

Relationship between human resources development and knowledge management value chain

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Abstract: Present research has analyzed the relationship between human resources development (Employee empowerment, Employee participation and Employee training) and KMVC by descriptive method in correlation type. 1221 employees of one of the Iranian Steel Company with B.S degree and upper took part in the statistical universe of this survey. 232 people were chosen by using systematic sampling method and the sample size formula. To collect data, two researcher-made questionnaires of KM and HRD have been used. Also content validity and face validity of questionnaires in this research were confirmed by experts. The validity of both questionnaires was estimated using Cronbach's alpha coefficient (α) which equals to 0.87 in KM and 0.83 in HRD. The result has shown that there is a relationship between KM and employee participation ($r = 82\%$, $\alpha = 0.001$), a relationship between KM and employee empowerment ($r = 76\%$, $\alpha = 0.001$) and a relationship between KM and employee training ($r = 63\%$, $\alpha = 0.001$).

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I. INTRODUCTION

NOWADAYS, exponential increases in data volumes are increasingly viewed as important and essential sources of information that may eventually be turned into knowledge [1], so that knowledge is increasingly claimed to be a key critical resource and source of competitive advantage in the modern global economy, especially with the rise of the service economy, the growth in the number of 'knowledge workers', and the growing recognition of the importance of intellectual capital and intellectual property rights [2]. Although a firm has access to the knowledge, skills and expertise of employees, it also needs knowledge management mechanisms in place to ensure effective utilization human capital. Knowledge management is an approach to adding or creating value by more actively leveraging the know-how and experience resided in individual minds [3], [4], [5]. Consequently, HRM activities and program must focus on instilling, improving, and evaluating knowledge, skills, and abilities of human assets [6]. Examining the relationship between KM and human resource development activities may lead to increasing organizational efficiency and effectively. The purpose of this paper is to identify the relationship between human resource development activities and KM activities.

II. LITERATURE REVIEW

As the world is becoming more competitive and unstable than ever before, manufacturing-based industries are seeking to gain competitive advantage at all cost and are turning to more innovative sources

through HRM practices [7]. Human resource management (HRM) is an inevitable process that accompanies the growth of organizations [8]. The overall purpose of HRM is to ensure that the organization is able to achieve success through people. HRM system can be the source of organizational capabilities that allow firms to learn and capitalize on new opportunities [9]. And to this end Human resource development (HRD) activities are intended to ensure that organizational members have the skills or competences to meet current and future job demands [10]. Strategic human resource development involves introducing, eliminating, modifying, directing and guiding processes in such a way that all individuals and teams are equipped with the skills, knowledge and competences they require to undertake current and future tasks required by the organization [11]. HRD includes: paying attention to change management, to combining learning processes, KM, job development, team making, instructional technology, good job relations, information technology and HRD relation, leadership development and interference strategy [12]. In this survey, three tools such as staff participation, staff empowerment and staff training have been analyzed as the necessary tools to develop human resources in organization.

Training: is a useful investment and a key factor in development and If it is planned and applied well, will have a remarkable economic output. Staff training is a helpful action that can give credit to individual and in organizational level causes

improvement and development to the organization and also in national and transnational level can increase productivity. So we can say one of the basic actions that causes efficiency to organization, is human resource development via training and its improvement continuously. Training and improvement of human force give abilities to the individuals to continue their activities effectively according to organization and environmental changes and increase their productivity and efficiency. So Training and improvement is a continued and planned attempt by management to develop staff competency and organizational operation [13].

Empowerment: is the process of enhancing the capacity of individuals or groups to make choices and to transform those choices into desired actions and outcomes. Central to this process are actions, which both build individual and collective assets, and improve the efficiency and fairness of the organizational and institutional context which govern the use of these assets. It identified empowerment as “the expansion of assets and capabilities of the people to participate in, negotiate with, influence, control, and hold accountable institutions that affect their lives [14].

Participation: there are different definitions about participation that all show the role play, giving ideas and recommendations, issuing solution, work development and improvement. “Employee participation” is a partnership process that aims to stimulate and encourage staff for more commitment and collaboration in organization success [15]. Employee participation embraces employees in the organizational decision making on a collective basis [16].

A number of scholars, such as [17], [18], and [19] have argued on the missing link between HRM practices and organization outcomes. Reference [20] have recognized Knowledge management as the fundamental activity for obtaining, growing and sustaining intellectual capital in organizations and an intervening mechanism between organizational factors and organizational outcomes. Knowledge Management (KM) is an effort to increase useful knowledge within the organization. Ways to do this include encouraging communication, offering opportunities to learn, and promoting the sharing of appropriate knowledge objects or artifacts [21]. Knowledge management is a multidisciplinary approach that takes a comprehensive, systematic view to the information assets of an organization by identifying, capturing, collecting, organizing, indexing, storing, integrating, retrieving, and sharing them. Such assets include (1) explicit knowledge, such as databases, documents, environmental knowledge, policies, procedures, and organizational

culture; and (2) the tacit knowledge of the organization's employee, their expertise, and their practical work experience [22].

The goal of KM is to improve tasks and sub-tasks, in most cases the creation or generation; acquisition; identification or capture; validation and evaluation; conversion; organization and linking; formalization or storage; refinement or development; distribution, diffusion, transfer or sharing; presentation or formatting; application and evolution of knowledge, with the help of systematic interventions, instruments or measures [23], [24], [25], [26], [27], [28], [29], [30].

The Art and science of KM is a frame for designing continuous systematic activities to make effective organizational decisions. In this field, KM is a strategic process by the goal of separating organizational from competitors and outstrips from their competitive advantages. To reach to this goal, the organization activities should be organized to create an appropriate model for KM [31]. According to [32], potential sources of competitive advantage are everywhere in the firm. To highlight the idea that competitive advantage grows fundamentally out of the value a firm is able to create for its customers [33] integrate different terminologies used by some authors in describing the KM process and aggregate their work as a simple KM value chain in Fig. 1 the KM value chain is divided into four activities knowledge creation, knowledge storage, knowledge distribution and knowledge application.

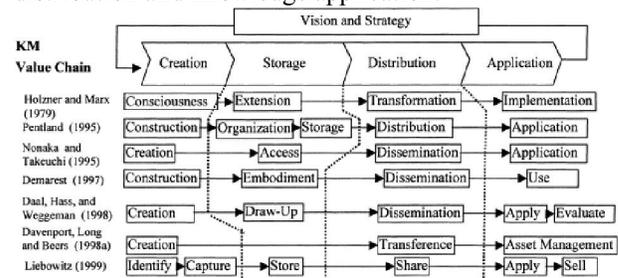


Fig. 1 Knowledge Management value chain

These four activities are defined as a chain to create value for organization via knowledge [33]. Although different researchers have suggested different models to perform knowledge management system in the organization, all of them originate from these four levels. Nowadays the rapid growth of technology has led to an economy where competitive advantage is increasingly based on the successful application of knowledge [34]. The emphasis on HRD is also broadening to a focus on developing themes and creating environments conducive to learning, as well as to the acquisition and creation, sharing and dissemination and application of knowledge within organizations [35].

For instance employee participation is one of key factors in successful KM implementation because the nature of knowledge creation and sharing is unthinkable without employee participation, in addition employee training which can transfer tacit knowledge into explicit knowledge through education, organizations must build employee skills, competencies, and careers, creating "bench strength" [36], and also effective creation and sharing of knowledge will fail if employees do not have a sense of ownership in the overall aim of the organizational KM project so through empowerment, employers can value their employees' expertise and help them communicate their knowledge by creating ways to capture, organize and share knowledge [37].

The resource based view of the firm suggests that organizations will need to be able to combine distinctive, sustainable and superior assets, including sources of knowledge and information, with complementary competencies in leadership and human resource management and development to fully realize the value of their knowledge [38]. HRD in organizations should be structured to promote knowledge creation and mobilization, and how to develop a culture and set of HRM policies and practices that harness knowledge and leverage it to meet strategic objectives [2]. Obviously KM is first and foremost a people issue. The success of KM initiatives depends upon people's motivation, their willingness, and their ability to share knowledge and use the knowledge of others. People in organization, processes and technology will at all times be acting as either enablers of, or barriers to, effective KM practices. Barriers need to be identified and removed. Existing enablers also need to be enhanced and additional ones created. This is often where the greatest KM challenges lie [39]. Consequently, according to the broad goals of HRD in organization, it can help organization to reach its goals along with KM. In the other words, by integrating KM and HRD together, it is possible to follow up the ultimate goals of organization which called the organizational excellence.

III. THEORETICAL FRAME OF RESEARCH

Knowledge management and human resource management are two significant issues in organizations management. In spite of wide literature about both of them, applying them still has been a challenge. When the knowledge capitals of an organization are mentioned, in fact human resources are supposed as the knowledge capitals. So in this situation, human resource systems have to be stated so that support learning environment and have harmony with organizational knowledge management system to respond organization knowledge needs and

operate organizational goals. So, present research has tried to survey the relation between HRD (including staff empowerment, staff training and staff participation) and knowledge management value chain in one of the big Iranian industrial companies.

IV. RESEARCH METHODOLOGY

Present research has analyzed the relationship between human resources development (Employee empowerment, Employee participation and Employee training) and KMVC by descriptive method in correlation type. 1221 employees of one of the Iranian Steel Company with B.S degree and upper took part in the statistical universe of this survey. 232 people were chosen by using systematic sampling method and the sample size formula. To collect data, two researcher-made questionnaires of knowledge management and human resources development have been used. Also content validity and face validity of questionnaires in this research were confirmed by experts. The validity of both questionnaires was estimated using Cronbach's alpha coefficient (α) which equals to 0.87 in knowledge management and 0.83 in human resources development.

V. HYPOTHESES

A. There is a relation between employee empowerment and knowledge management value chain in organization:

TABLE I
CORRELATION COEFFICIENT BETWEEN EMPLOYEE EMPOWERMENT AND KNOWLEDGE MANAGEMENT VALUE CHAIN

Predictor variables	Correlation Coefficient	r ²	α
Knowledge Creation	0.614	0.377	0.001
Knowledge Storage	0.658	0.433	0.001
Knowledge Distribution	0.674	0.454	0.001
Knowledge Application	0.785	0.616	0.001
KM (Total Mark)	0.767	0.588	0.001

P<0.01

Findings table I show that the correlation coefficient between employee empowerment and KMVC and its subscales in (p<0.01) level is meaningful (r= 0.767). It means that there is a meaningful relation between employee empowerment and KMVC and its subscales. According to determination coefficient (r²) 58.8% variance of employee empowerment and KMVC was common. So the first theory that says "there is a relation between employee empowerment and knowledge management value chain" is confirmed.

The outcome is matched with [40]. They concluded that the role of applied KM in ISACO Company regarding to three indicators such as individual, group or organizational abilities is 68%

TABLE III
CORRELATION COEFFICIENT BETWEEN EMPLOYEE PARTICIPATION
AND KNOWLEDGE MANAGEMENT VALUE CHAIN

Predictor variables	Correlation Coefficient	r ²	α
Knowledge Creation	0.727	0.528	0.001
Knowledge Storage	0.656	0.430	0.001
Knowledge Distribution	0.736	0.542	0.001
Knowledge Application	0.802	0.643	0.001
KM (Total Mark)	0.826	0.682	0.001

(3.39 out of 5) from the responders view. So we can conclude that the applied KM in this company has been successful and increased individual, group or organizational abilities. Also this finding is matched with the result of [41] that shows in general level, there is a meaningful relation among transferring implicit knowledge and capability feeling on employee in decision making, taking responsibility of decision making in employee, Their access to related tools for decision making, implementation and finally accepting the responsibility of employee decision result, and its correlation coefficient is 0.6. This survey's results are not matched with [42] results. Because their research shows that there is a trivial relation between employee empowerment and knowledge creation, knowledge storage and knowledge distribution. Empowerment is one of the related factors to KMVC. In modern organizations, organizational knowledge is supposed as a persistent competitive advantage resource and whole KM pays attention to apply present knowledge in organization which results in organizational benefit. In the other hand the importance of knowledge doesn't mean that it is applied all the times in organization activities. So employee empowerment as a strategic and important resource in organizations is caused to persistent development and access to goals, in global approach. If KM process is organized and designed well in an organization, but the employees can't use this new management system, the entire manager's attempts will be useless. Employee empowerment is a factor that facilitates using the KM project and develops the organization. So we can determine the relation between employee empowerment and KMVC.

B. There is a relation between employee training and knowledge management value chain in organization

Findings table II show that the correlation coefficient between employee training and knowledge management value chain and its subscales in ($p < 0.01$) level is meaningful ($r = 0.634$). It means there is a meaningful relation between employee training and KMVC and its subscales. According to determination coefficient (r^2), 38.9% variance of employee training and KMVC was common. So the second theory of the research is confirmed.

The outcome is matched with the result of [31] that shows there is a meaningful relation in the role

TABLE II
CORRELATION COEFFICIENT BETWEEN EMPLOYEE TRAINING AND
KNOWLEDGE MANAGEMENT VALUE CHAIN

Predictor variables	Correlation Coefficient	r ²	α
Knowledge Creation	0.558	0.346	0.001
Knowledge Storage	0.506	0.256	0.001
Knowledge Distribution	0.557	0.310	0.001
Knowledge Application	0.618	0.382	0.001
KM (Total Mark)	0.634	0.389	0.001

of quality management in human resource training and making KMVC in organization. Also it is matched with the outcomes of [5] that shows there is a positive meaningful relation between employee training and knowledge acquisition and also between employee training and knowledge application.

Human capital with its knowledge, proficiency and skills is a valuable resource for organizations. Modern organizations which apply and manage the knowledge and proficiency of people mind continuously and effectively, are able to make more value and achieve better competitive advantages. In order to develop KM, they use some useful procedures to expand human resources, such as training which makes them skillful and freed to act. So we can determine the relation between employee training and KMVC.

C. There is a relation between employee participation and knowledge management value chain in organization

Findings table III show that the correlation coefficient between employee participation and knowledge management value chain and its subscales in ($p < 0.01$) level is meaningful ($r = 0.826$). It means there is a meaningful relation between employee participation and KMVC and its subscales. According to determination coefficient (r^2), 68.2% variance of employee participation and KMVC was common. So the third theory is confirmed.

The outcome is matched with the result of [31] that shows a meaningful relation between the role of quality management in the dimension of human resource participation and producing KMVC in organization. Reference [43] concluded that employee participation doesn't have an important effect to implement KM in the company and this result is not matched with the result of this research.

Knowledge has an abstract meaning and the culture of knowledge sharing and application in organization depends on individual attitudes. Employee participation is one of the most important challenges to implement KM in organization. The culture of participation effects knowledge producing by increasing knowledge exchange in organization and creates suitable situation to transfer knowledge

between individuals and groups, because knowledge transferring needs people who cooperate in exchanging ideas, sharing and creating knowledge. The lack of the culture of participation that supports KM system, limits KM system efficiency.

VI. CONCLUSION

Human resource management is the most important key in organization's success. If policies and procedures related to organization staff are in accordance and have a remarkable share in accessing strategic programs and organization goals, reaching the organizational success is more possible. Culture and general values, organizational situation and managerial behavior which originate from that culture, have a big effect on reaching to desirable excellence. On the other hand, KM causes to establish and improve competitive progresses for commercial organizations. In the other words knowledge improves the ability of competition in an organization and also helps the organizations to survive in present turbulence and changed situation. KM is not just a collection of software and hardware and the organization foundation such as culture and staff have an important role in it. The main duty of HRD is supervision, evaluation and interfering in staff's knowledge visualization, distribution and application. Also all the activities of HRD dimensions are effective in maintaining and making the abilities of organization staff. So if HRD involves human capitals education and if knowledge is the valuable resource for these capitals, in this case HRD and KM are dependent on each other strongly. HRD and KM share general goals and activities when forming work units, teams, multi-duty cooperation and also networks of communications inside and outside organization borders. So by surveying knowledge management cycle and human resource management process together, it is clear that there are a lot of common activities and a two-way relation between them. According to the result of research in this industrial company, we can confirm what was thought in research general. In other words we can say that there is a meaningful relation between HRD (empowerment, training, participation) and knowledge management value chain.

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