Baby Boomers Retirement in Oil and Gas
Challenges of Knowledge Transfer for Organizational Competitive Advantage

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Abstract: The current paper presents an overview of the baby booming phenomena and its implications on the knowledge management capabilities and competitive advantage of the organizations. Further it focuses on the baby boomer crisis in oil and gas sector and proposes a framework to investigate the knowledge transfer trends from baby boomers and its impact on organizational competitive advantage and knowledge management.

1 INTRODUCTION

Oil and gas industry is one of the most complex, most important and one of the world's largest industry among the global industries. Due to changing economic and global conditions and searching for oil and gas at remote locations, there has been an increasing number of challenges in the oil and gas industry regarding the aging workforce of the industry and problems in attracting new talent. In order to handle these challenges, effective knowledge management is a key to success covering knowledge production, transformation and distribution. As older employees leave an organization, they take along with them a wealth of experience accumulated over years. The knowledge of these workers need to be captured before they walk out of the door so that the new and inexperienced employees could benefit from this knowledge and learn the techniques and ideas which they are unable to learn from the manuals and regular training. Ultimately good knowledge management will eventually help organizations in gaining competitive advantage. Technology and culture play a key role in capturing of such knowledge and work as enablers of knowledge management. This paper provides a framework to be used for an empirical investigation of role of baby boomers in successful knowledge management implementation and the inter relationship of technology & culture, competitive advantage and baby boomers. This study aims at filling the gap in previous literature regarding the inter relationship between competitive advantage, knowledge management and critical role of baby boomers in oil and gas sector.

2 LITERATURE REVIEW

In this section a detailed literature review about the baby boomers, knowledge management and competitive advantage will be presented.

2.1 Baby Boomers, Source of Knowledge and Huge Player in Success of Organization

When a worker leaves, it is not just a long time employee of the organization leaving but years of experience and knowledge is flowing out of the organization. Although managers fear losing their competent and experienced employees but still people are being fired and they getting retired and most of time organizations don't realize they are losing valuable source of knowledge because of the culture prevailing in that specific organization. The workforce in today's economy can be divided into three groups. These are X generations, Y Generations and Baby Boomers. Baby boomers is a term used to name the employees who were born between 1945 and 1964 (Yu and Miller, 2005). Generation X comprise of people born between 1965 to 1980 and generation Y are the young ones born after 1980 (Kyles, 2005). Thus study is focusing on baby boomers who have reached the retirement age

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now and have been part of the organizations around the world for past 25 to 30 years.

Older employees are good at doing good and quality work, they tend to be more reliable, better reading and communication practices and finally, have good performance records and experience. In 2005, Tower Perrins issued a report in which researchers interviewed 10 major US employers and they were of the view that workers aged 50 above brought huge success and value to the company because of their experience, maturity and positive attitude (US, 2005). Moreover older employees put a lot of efforts in terms of time and hard work to make business succeed like as (Ball, 2011) mentions that top sales people used to play golf all day with their clients and had longer meetings if needed and this was the way to grow the businesses and what clients expected from you. This in turn helped organization flourish and gain competitive advantage over competitors. Thus boomers are a huge asset and they possess a lot of experience, good reputation and deep insight of the company developed over a long period of time, which new employees lack and can't replicate (Lesser and Rivera, 2006). Thus organizations need to effectively work on capturing knowledge of these baby boomers to avoid valuable knowledge loss (Glick, 2007).

2.2 Organizational Awareness of Baby Booming Phenomena

Companies are trying to handle this baby booming phenomena, some have succeeded while others have failed. Failure is due to the attitude of executives and top management and, technology, budget shortfalls etc while success is due to timely realization of the aging workforce and taking adequate measures to secure knowledge (Ball, 2011). For the success of the organization, knowledge management is an important challenge, and the most important knowledge source is the knowledge of the individuals in the organization (Gretsch et al., 2012). The common errors which make knowledge management implementation unsuccessful are; not able to understand what knowledge is, give less attention to the role and importance of tacit knowledge and focus on past and present only, not the future (Fahey and Prusak, 1998).

In certain industries like manufacturing and oil and gas, the issue of boomers retirement is more serious as new generations aren't stepping up to join these industries as many of them don't want to be away from home and work in harsh environments in case of oil and gas (Ball, 2011) and others don't want to work in dangerous and dirty factories even though they can make good money (Eisen, 2003). According to McKenna et al., (2006), the shortage of technical people due to graying of baby boomers will have huge impact on oil and gas industry as more than 50 % of employees in oil and gas companies and contractors will be retiring in the next five to ten years thus raising concerns about success of new projects. Overall, there will be 76 million baby boomers retiring next ten years according to Forrester research (Lesser and Rivera, 2006) and the younger employees to replace them are only 46 million.

According to Gould et al., (2007), oil and gas industry is facing baby boomer crisis mainly because of its cyclic nature. More people are recruited and additional skilled workers are employed as the oil prices go high which favours increase in cost effective exploration and production and drilling projects and people stay as workforce is required. When the prices fall, it reduces the exploration and production and thus less work force is required and employees contracts are not extended. As the employees cannot wait for the next project, they go for other opportunities and jobs available. Inkpen and Moffett (2011) discuss the major reason for failure of oil and gas industry in retaining new talent. These include a bad perception of oil and gas industry, shortage of engineering graduates, project base work in oil and gas causing job insecurity, harsh environments and far off work places away from home and no formal career path development.

Organization are concerned about knowledge transfer from old to young but still there are barriers like from where to start and how, confusion of knowledge transfer with information exchange, lack of incentives to employees for knowledge sharing, lack of time and organizations' lack of knowledge about the work force (Piktialis and Greenes, 2008). In terms of competitive advantage, intangible assets are the most important or firms and the most important of these are the accumulated learning and experience of the people (Bateman and Snell, 2002) as well as the knowledge of the employees which can bring value to the organizations (Marr et al., 2003; Walters et al., 2002) and baby boomers are a very wealthy source of this knowledge.

2.3 Baby Boomers, Knowledge Management and Competitive Advantage

Knowledge is everywhere in organizations in various forms (Ball, 2011) and it is the true

knowledge that makes organizations work and succeed (Davenport and Prusak, 1998). The best way for knowledge transfer through the bright and experienced people in the organizations (Davenport and Prusak, 1998). Same was agreed by Holtshouse (1998) that according to many business leaders and scholars face to face interaction is best for sharing tacit knowledge. Cultural knowledge is important as it determines how you navigate and interact with others in an organization. Without knowing the culture, it is hard to be part of the organization. It is critical to understand what type of knowledge exists in the organization (Ball, 2011). McNichols (2010) on her research of knowledge transfer between Boomers and Gen X states that young workers wanted to learn the tacit knowledge by sitting and having face to face conversations with them. Moreover her research revealed that top management plays a key role in fostering a conducive learning environment based on trust, relationships with IT as an enabler (McNichols, 2010; Stevens, 2010).

Knowledge management and competitive advantage are strongly linked to each other and it is very obvious that organizations can gain competitive advantage through effective use of knowledge management (Grant, 1991; 1996; James, 2005). As knowledge bring competitive advantage, so does the management of knowledge and it involves the building, linking and bonding of the human capital (Bartlett and Ghoshal, 2013). First efforts need to be made in developing individuals with specialized knowledge, the linking them through social networks using IT infrastructure to enable knowledge sharing and finally developing relations of trust and bonding for employees to stay and not leave the company with their valuable knowledge.

When there is need to transfer and share knowledge from the experts to employees, organizations that have clear understanding of their knowledge capabilities will be successful (Snyder et al., 2000). Moreover every generation has its own style of communicating and understanding things using different aids. So new generations might not learn in the same way and time and ways required for understanding might be different. It will definitely take time. Wagner (2009) is also of the same view that methods for knowledge transfer might vary considering how the new generations learn.

In 2011, third Oil and gas Industry collaboration survey sponsored by Microsoft was conducted to have an insight of the emerging trends in companies. The pie charts (fig. 1) shows that there are more than 40 percent people older than 50 years and 66 % older than 40 years which shows evidence of aging workforce. The managers, engineers, scientists, executives all were aware of the greying of baby boomer and possible loss of knowledge. However, regarding the retention of knowledge, only 31 percent were of the view that technology driven access to people and information will somewhat reduce the impact of talent scarcity. This survey also showed awareness of the companies about measures being taken to capture knowledge using blogs, wikis, social networking, messaging etc. Also only 40 percent of the companies were taking measures to capture knowledge and somewhat prepared and rest of the companies were either unprepared or don' feel the need (Ball, 2011).

There are three main components of knowledge management; Humans, organization and technology (Reinmann-Rothmeier et al., 2000). Information and communication technology plays an important role in knowledge management as KM is defined as a process which makes organizations to create, refine, store and share knowledge through this ICT system (Zack, 1999). Developments in technology and communication have also lead to the development of knowledge management and thus organizations can create, store and disseminate knowledge with much ease using the advanced technology which eventually helps organizations in sustainable competitive advantage (Adams and Lamont, 2003; Bhatt, 2001; du Plessis, 2005; Malhotra, 2004; Tsui and Malhotra, 2005). Moreover organizations comprise of individuals with unique characteristic and values that contribute towards an organizational culture (Davenport and Prusak, 1998). David and Fahey (2000) explain four ways in which culture influences knowledge creation, disseminations and sharing. First about identification of knowledge, second about managing knowledge, third social interactions for sharing knowledge and finally shaping the ways to facilitate new knowledge. Culture of trust and confidence is highly important for efficient knowledge transfer (McDermott and O'dell, 2001). Albert and Picq (2004) worked on knowledge based organizations: perspective in Francisco Bay area companies. They collected data through interviews from 50 HR executives, consultants and staff working for 20 companies. Their findings revealed that culture and other supportive infrastructure are important for the successful implementation of knowledge based programs. Park et al., (2004) distributed 212 knowledge management technology profile (KMTP) survey instruments and 1,060 organizational cultural profile (OCP) survey instruments across 44 organizations. The results suggest sufficient

evidence to establish correlation between specific cultural attributes and successful implementation of knowledge management technology and knowledge sharing. Continuous learning is highly valued when there is openness and climate of trust in organizations (Olla et al., 2006). Employees collaboration and interaction are key for transfer of tacit knowledge and conversion of tacit knowledge tom explicit knowledge at organizational level (Nonaka and Takeuchi, 1995) and is favoured by a culture of knowledge sharing and integration from individual at multiple levels within organizations (Davenport and Prusak, 1998).

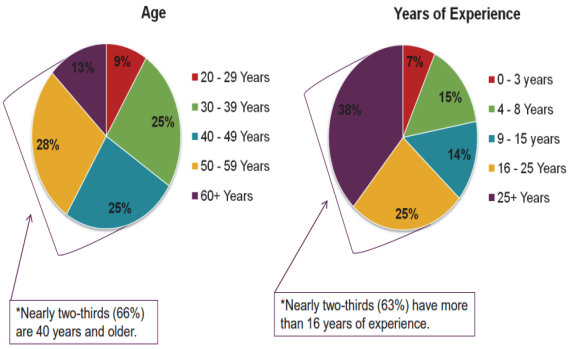

Figure 1: Aging workforce in Oil and gas industry (Source: Microsoft Accenture Oil and Gas survey 2011).

Thus from previous research as discussed above it is obvious that baby boomers are raising concerns regarding loss of experienced staff in oil and gas companies. It will eventually effect the success of mega projects where the technical and experienced skills are essential especially when talent pool is not being replenished. The old employees are key to the success of companies because of the wealth of knowledge they have accumulated over time and helped companies in achieving success and gaining competitive advantage. The role of technology is also important to capture the knowledge from the boomers and make it available to other employees.

3 KNOWLEDGE GAP AND PROPOSED FRAMEWORK

From previous literature review it is evident that a lot of research work has been done in areas of competitive advantage, baby boomers, knowledge management, culture and IT as enablers but no study up to the knowledge of the authors has worked on the linkage of these factors and most specifically performing an empirical investigation on their relationship with each other. Moreover there are few studies found about baby boomers in oil and gas companies in relation to the competitive advantage and knowledge management capabilities. A few studies so far found have investigated the effect of knowledge management process capabilities, competitive advantage and IT and culture in SMEs (Nguyen et al., 2008; Nguyen et al., 2008), manufacturing industry (Chuang, 2004) and these studies are based on the resource based view of the firms.

This study involves one major phenomena predominantly the baby boomers and its relationship with knowledge management, competitive advantage, IT and culture. The focus is on oil and gas specifically as from previous discussion it is evident that oil and gas industry is the most effected one from baby boomers and also it is not being able to replenish the talent. Thus this empirical investigation will provide an insight to the managers, executive and people linked to the oil and gas industry about the major technological, cultural, personal, organizational and managerial barriers in transferring of knowledge from baby boomers to younger generations. The role of technology and culture will play a role and is worth including as oil and gas industry involves sharing of knowledge across different geographical locations and people from different backgrounds and nationalities dispersed at different place. So it will be worth investigating how the technology and culture influence the knowledge transfer from baby boomers to the employees of different backgrounds and in different locations. Also as previously discussed, the ways different generations want to learn are different and thus it would be interesting to investigate the issues of learning and methodologies adopted at different levels for facilitating efficient knowledge transfer and sharing. The literature also gives evidence that knowledge of baby boomers is also directly related to the competitive advantage of the companies because of their commitment, reliability, experience and loyalty to the organizations. Based on the previous literature review, the conceptual framework formulated is shown in figure 2. The solid lines show the direct relationship of the variable with each other while the dotted line shows the indirect relationship with the variables. The main questions that will be focused are

1) When there are cultural differences, Boomers might have to share knowledge with people from different backgrounds, countries and generations and thus boomers may face a cultural double - whammy?
2) Are the ways of sharing knowledge and

communication of baby boomers is easier to understand by younger generations and helping in overall productivity and knowledge management capabilities of organizations for sustainable competitive advantage?

3) Is the prevailing culture and technology infrastructure sufficient for efficient knowledge transfer to younger generations and boomers themselves are comfortable with it?

4 CONCLUSION

The current framework integrates the various factors in order to investigate the trends of knowledge transfer from aging workforce to younger generations and its relationship with overall organizational effectiveness in terms of competitive advantage. The future directions will involve application of this framework and validation of the relationships among the different variables

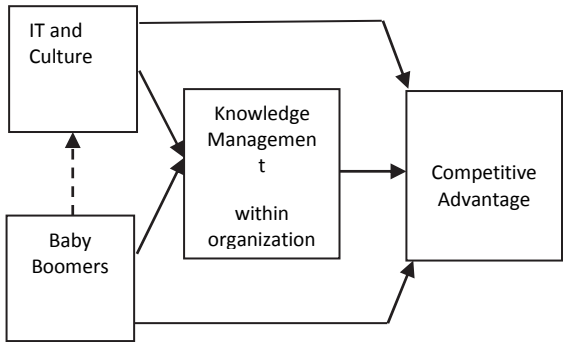

Figure 2: Theoretical Framework for investigating the knowledge transfer trends and impact on organizational effectiveness.

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