executives at top 22 international oil and gas companies believe that the industry is facing a talent void and consider the problem as one of the top five business issues facing their companies. Orr and McVerry (2007) of Oliver Wyman identify the talent challenges as the most significant issues that industry is going to face over five to ten years. They believe that attracting and retaining skilled workers will be one of the biggest risks to industry. A joint study (2006) conducted by Petroleum Federation of India and Pricewaterhouse Coopers states that scarcity of skills and non availability of talent at the entry level are some of the critical issues faced by the industry. Similarly Cazalot (2007) President and CEO Marathon Oil Corporation asserts that to achieve growth, full commitment of resources (people, capital and technology) is required. Cassiani (2007) President, ExxonMobil Upstream Research Company, is of the view that responding to industry’s challenges will require skilled people and effective work processes. The technology development will require new models for attracting, training and developing talent. He further observes that future success will depend on the availability of talent and its effective management. A study by Deloitte (2010) highlights the key challenges that the Indian oil and gas industry and in particular the upstream sector of the industry is facing are: Increased exploration and production activity, scarcity of talent at entry level, low industry awareness, low industry attractiveness, better overseas opportunities, negative public perception, industry cyclicality, aging workforce, lateral hiring, knowledge retention before it walks out of door. Similarly Petrotech society (2010) recognizes that Indian oil and gas sector is likely to require around 25,000 additional professionals in the next five years due to business growth and retirement or attrition in the sector. This is equivalent to 48% of the current employee strength. The report mentions that around 50% employees have more than 20 years of experience and the majority is due to retire in the next five to ten years. As per the report the key human
resource challenges faced by the industry are: Bulk retirement, attrition, attracting talent, inadequate supply of talent from Institutes. Talent management is arguably more significant among oil and gas companies. In the following paragraphs we will explore the concept of talent management.

**Review of Literature**

Since 1998 when McKinsey coined the term war for talent, it has become a topic of debate in board rooms and academia both. Michaels, Jones, and Axelrod (2001) observe that talent management has become a hot topic everywhere. A review of the literature brings to light that there is a lack of clarity regarding the meaning and scope of talent management. The various definitions (Stahl et al, 2012; Joshi and Agarwal, 2011; Hajimirarab, Nober and Ghalambor, 2011; Serrat, 2010; Collings and Mellahi, 2009; Grobler and Diedericks, 2009) of talent management point out three set of approaches regarding the scope and objectives of talent management.

The first approach is general in nature. It seems that there is hardly any difference between human resource management and talent management. Like human resource management, talent management is concerned about everybody in the organization. The advocates of this approach are of the view that every person is important for an organization. Armstrong (2006) believes that talent management seeks to achieve the extraordinary results with the ordinary people. Ashton and Morton (2005) state that talent management attempts to yield superior performance among all levels in the workforce thus allowing everyone to reach his or her potential, no matter what that might be. According to Redford (2005) talent management is an approach to management that ensures that everyone at all levels works to the top of his/her potential and eventually enhance organisational performance. This approach to talent management believes that every individual has the potential or the ability that needs to be taped and harnessed. For example Williams (2000) believes that there is often a wealth of potential competence waiting to be tapped, released and creatively channeled. Therefore it is the management practices and processes that need to be designed and implemented in such a way that they bring the best out of the people. Talent management is essential to catalyze and facilitate organisational learning and use of collective knowledge.

Unlike the first approach, the second approach examines talent management as the exclusive concept which is just concerned about a particular set of people. It focuses only on talent or high potentials rather than the entire workforce. According to the proponents of the exclusive approach, talent management is a set or a bundle of practices designed to meet the demands for talent in the organisations, for example Kesler, (2002) and Pascal, (2004) explain the term as a bundle of practices to make sure that the organisation has the adequate supply of talented employees. Talent management is the strategic management of the flow of talent through an organisation (Duttagupta, 2005). These views have been echoed by other authors also. Garrow and Hirish (2008) are of the view that talent management is about positive things – doing things for your best people, investing in developing them, building on potential and therefore helping people make the best use of their strengths and improve on their weaknesses. Wilcox (2005) believes that talent management is a mechanism to provide an accelerated development
paths for highest potential employees. According to Smith and Campbell (2008) talent management is concerned with designing and implementing the strategies, culture, systems and processes needed for talent sustainability. The essence of these definitions is to attract, develop and retain such individuals that are considered talented and are critical for the success of the organisation.

Besides these two extreme views (inclusive and exclusive) on talent there is one very specific approach (Huselid et al, 2005) to talent that believes that the people who occupy the key positions or key roles should be considered as talented employees. This approach is position oriented. It calls for identification of the key roles first then identifying those players who can fulfill the requirements of those jobs. Iles, Chuai and Preece (2009) have presented the different approaches of talent management in the graphical form (figure 1.0). It is evident from the above discussion and the figure 1.0 below, that there is a great degree of difference in the understanding whether talent management should be focusing on certain group of people or the entire workforce should be its concern. Besides the difference of opinion regarding the scope of talent management (i.e. whether TM should focus on a few selected group of employees or it should consider all the employees of the firm) the different definitions of talent management brings out a new set of discussion. These definitions not only differ in terms of the scope but they also create confusion about the objectives of talent management.

To get the deep insight about the talent management, we explored various models proposed by different consultants and researchers for implementing talent management in organisations to get competitive advantage and prevent themselves from talent shortage that has become a vital problem across the world today.

Charted Management Institute (CMI) identifies 18 operational dimensions of talent management that were common to all those organisations that have been studied by it. These dimensions are to be considered while designing talent management system in order to meet the strategic intent of the organization. The dimensions may be organized into three categories namely 1. Defining talent, 2. Developing talent and 3. Structures and systems supporting talent management.

**Figure 1.0: Talent Management and HRM in Multinational companies in Beijing**

<table>
<thead>
<tr>
<th>Key Roles/Positions</th>
<th>Exclusive</th>
<th>Key / Selected people</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positions</td>
<td>People</td>
<td></td>
</tr>
<tr>
<td>Social Capital</td>
<td>Wide talent pool</td>
<td></td>
</tr>
</tbody>
</table>

McKinsey (2001, as mentioned by Serrat, 2010), identifies five elements of talent formula used by leading organisations. The elements are: 1. Talent mind set at all the levels of organisation, 2. Attract talent by creating winning employee value proposition, 3. Continuous recruitment of talent, 4. Growing leaders and 5. Differentiating and affirming.

DiRomualdo (2005) suggested four steps model that companies can adopt to quickly access their talent management process and begin improving their talent management competency. The model states that TM process begins with the identification of key roles that are critical for the survival and growth of the organisation. Identification of key roles is very important as it helps the organisations to ensure that it has the right people at the right job and roles and responsibilities are properly matched. Once the key roles are identified the next step is to take an inventory of the skills to determine the availability of the skills for the critical jobs and to identify the possible solutions in case of unavailability of the same. The most important aspect of the talent management process is to have the scientific and systematic measurement tools and techniques in place to evaluate the talent management processes and efforts. Every aspect of the process is to be measured in terms of efficiency, impact and effectiveness. Finally the talent management efforts of the organisation will be able to deliver results only when there is a provision for process wide feedback loop to ensure minimum loss of information and proper dissemination of the objectives.

Bersin (2006) proposed a model that depicts talent management as a continuous process that stems from the business plan or the strategic objectives of the organisation. Business plan sets the direction and strength of the talent efforts that further helps the organisation in identifying talent related challenges; design the relevant HR processes and talent strategies. The model proposes that job roles and the competency management are the foundations for the talent management. Competencies set the tone for descriptions, provide the needed guidelines for workforce planning, recruitment, training and development, compensation planning and decide the benchmark for performance management.

Knowledge Infusion (2006) proposed a talent management model that seeks to create a road map to realise the organisational objectives. The model is based on the concept of "Talent DNA" that has three components: 1. Identification of key roles, 2. Identification of competencies required for the key roles and 3. Creation of database of the competencies. Talent DNA is the building block of talent management that serves as the link among the various HR processes such as succession planning, career planning and performance management. The model provides a mechanism to make the effective and efficient talent related decisions. It further emphasises that TM is not about the effective people management practices.
(such as procurement and succession planning) only. It involves the integration of data, people, processes and analytics.

Smith and Campbell (2008) proposed a descriptive model of talent management. According to them “talent management is the work of designing and implementing the strategies, culture, systems and processes needed for talent sustainability”. The organisational systems and processes that are central to talent management include 1. Executive commitment and engagement, 2. Critical talent identification, development and succession, 3. Learning and development, 4. Competency model development and deployment

5. Sourcing and recruiting, 6. Rewards and recognition, 7. Performance management and 8. Knowledge management and the measurement of the effectiveness of the systems and processes used for the purpose of talent sustainability. Talent Sustainability is an organisation’s ability to continuously attract, develop, and retain people with the capabilities and commitment needed for current and future organisational success. They further believe that everyone in the organisation has a role to play in talent management. The roles that they had identified are: “Talent orchestrators”, “Talent accelerators” and “Talent influencers”.

Taleo consultants (2009) define talent management as the implementation of integrated strategies or systems designed to improve processes for recruiting, developing and retaining people with the required skills and aptitude to meet current and future organisational needs. Like other models of TM, Taleo’s model also stresses the need for the integration of talent management processes with business goals and thus become the driver of business performance. The model also calls for strong executive commitment and engagement along with the requisite infrastructure to ensure that the organisation has the right quality and quantity of people.

Bearing Point Management and Technology (2008) proposes that for success of the organisational mission, an integration of organisational and employee based human capital strategies is very important. An effective talent management programme needs an alignment between the overall organisational strategic intentions, people management practices and the technology. BearingPoint recognises that competencies serve as the critical foundation for creating a high-performance organisation and therefore must be integrated into the core of any talent management system.

Appelbaum (2005), Senior Consultant, Development Dimensions International defines talent management as the system in which people are recruited, developed, promoted, and retained to optimize the organisation’s ability to realize positive business outcomes in the face of shifting competitive landscapes and labor requirements. DDI’s talent optimization model clearly explains that the talent management efforts of the organisation must begin with the end in mind. (i.e. all the TM decisions must be focused on the strategic intensions and desired outcomes.) The model emphasises at four levels of organisational analysis to ensure that TM builds leadership capability and create flexible organisation to meet rapidly changing market conditions. The critical components of the DDI framework are: 1. scanning of the business environment, 2. Identification of the needed talent to meet the challenges of the
environment, 3. Preparation of the game plan and 4. A proper policy to ensure that the plans are executed and implemented the way the organisation wants them to be implemented. It can be concluded that the model shows a tight linkage between talent management processes and outcomes of business.

Morton, (2005) suggests that there are several ways to begin talent management work. He believes that talent management is holistic in nature and therefore there is no linear path to become talent centric organisation. He concludes that wherever we begin with talent management, it should enable the organisation to get moving. According to him the important components of talent management are: 1. Identification of critical jobs, 2. Development of competency framework, 3. Creating tools and processes for talent conversations, 4. Determining workforce vulnerability, 5. Enhancing the performance management process and 6. Structuring the ways for the CEO to be visibly involved.

Hajimirarab, Nober and Ghalambor (2011) are of the view that talent management has three principle components: talent identification, talent development and talent motivation and retention.

Regardless of the perspective taken, the fundamental idea is that talent management has the strategic importance and can differentiate an organisation when it becomes the core competence and when its talent significantly improves strategy execution and operational excellence (Ashton, and Morton, 2005). They suggest that the talent management must be integrated with the business strategy, business planning and the organisation’s approach to people management.

Boudreau and Ramstad (2004) have tried to link the TM with the strategic management of the firm by developing a model, which they call as the HC Bridge model. They state that Human resource management adds value to organizations by focusing on delivery of HR practices (such as staffing, development, compensation etc.).

Factors of Talent Management

Based on the review of the studies and the experience interviews with executives from oil and gas industry, the following factors of talent management have been identified

Executive Commitment and Engagement

Executive commitment and engagement reflects the degree to which company leaders involve with the talent management drive of the organization and show their commitment to the details of talent management. Executive commitment and engagement refers to the sense of ownership of the process on the part of the top management and the support (time, efforts, budgets, guidance) it provides to the organisation and the people. The organisation’s talent management efforts will not be able to deliver results if the top management is not committed to it.
Key Role or Positions

Key roles or positions refer to those jobs or roles or positions which are strategically important for the organization. The roles that are critical in employing the strategic capabilities in the execution of the strategy and have the performance variability are called as Key roles/positions.

Identification of Talent Pool

Talent Pool refers to the individuals, who are considered to have the competencies to carry out the jobs which are strategically important. It refers to the people who are able to work in “A” positions. Identification means spotting of talent. That spotting may be from internal and or external sources.

Attracting the Talent

Attracting the talent is critical first step in the talent management cycle. It refers to the recruitment and selection of talent. It is the hiring strategy that is clearly linked with the requirements of the jobs. It clearly calls for the differentiated staffing strategy for the critical role incumbents and the others. Attracting of talent refers to strategic talent acquisition.

Performance Management and Reward

Performance management is a process that aims to enhance organizational performance by positively impacting the contributions of individuals and groups within an organization. It is a systematic process through which the organization seeks to achieve its objectives.

Development of Talent

Development of talent refers to all those training and development activities such as coaching, mentoring etc which are meant for the development of talent pool. Drawing on the strengths and weaknesses revealed in the performance evaluations, people in the key roles are required to undergo a continuous development programme.

Succession and Retention of Talent

Succession involves the creation of the pipe line of the talent that is ready for the promotion as and when the need arises. Succession planning refers to identification, development and tracking of key individuals who eventually may assume the critical jobs or key positions.

Talent Management System (TMS)

Talent management system refers to the organization wide knowledge, skills and abilities inventory management system which supports talent management planning and decision making. It is a database of employees that shows the existence of critical talent in the organization.

Process Control and Measurement (PMS)

Process control and measurement refers to the system that ensures the compliance with all aspects of the talent management processes. PMS is an audit of the processes, people and the technology
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engaged in talent management in the organisation. PMS ensures that the talent management processes result in measurable improvements in organizational strength and performance.

Outcome of Talent Management

Besides the difference of opinion regarding the scope of talent management (i.e. whether TM should focus on a few selected group of employees or it should consider all the employees of the firm) the different definitions of talent management brings out a new set of discussion. These definitions not only differ in terms of the scope but they also create confusion about the objectives of talent management. Some of the researchers view talent management as a tool to create competitive advantage whereas others aim to ensure the availability of right kind of people or to create an organizational culture or to bring change in the organization. Boudreau and Ramstad (2005) observed that talent management is critical to organizational strategic success. Heinen and O’Neill (2004) also believe that talent management can be the best way to create a long-term sustainable competitive advantage.

Morton (2005) believes that talent management provides a host of benefits to all the three parties (The individual employee, the organisation and the HR professionals) who are involved in the process of talent management. He further cites the research works such as Wyatt (1999, 2001) and Hewitt Associate’s Best employers in Asia study (2005) that have mentioned the positive and significant correlation between talent management and the employee and organisational level of outcomes such as creativity and innovativeness, competence development, flexible work places, financial results and organisational culture. It clearly brings out that talent management benefits the individuals by providing them with tools and processes to learn, grow and remain committed and engaged. Besides these individual levels of outcomes it helps organisations to create flexible work places. Collings and Mellahi (2009) argue that the strategic talent management system has a positive impact on critical individual and organisational level of outcomes. They clearly bring out the positive and significant correlation between talent management and employee commitment and motivation and career development. Morton (2005); (Mac-Beath (2006); Steinweg (2009) believe that the important outcomes of talent management are career development and organisational flexibility. Schuler, Jackson, and Tarique (2011); Grobler and Diedericks (2009); Tansley et al. (2007) argue that competency development is one of the most important outcomes of talent management. According to Cheese (2008) Talent management generates high performance which in turn attracts new talent and creates means to reward it. It also helps improve innovation. Horton (2002); Gandossy and Kao(2004); DiRomualdo et al.(2009) argues that performance based reward system which is an important component of talent management helps people to feel engaged (committed and motivated ) and helps organisations to create flexible work force. Grobler and Diedericks (2009); Kontogiorghes and Frangou (2009); Sullivan and John (2009) state that innovation and creativity and motivation and commitment are the important outcomes of talent management. These studies provide the basis for the following objectives and hypotheses for the present study.
RESEARCH METHODOLOGY

Objectives of the Study

1. To study the impact of talent management on employee creativity and innovativeness.
2. To study the impact of talent management on employee competence development.
3. To study the impact of talent management on employee career development.
4. To study the impact of talent management on employee commitment and motivation.

HYPOTHESES

Hypothesis 1

Ho: There is no significant impact of talent management on employee commitment and motivation.
Ha: There is significant impact of talent management on employee commitment and motivation.

Hypothesis 2

Ho: There is no significant impact of talent management on employee creativity and innovativeness.
Ha: There is significant impact of talent management on employee creativity and innovativeness.

Hypothesis 3

Ho: There is no significant impact of talent management on employee competence development.
Ha: There is significant impact of talent management on employee competence development.

Hypothesis 4

Ho: There is no significant impact of talent management on employee career development.
Ha: There is significant impact of talent management on employee career development.
RESEARCH FRAMEWORK

Sampling

Population

Middle level and senior level executives who are responsible for designing and executing the talent management and high performance work system in the oil and gas firms in India.

Sampling Units

Firms (Governed by Ministry of Petroleum and Natural Gas, Government of India) in oil and gas industry.

Sampling Technique

Considering the nature of study and the structure of the oil and gas industry in India, it was appropriate to employ stratified random sampling.

Sample Size

Considering the nature of research, the number of independent and dependent variables, the structure of the industry in India, the ambiguity about the concept of the talent and talent management, very limited number of previous studies particularly with respect to the oil and gas sector, location problems and various resource constraints, the appropriate sample size was calculated with the help of the sample size calculator. A sample of 598 respondents was selected from the sample units. The said sample size was calculated at confidence interval of 0.05 and the confidence level of 99%, for the
population size of 6000. Out of 598 respondents 150 were from company A, 105 were from company B, 128 were from company C, 120 were from company D and 95 were from company E.

Research Instruments

For the purpose of survey two sets of questionnaires were developed and administered by contacting the respondents personally and in certain cases the questionnaires were mailed to the selected respondents to get their responses.

Instruments Evaluation

The instruments were evaluated for accuracy and applicability. This involves an assessment of reliability and validity of the scale.

Reliability

SPSS software has been used to calculate Cronbach’s alpha. The values of Cronbach’s alpha for the individual dimensions and the complete questionnaire are as follows.

Table 2.0 Dimension wise Cronbach’s alpha (Talent Management)

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Executive commitment and engagement</td>
<td>0.847</td>
</tr>
<tr>
<td>2. Key roles/positions</td>
<td>0.792</td>
</tr>
<tr>
<td>3. Identification of talent pools</td>
<td>0.893</td>
</tr>
<tr>
<td>4. Attracting the talent</td>
<td>0.865</td>
</tr>
<tr>
<td>5. Performance management and rewards</td>
<td>0.929</td>
</tr>
<tr>
<td>6. Developing the talent</td>
<td>0.951</td>
</tr>
<tr>
<td>7. Succession planning</td>
<td>0.887</td>
</tr>
<tr>
<td>8. Talent management system</td>
<td>0.801</td>
</tr>
<tr>
<td>9. Process control and measurement</td>
<td>0.771</td>
</tr>
<tr>
<td>Composite</td>
<td><strong>0.917</strong></td>
</tr>
</tbody>
</table>
### Table 3.0  Dimension wise Cronbach’s alpha (Outcome)

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Competency Development</td>
<td>0.756</td>
</tr>
<tr>
<td>2. Career Development</td>
<td>0.689</td>
</tr>
<tr>
<td>3. Commitment and Motivation</td>
<td>0.794</td>
</tr>
<tr>
<td>4. Creativity and Innovativeness</td>
<td>0.832</td>
</tr>
<tr>
<td>5. Organisational Flexibility</td>
<td>0.822</td>
</tr>
<tr>
<td>Composite</td>
<td>0.775</td>
</tr>
</tbody>
</table>

**Validity**

The validity of the instruments has been determined by using content, concurrent and construct measures. For content validity the instruments were discussed with the prospective respondents (i.e. the executives from oil and gas industry). For concurrent validity a short version of instruments were administered along with the original questionnaire on few selected respondents from the sample companies. After comparing the results of the two it was found that the instrument is valid. For construct validity the item to total correlation was computed. For talent management the values ranged from 0.52 to 0.74. For outcome variables values ranged from 0.57 to 0.88. The item to total correlation value equal to or greater than 0.4 is considered acceptable (Nunnally, 1978).

**Analytical Tool Used**

In the present study, the data variables can be divided into independent variable and dependent variable. Since the objective of the study is to predict or explain the employee commitment, motivation and creativity and innovativeness by talent management, it is evident that a dependence technique would be appropriate. For the purpose of the present study the multiple regressions has been adopted.
RESULTS AND DISCUSSIONS

Table 4.0: Summary of Regression Analysis (TM components on Employee level outcome)

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Outcome</th>
<th>R²</th>
<th>F value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive Commitment and Engagement, Key Roles / Positions, Identification of Talent Pool, Attracting the Talent, Performance Management and Rewards, Development, Succession and Retention, Talent Management System, Process Control and Measurement</td>
<td>Competency Development</td>
<td>0.074</td>
<td>5.226</td>
<td>0</td>
</tr>
<tr>
<td>Executive Commitment and Engagement, Key Roles / Positions, Identification of Talent Pool, Attracting the Talent, Performance Management and Rewards, Development, Succession and Retention, Talent Management System, Process Control and Measurement</td>
<td>Career Development</td>
<td>0.111</td>
<td>8.096</td>
<td>0</td>
</tr>
<tr>
<td>Executive Commitment and Engagement, Key Roles / Positions, Identification of Talent Pool, Attracting the Talent, Performance Management and Rewards, Development, Succession and Retention, Talent Management System, Process Control and Measurement</td>
<td>Commitment and Motivation</td>
<td>0.095</td>
<td>6.806</td>
<td>0</td>
</tr>
<tr>
<td>Executive Commitment and Engagement, Key Roles / Positions, Identification of Talent Pool, Attracting the Talent, Performance Management and Rewards, Development, Succession and Retention, Talent Management System, Process Control and Measurement</td>
<td>Creativity and Innovativeness</td>
<td>0.079</td>
<td>5.574</td>
<td>0</td>
</tr>
<tr>
<td>5. Organisational Flexibility</td>
<td>0.822</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Composite</td>
<td>0.775</td>
<td></td>
<td></td>
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</tbody>
</table>

THE TABLE

Presents the results of regression analysis summary. The table shows the predictors (Executive Commitment and Engagement, Key Roles / Positions, Identification of Talent Pool, Attracting the Talent, Performance Management and Rewards, Development, Succession and Retention, Talent Management System, and Process Control and Measurement) outcome variables (Competency development, career development, commitment and motivation, and creativity and innovativeness), values of R square, F values and the significance level. The third column that represents the value of R² is the measure of variability in the outcome because of the predictors. The R² value for the first model is 0.074 which means talent management accounts for 7.4% variation in competency development. Likewise for second, third and fourth model, the R² values are 0.111, 0.095, 0.079 respectively. If we
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compare the calculated $R^2$ values with the table values of $R^2$ (Table 4.1), we notice that all the values for all the seven models are highly significant.

**Table 4.1: Minimum $R^2$ that can be found statistically significant with a power of .80 for varying numbers of independent variables and sample sizes**

<table>
<thead>
<tr>
<th>Sample Size</th>
<th>2</th>
<th>5</th>
<th>10</th>
<th>20</th>
<th>2</th>
<th>5</th>
<th>10</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>45</td>
<td>56</td>
<td>71</td>
<td>NA</td>
<td>39</td>
<td>48</td>
<td>64</td>
<td>NA</td>
</tr>
<tr>
<td>50</td>
<td>23</td>
<td>29</td>
<td>36</td>
<td>49</td>
<td>19</td>
<td>23</td>
<td>9</td>
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The third column of table 4.3 (labelled as F value) represents the significance of relationship between the independent variables and the dependent variables. The F values for all the models are 5.226, 8.096, 6.806, and 5.574 respectively. This implies that there is a significance of association between dependent and independent variables. Therefore talent management is significant predictor of competence development, career development, commitment and motivation and creativity and innovativeness.

The obtained results reveal that executive commitment and engagement, key roles / positions, identification of talent pool, attracting the talent, performance management and rewards, development, succession and retention, talent management system, and process control and measurement are significant predictors of competency development, career development, motivation and commitment, creativity and innovativeness respectively. These empirical findings support the earlier research work in this area. There is a large number of research (such as Morton, 2005; Wyatt, 1999, 2001, 2006; Collings and Mellahi, 2009; Schuler, Jackson, and Tarique, 2011; Grobler and Diedericks, 2009; Cheese, 2008; Horton, 2002; Ready and Conger, 2007; Fernando, 2007; Anika, 2007; O’Neal and Gebauer, 2006; Lockwood, 2006; Lawler, 2008; Bhatnagar, 2009; Bano et al, 2011) works in this area that supports our findings. The results also support the findings of Guest (1997, 2000a) which suggest that HR practices that are linked with business strategies lead to increased employee competence, commitment and flexibility which in turn leads to increased productivity and increased financial performance of the
organisation. Besides Guest, there are many other studies (Arthur, 1990, 1992, 1994, 1999; Huselid, 1995; Huselid and Becker, 1995; Patterson et. al, 1998) that have confirmed the positive relationship between human resource management practices and the organisational performance.

CONCLUSIONS

The study represents a modest attempt to investigate the state of talent management and its role in emitting desired employee behaviour in oil and gas industry in India. The results of the study illustrated that talent management is directly and positively associated with employee engagement. It was found that all the nine dimensions (collectively) of talent management that we had identified in the beginning of the study through exploratory research significantly predict the outcome.

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