
Designing a Human Resource Agility Model based on Grounded Theory Approach (Study Case: Social Security Organization)

Nahid Khodabandeh¹, Nabiollah Mohammdi^{2*}, Homa Doroudi³, Ali Mansouri⁴

1. PH. D Student of public administration, Zanjan Branch, Islamic Azad University, Zanjan, Iran
 2. Assistant Professor, Department of Management, Zanjan Branch, Islamic Azad University, Zanjan, Iran
 3. Associate Professor, Department of Management, Zanjan Branch, Islamic Azad University, Zanjan, Iran
 4. Assistant Professor, Department of Accounting and Management, Zanjan university, Zanjan, Iran
-

Article history:

Received date: 7 September 2017

Review date: 5 November 2017

Accepted date: 26 January 2018

Printed on line: 9 October 2018

Keywords:

human resources agility, social security organization, grounded theory.

Abstract

Purpose: Huge economic, social, political and technological changes, particularly in recent decades, have brought about increasing complexity and reduced predictability of the organizations' environments. One solution offered to deal with such environments is the human resource agility approach. Though human resources play an effective role in the agility of organizations, the integrated model that identifies its dimensions and components has not been yet explained. This study aimed to design an agility model for human resources and to explain the factors influencing it. **Methodology:** This research has been conducted in the qualitative approach framework along with the survey method and by relying on grounded theory. Related data were extracted from theoretical literature, upstream documents, and interviews and then analyzed in three stages of open, axial and selective coding. **Findings:** The results indicated that the agility of human resources as an axial phenomenon is due to a set of individual-organizational, individual-personal, organizational and occupational characteristics. **Discussion:** The effects of this phenomenon were categorized into two groups: individual and organizational. Also, in this model, the underlying factors (power sharing practices, human resource management practices, organizational coordination, communication and information technology, organizational process) and interventional conditions (organizational culture, leadership style, self-development, environmental factors) are influential on the ruling relations.

Please cite this article as: Khodabandeh N, Mohammdi N, Doroudi H, Mansouri A. (2018). Designing a Human Resource Agility Model based on Grounded Theory Approach (Study Case: Social Security Organization), *Iranian journal of educational Sociology*, 1(7), 163-179.

* Corresponding author email: mohammadi_management@yahoo.com

1. Introduction

The complexity of the business environment, the increasing development of science and technology, the emergence of growing needs of environment, the diversity and composition of them, the various demands of customers, reduced time of product delivery, as well as the effects from accepting globalization, increased competition, and even de-globalization have led to instability and a tendency to ongoing change, and in general, the lack of predictability of the environment (Khosravi, 2011). Due to this situation, traditional models and past business priorities have lost their ability to face organizational and environmental challenges (Jafarinejad and Shahayi, 2007). Among the various solutions offered to address these conditions, agility has been noted as the dominant business paradigm in the third millennium and the best option for survival by most manufacturing and service organizations (Sherehiy et al. 2007). In consequence of the organization's attention, many efforts have been made to achieve a desirable and proportionate level of agility. Until recently, it was believed that the agility strategy could be developed through advanced information technology, but based on research it was found that strategic flexibility and agility were more dependent on the staff of the organization than technology. Thus, one of the most fundamental mistakes is to ignore the prominent role of manpower in promoting agility (Abbaspour et al., 2014). Although agility in human resources has been mentioned as a profitable strategy in the dynamic business environment, the lack of agile workforce has been identified as one of the main reasons in the organizations' failures in keeping with market and technology changes (Qin & Nembhard, 2015). Hence, achieving success at the organization level will not be possible unless human resource and the manner of its engagement in processes is noted. The methods of managing and motivating the human capital play a key role in moving individuals towards agility (Nejatyian et al., 2013).

2. literature Review

Adoption of human resource agility approach with benefits such as increased autonomy and employee control, job enrichment, better performance, well-being (Abrisham Kar and Abdollahi, 2006), improved quality, providing better customer service, accelerated learning curve, economic savings in all processes, the improvement of organizational culture, leads to economic excellence (Hopp & Van Oyen, 2004); and the lack of agility really can lead to significant losses of opportunity and even threaten the survival of the organization in the long run (Qin & Nembhard, 2010). Unlike traditional methods, agile methods rely on employees and their creativity to fight against instabilities (Muduli, 2016).

The social security organization, as the largest provider of social services in Iran, covers the salaried employees, wage earners, and self-employed business owners. Nowadays, this organization continuously encounters internal and external issues, including reduced earned premiums, unemployment of production factors, production costs, rising unemployment insurance costs, members' increased retirement pension, increased average age of insured and pensioners, organization reaching its middle age, existence of liquidity crisis, the growth of various insurance companies, and so on. Given that an organization is a social phenomenon and has a continuous interactive environment, it is inevitable for its survival to constantly revise its internal structure and policies so that it can move towards organizational and human resource agility and become more adapted to the dynamic and changing environment. In order to cope with these problems as well as to maintain a competitive market in the dynamic environment of the country's insurance industry, the

social security organization needs to speed up decision-making, flexibility, and dynamism, making better use of investment opportunities and ideal creativity. This flexibility and creation of new ideas may only be realized with the help of flexible and agile force. Failure to consider these issues will hinder the organization from performing its obligations, thus creating problems for the population who are under insurance coverage.

Despite the increasing importance of an agile workforce, this concept has not yet been systematically studied (Muduli, 2016). Research on agility to understand the agile workforce have been investigated only in terms of speed, flexibility, and operation, as well as from production viewpoint in factories (Goldman and Nagel, 2014, quoted by Khosravi et al., 2012). There is no exhaustive theory based on the agility of human resources from an organizational perspective that can be expanded to the human resources employed in all units of the organization (Sherehiy et al., 2007). In this regard, Sherehiy & Karwowski (2014) have noted that "little research has been done on the agility of the human resource and the characteristics of the organization, which leads to the agility of the employees" (Sherehiy & Karwowski, 2014). where it becomes clear that organizational methods can improve the human resources agility, the literature is limited to untested versions (Sherehiy & Karwowski, 2014; Alavi et al., 2013; Muduli; 2013; Sumukadas & Sawhney, 2004; Sawhney & Piper, 1999). Testings have been limited either to the role of culture, cooperation, information systems, and competencies (Chonko & Jones, 2005) or organizational learning and organic structure (Alavi & Dazaraydeh, 2013). In addition, most of these studies have been carried out by assuming direct and linear relationships between organizational practices and the human resources agility (Muduli, 2016). Some sources have addressed this issue on the conceptual level. In particular, there is relatively little awareness of the preference of human resource agility models, agile-based algorithms, rewards and costs related to human resource agility, and, to a similar extent, there exist some of the most relevant performance criteria for human resource agility (Zahedi et al. 2013). On the other hand, in a few of researches addressing the causes of affecting the human resource agility (Sumukadas & Sawhney, 2004; Kathuria & Partovi, 1999) which look at the issue of agility from outside to inside, only proposing the necessary management measures to heighten the agility of the staff. Addressing the human resource agility from an attitudinal perspective has been scarce. Finally, the theoretical gap in human resource agility research implies the absence of a comprehensive model for agile workforce management and the recognition of the dimensions and foundations for its development, especially in the public sector. Most research is related to the manufacturing sector, or some have provided solutions by highlighting one of the organizational dimensions and examining its impact on human resource agility. From several aspects, identification of human resource agility models, dimensions, components, and outcomes is important: first, recognizing this model will help managers in managing it more effectively. Second, identifying effective indicators will facilitate the process of moving the organization towards a desirable position. Third, if in the course of action, the process of execution is challenged, the knowledge of the influential factors makes it possible to look at the system in a systematic way and thus allowing for an appropriate feedback and modification, thus preventing the loss of time and money. Accordingly, the question from which the present research originates is what is the appropriate model for human resource agility management? What components have the above model? The ultimate goal of this research is to create a grounded theory about the agility of human resources in the social security organization.

In this research, the theoretical foundations and literature review is conducted in two steps: The first step before entering the data analysis phase and the second stage during the analysis of data and in the phase of the

conceptual model formation based on the grounded approach. In this regard, key concepts and themes based on research questions are expressed in the context of human resource agility study.

The agility history dates back to the downturn in the US industry. In 1991, a group of industrial experts observed that the rate of change in the business environment is faster and more accelerated than the traditional manufacturing organizations' capabilities in adapting to it. These organizations were unable to take advantage of the upcoming opportunities and the failure to adapting to the conditions of change was likely to lead to bankruptcy and failure in the long run (Hormozy, 2001). For the first time, a new paradigm was published by the Iacocca Institute and introduced publicly in the "The 21st Century Manufacturing Enterprise Strategy Report", in which the views of industrialists were expressed. By the publication of this report, the term "agile production" was immediately used commonly by the public (Nagel & Dove, 1991).

In agility research, there are many definitions of this term, however, none contradicts or violates the other. Generally, these definitions indicate the idea of speed and change in the business environment (Khodami et al., 2012). The word "agile" in the Longman Dictionary as an adjective, means being able to move fast; and "agility" as a noun means being fast (Longman Dictionary, 2006). One of the first debates about modern agility has been made by Nagel and Dow (1991). They found lack of agility as one of the main reasons for the inability of the traditional productive sectors in the face of increasing pace of change since the 1990s. Agility has been also of interest among the researchers and industry professionals, and several studies have been presented in this regard to better understand the concept of agility. Kidd (1994) suggests agility as a response to the highly variable and fast-moving needs of the market, which can be done through the "just in time" method by making further changes in desired productions (Kid, 1994). Goldman et al. (1995) point out that agility means the organization's efforts to make more profit by more adaptability with changes in a competitive and dynamic environment (Khosravi et al., 2012). Agility refers to the ability to be creative and to respond to unanticipated changes in order to achieve the desired benefits in a dynamic business environment, and the ability to balance the flexibility and stability and sustainability. There is a difference between flexibility and agility. Flexibility is a response to the planned changes, while the agility sees the change constraints in the minimal state and considers any unpredictable and unplanned change possible (Khosravi, 2011). Despite the various definitions of agility, many argue that agility has three unique characteristics that distinguish it from any other specific scale like flexibility, shortest processing time, and the lowest cost. Firstly, agility is an ability adopted by an organization to take advantage of opportunities and the positive use of risks, all of which are due to large and frequent unpredictable changes, especially market-based uncertainty. Secondly, agility is created using methods for product valuation. Third, one of the goals of agility is to achieve long-term success by maintaining a strategic economic balance among competitive matrices (Zahedi et al., 2013) .

Agile workforce: human resource dimension in agile studies (Vernadat, 1999; Gunasekaran, 1999; Sharifi & Zhang, 2001, Meredith & Francis, 2000; Ramesh & Devadasan, 2007) as a driving force and a prerequisite for acquiring agile production and organizational agility (Muduli, 2016). In the past, it was believed that accountability and agility of production could be achieved through advanced technologies such as integrated computer manufacturing (CIM). But Upton (1995) argued that although computer integration can provide important competitive advantages, the achievement of flexibility in production and services requires the development and maintenance of a high-tech element and a human source to enable facing exceptional and unusual situations. Thus, one of the most fundamental mistakes is to ignore the role of human force in

promoting agility (Abbaspour et al., 2014). Kidd (1994) and Goldman et al. (1995) in their research on agility production models concluded that human resource agility is always considered as one of the organizational agility dimensions of the organization. They believe that in an organization, the main factor is productivity, not the facilities, equipment, and technology of that organization (Goldman et al., 1995). In his research, Forsythe (1997) considered the importance of human factors in the technologies necessary for agility of production, first in the field of technology development, and then in its applications, finally concluding that since the processes of the organization are crystallized in the form of product, process, and management, agile employees can be considered more effective than agile processes (Forsythe, 1997). Sharifi et al. (2001) concluded in their studies that the agile human force is considered one of the most important providers of agile production. Hopp and Van argue that agile manpower is effective on four strategies in an organization and lead to organizational agility: cost, quality, time, and diversity (Hopp & Van, 2004). In the era of speed and change, the organization's survival depends on the ability to mobilize flexible and agile employees to meet the needs of the market. Agile workers can conquer new markets with a flag of innovation, and draw up a bright future ahead of the organization. It also plays an important role in the development and excellence of the organization as a source of competitive advantage and financial success of the organization (Amin & Mir, 1395). In general, agility literature refers to the importance of highly skilled, knowledgeable, flexible and motivated employees who can be responsive to agile production (Abrisham Kar and Abdollahi, 2016).

According to Gunasekaran (1999), in particular, the agility of human resources refers to the human agility of an organization (Gunasekaran, 1999). As pointed out by Dow and Wills (1996), for an individual, agility means the ability to distribute in the lower ranks of a company that is continually reorganizing its human and technical resources to respond to unpredictable and changing opportunities of the customer (Dove & Wills, 1996). Zhang and Sharifi (2000) defined the agile workforce as "individuals with a broad insight and ability to cope with market volatility through conquering the beneficial aspect, such as dynamic conditions, occasional changes in customer preferences, and the structure of reports" (Muduli, 2016).

The literature review and studies on human resource agility illustrate the development of human resource agility models and methods. In general, research in this field can be divided into two groups: the first group is a research in which human resource is considered as one of the dimensions of agile production; and the second group is a study which focuses particularly on the agility of human resources (Amin & Mir, 1395). Most research basically considers the human resource agility as the ability to change the capacity and capability of human resources, and consequently human resource training to fully master knowledge and skills (Abbaspour et al., 2014). In this regard, Weick (1979) states that future human resource skills should be continually evaluated by assessing the dynamics of the environment. Prahalad & Hamel argue that investing in employee skills prior to the change is essential for human resource agility (Prahald and Hamel, 1990). For Kidd (1994), having skilled, informed, motivated, collaborative, and responsible-to-change individuals is deemed a necessary element to create agile organizations to respond to environmental changes. Plonka (1997) by emphasizing the importance of human resource agility as an essential factor in organizational agility, considers the use of new knowledge, accelerated learning and timely education as one of the most important factors affecting the agility of human resources, and considers the agile workforce as necessary an element to achieve a high level of quality and flexibility with lower costs and shorter product life cycles. In addition, he discusses potentially agility-based mechanisms for knowledge workforce, such as selecting staff, gaining new

knowledge, accelerating learning, and providing timely training (Plonka, 1997). Yousef et al. (1999) point out that in an organization with qualified employees, their collective knowledge can finally be relied upon, which is crystallized in productions (Zahedi et al., 2013). For Goldman et al., an agile competitive environment is where employee skills, knowledge and experience are the most important factors for creating a distinction between companies and organizations. Therefore, the upgrading of skills and continued training of human resources is an integral part of the processes of an agile organization, because this is a viable investment for future success (Goldman et al., 1995). Dow believes that agility cannot be developed without the use of skilled and knowledge workers; there is a widespread belief that employee agility can bring a broad range of benefits, such as improving quality, better customer service, the high learning speed, superficial and profound economy; however, the transformation of the traditional production approach to agile production is a great demand for employees at all levels of business (Sharhey & Karwowski, 2014). Muduli (2013) argues that human capital agility is an organized and dynamic talent that can quickly and accurately provide knowledge and skills at the right time. An agile worker is a flexible and learning force that can adapt quickly and easily to opportunities and conditions (Muduli, 2013). Human capital is agile, flexible and trainable, and demonstrates two important behaviors: firstly, it is able to demonstrate timely responsiveness and rapid adaptation to change, and secondly, it has the ability to use the change and transforming it into an opportunity in the interests of the organization (Alawi and Dezaraydeh, 2013).

In studies to investigate human resource agility subunits, the focus has been on agility behaviors such as flexibility and adaptability. Plonka (1997) argues that the Proactivity is the ability of individuals to find effective and better ways to do work and to be able to solve new and complex problems at work (Plonka, 1997). Pulakos (2002) and Dyer & Shafer (2003), in addition to confirming Plonka's view, considered the ability to predict the problems that may arise in the work as an index for proactivity (Dyer & Shafer, 2003). Griffin and Hesketh (2003), similar to Plonka (1997), suggested new methods or guidelines in the workplace as the sign of human resources proactivity (Griffin & Hesketh, 2003).

For Harvey et al. (1999), adaptability is the ability to adapt to new or different conditions arising from various technical demands and organizational changes that are made by substituting and changing behavior, attitudes, and mental and mental state against the changes, either internally (by employees) or externally (for example, organization or technology) (Harvey et al., 1999). Alorth and Hesketh (1999) state that agility cannot be achieved by the employees unless they show flexibility and accept changes. The adaptive and flexible behavior of employees comes from two components: cognitive and emotional. Cognitive components include learning, access to information, prediction and problem solving and emotional components including positive emotional response, satisfaction in accepting change, lack of resistance to change, and ensuring that there is ability to deal with change (Jafarnezhad and Shahayi, 2007); and, finally, Sherehiy et al. (2007) argue that adaptive behavior refers to those behaviors that express the ability to handle change and the ability to transfer learning from one task to another in the event of changes in occupational requirements and expectations (Sherehiy et al., 2007).

In determining compatibility indices, some researchers believe that using new tools in work and quickly learning new tasks are reflection of individuals' compatibility (Breu et al., 2002; Plonka, 1997; Youndt et al., 1996). Polakus (2002) and Dyer & Shafer (2003) argue that quick adaptation to project switch position, having good communication with others, and being critical is the compatibility indicator of human resources.

Also, a number of researchers concluded that the ability to work in difficult and stressful conditions, staying calm in the face of difficult working conditions, and the desire to make changes in work, are indicators of human resource flexibility (Griffin and Hasketh, 2003). Sherehiy (2008) in his study described the agility of human capital in three key areas: proactivity, adaptability, and Resilience (Abbaspour et al., 2014) .

Agile workforce characteristics: For the specific characteristics of the agile workforce, it was first assumed that the characteristics of those who lead to success in agile organizations are the same characteristics that lead to success in traditional organizations. however according to studies, it has been shown that the main differences in this field can be expressed in three levels: organizational, team and group work (Atos, 2007, quoted by Ismaili et al., 2013). At the organizational level, organizations are trying to find the right number and type of individuals at the right time and place. It can be argued that agile organizations need more professional staff with sufficient skills to adapt to permanent improvements and rapid developments inside and outside the organization. Although there have been a lot of discussions in organization's agility literature about the importance of teams and workgroups, the relationships of these groups are discussed at various levels and even between organizations, however, investigation on essential characteristics of these groups has been very scarce. In the field of personal characteristics, there is a richer literature (Kaiyai, 2010). A summary of the most important features expressed by the researchers, as presented in Table 1.

Table 1. Characteristics of agile workforce

researcher	Agility characteristics of human force
Nijssen and Paauwe (2013)	Scalability; Creating organizational knowledge; coordination and integration; having high compatibility; organizational infrastructure;
Sherehiy (2008)	Confrontation with unpredictable situations with uncertainty; creative problem solving; professional flexibility; learning tasks and procedures; interpersonal adaptability; managing the stress of work Action-oriented behavior: initiative, compilation;
Dyer & Shafer (2003)	Adaptive behavior: assuming multiple roles, quick re-arrangement, spontaneous and immediate cooperation; constructive behavior: learning, teaching Responsiveness to external change; benchmarking of the best practices to assess staff skills; the speed with which skills are developed; the speed of adaptation to new working environments; the speed of access to information; the speed of the change of the information system; the use of mobile technology of autonomy
Breuet et al. (2002)	In the work environment; virtual teams; access to mobile information; participatory technologies; knowledge sharing; empowerment of employees.
Gunasekaran (1999)	employees capable of using information technology; knowledge in teamwork and negotiation; knowledge about advanced manufacturing strategies and technologies; Empowered employees; Self-governing teams; multidisciplinary and multilingual human resources.
Pulanka (1997)	Attitude toward learning and self-development (ability to solve problems); Adaptation to change; new ideas and new technologies; the ability to create innovative ideas; to accept new responsibilities;

Agile workforce empowerments: Through research studies, various organizational practices have been introduced that can affect the human resource agility (Sherehiy & Karwowski, 2014; Chonko & Jones 2005; Sumukadas and Sawhney, 2004; Kathuria and Partovi, 1999 and ...). Some scholars have categorized these factors as empowers or human resource agility empowers, a summary of which is given in Table 2.

Table 2. organizational practices affecting the human resource agility

researcher	Description of empower
Muduli (2016)	Organizational learning and training; reward system; employee participation; work team; information system
Ripatti(2016)	Changing the attitudes and culture; increasing internal communication; sharing knowledge and collaboration; empowering support and work for organization; promoting new methods of work and training;
Bersin et al. (2014)	Balance between the existing and future needs by human resource planning; Investing in improving the performance of human resource groups; Continuous assessment of customer service improvements; Incorporation of human resource groups without power layers or low layers.
Alavi & Dazaraydeh(2013)	Organizational learning and organic structure (with three dimensions, decentralized decision making, low formalism and flat structure)
Sherehiy & Karwowski(2014)	Autonomy of employees
Bohdana & Waldemar(2014)	Structure of the strategy (people and knowledge, cooperation, organization and product); organization of work organization (job requirements, work complexity, work control, skill variation, labor force support); labor structure (adaptability, being active and flexibility)
Martin & Puig(2013)	Human capital practices; fair rewards; performance appraisal for development; enrichment of jobs
Zare Zardeini & yousefi(2012)	Self-awareness; self-control; self-motivation; empathy and management of relationships
Sherehiy et al. (2007)	Flexibility; responsiveness; the culture of change; speed; low integration and interoperability <u>Organizational authority</u> : decentralized control and knowledge; low level of differentiation in power (titles, levels, low positional dimensions); low attachment to authority and control; commitment and loyalty to the project or group; the ability to relate to tasks; change of authority with change of duties ; Wide control scope. <u>Organizational rules and procedures</u> : a small number of rules and procedures; Low level of formal regulation (in relation to job descriptions; work tables); Fluidity and clarity of the definition of roles; Informal organization.
Sherehiy et al. (2007)	<u>Coordination</u> : personal and informal coordination; assignment of duties and decision; network communication; goal-oriented. <u>Organizational structure</u> : flat, horizontal, matrix, network or virtual structure; teamwork; multitasking links; disappearance of boundaries between tasks and units. <u>Human resources management measures</u> : Empowering employees; employees' participation and engagement; occupational turnover; occupational enrichment; independent in decision making; accessing knowledge and information; teamwork; multi-tasking teams; multi-skills training. Human resources training and development; diverse and different development
Chonko & Jones (2005)	Culture; collaboration; information systems and competencies
Beatty(2005)	Agile environment is an environment where abilities are more valuable than jobs, cooperation between sectors is encouraged; tasks and processes do not require "ownership"; and where the data transform into organizational intelligence and can be the focus of decision-making.
Jackson & Johansson (2003)	Knowledge and creativity
Schäfer et al. (2001)	Human resources plans and practices: selection, deployment, training and organizational learning, performance management, promotion, reward and recognition of labor agility and the organization agility.

Sharifi et al. (2001)	Feeling the need for being agile by staff.
Meade & Sarkis (1999)	Knowledge; ability; theoretical and practical education; senior management support
Harvey et al. (1999)	Occupational enrichment; Job dependency; participation in group work; work environment; management support.

Since each research needs to know the literature review and investigate the views of previous researchers, this section reviews some of the most important empirical researches carried out in Iran and other countries in recent years about the human resources agility :

Cai et al. (2017), in their research titled "Improving employee agility through corporate social media: the role of the mediator of mental conditions," investigated the relationship between the use of corporate social media on employees' agile performance and its quality.

Using the Kahn framework, they confirmed the mediating effect of mental conditions. In a paper titled "search for facilitators and agile workforce mediators", Muduli (2016) explores the impact of organizational practices in the form of organizational learning and training, loss compensation, participation, teamwork, and information system on the flexible human resource in selected industries and top Indian factories. The findings showed that organizational practices significantly related to the human resource agility and could improve the human force agility and behavior; the mediating role of psychological empowerment, between organizational practices and human resource agility, has also been proven. Sheikholeslami Kandlulsi et al. (2016), in a research titled "evaluation of human resources agility indicators and dimensions," stated that agile workforce should have a set of flexible capabilities so that can overcome instabilities. He summarized five dimensions and various indicators of human resource agility capabilities: intelligence and awareness, multiple competencies, knowledge management, empowerment culture, information system. Retity (2016), in his research titled "moving to an agile workforce: a case study in three companies," conducted a research aiming to understand and describe the concept of labor agility in selected companies in Finland, and the discover the management practices, methods, and tools that companies have taken to activate and support agile workforce activities. The findings show that companies that aimed to make the organizations agile, faced two types of challenges: the ability to provoke excitement and interest in agility among employees; and the ability of agile work and failure management in the case of occurrence. To cope with these challenges, the companies adopted similar practices, change management tools and methods, as well as changing attitudes and culture, increasing internal communication, sharing knowledge and collaboration, empowering support and work organization, and promoting the new methods of work and training. Qin & Nembhard (2015), in a paper titled "agile workforce management operations," described a framework for describing the agility of labor in the field of operational management by investigating the literature. They showed that some operational management practices that relate to the agility of the workforce include the flexibility of the workforce and the development of dynamic human resources. Liu et al. (2015), in his research titled "conflict of interests and relationship conflict on labor force agility: moderating the role of social media," explores how to develop the agility of the workforce and identify the factors that affect it. The results showed that negative relational conflict and duty conflict have a positive effect on human resource agility. The relationship between work conflicts and human resource agility is also moderated by the use of social media. Thus, if employees make widespread use of mass media, the effect of conflict of duties on the agility of the workforce decreases.

Sherehiy and Karwowski (2014), in a research titled "The relationship between work organization and human resource agility in small manufacturing companies", examined the effect of agility strategy on employee organization and performance. The results showed that there is a relationship between management strategies focused on the development of agility, workforce characteristics, and human resource agility. Independence is one of the most important predictors of labor agility. The combination of job demands and job uncertainty has a significant impact on the agility of the workforce. Sohrabi et al. (2014), in a study titled "the relationship between agility and organizational intelligence," investigated the relationship between these two variables at Iran's Supreme Council of Informatics. The results showed that all components of organizational intelligence (except for the strategic vision) had a significant positive correlation with the human resource agility. Also, there is a positive and significant association between the individual components of the agile workforce (with the exception of individual adaptability) and organizational intelligence. Variables such as age, work experience, and organizational status had a significant positive correlation with labor agility, while no significant association was found between gender and education level. Zare Zardini and Yousefi (2012) also found that there is a relationship between emotional intelligence and employee agility in a study titled "the effect of emotional intelligence on the agility of employees in the food industry using hierarchical regression". Pourkarimi and Mazari (2017), in their research titled "self-developmental mediation role in the relationship between transformational leadership and agility of human capital", examined the relationship between transformational leadership and agility of human capital. The results of the research showed that transformational leadership directly affects self-development, and indirectly through self-development mediation, affects the agility of human capital; ultimately, transformational leadership doesn't directly affect the agility of human capital. Sarvi Ardkan (1395), in an article titled "prioritizing and identifying the factors affecting human agility using hierarchical analysis method at the Office of Cultural Heritage of Handicrafts", evaluated the concept of agility in 6 dimensions: organizational opportunity, competency, knowledge management, information system, occupational engineering and payment flexibility. Data analysis showed that the factor of supporting the information technology infrastructure has the most effect on the agility of human resources in the mentioned office. Other factors such as culture, management and knowledge sharing, mutual cooperation, the use of new management technologies, the reduction of levels of organizational titles and continuous education and training are respectively the most important factors affecting the agility of employees. Abrisham Kar and Abdollahi (2016), in a study titled "the relationship between agility of labor and innovation of a new product (case study: small, medium and large companies in the high technology industry)", explores the relationship between human resource agility and innovate new products. They showed that there is a positive relationship between the human resources agility and the innovation of the new product. Agha-Hosein Ashkavandi et al. (1395), in their paper titled "the impact of human resource management on crisis management: a case study: Isfahan blood transfusion and three other accident-prone provinces", after referring to scientific resources and identifying research variables through the questionnaire designing, and its implementation on the managers and experts of the blood transfusion organization in Isfahan and the three most accident-prone provinces of the country showed that: human resource agility has an impact on crisis management. Amin and Mir (2016), in their research titled "investigating the impact of demographic variables on human resource agility", through the administration of a questionnaire on 171 managers and industry deputies, showed that age, years, and organizational title and position are among demographic variables affecting the agility of human resources; and only the age variable influences the flexibility of the

workforce, and none of the demographic variables affects the human resource adaptability. Yavarian et al. (2016), in their research on "identifying and prioritizing the factors influencing human resource agility based on the Bogdana and Waldemar model", after reviewing the subject literature, investigated the factors affecting human resource agility, including work organization structure, workforce structure, and strategy structure. The results indicate that due consideration to such factors as cooperation can provide the necessary premises for the agility of the staff. Factors like people, knowledge, organization, and product are also important. Attention to management and environmental factors is more important than other factors. Taji and Bordbar (1394), in their research titled "the study of the relationship between transformational leadership and human agility", showed that transformational leadership and agility of human capital are positively correlated. This research was conducted on 115 employees of Yazd University (other than faculty members) through the distribution of questionnaires and structural equation analysis method. Dehghan Dehnavi (2014), in his senior thesis titled "investigating the factors affecting the agility of the manpower involved in the power distribution company of Yazd province" with the help of the fuzzy questionnaire and structural equation modeling, showed that in order to cope with the changes, agility is based on the knowledge of manpower, human resource skills, the existence of a cooperative culture and participation in the organization, and access to information by individuals.

3. Methodology

The approach used in this research is the grounded theory. A qualitative approach in the grounded theory allows researchers to review their data by converting them into concepts, categories, and finally paradigm models; the possibility that allows the problem to be determined, not in the theoretical frameworks, but in accordance with the theory that draws on local experience (Corbin and Strauss, 2008). Since the exploration of the human resource agility process in the social security organization is desirable in this research, the foundation data theory strategy is compatible with this desirability. In the research, we used the Strauss and Corbin's systematic strategy of grounded theory. Regarding the type of method, due to the inability of the researcher to interfere with the data, the research was descriptive and it was conducted as a survey. Because of the use of previous research, the researchers are seeking to improve the methods of execution; the research type was applicable and developmental. The instrument for collecting data in this study is a deep and semi-structured interview. Concepts and interview questions were extracted from theoretical literature and upstream documents. First, the framework of the interview, including interviewing, explaining the reason for the interview, and a general definition of agility of human resources were presented, then the research questions were asked based on the design of the interviewee. Since the quality of the data affects the size of the sample, in the present study, the snowball sampling method has been used and either purposeful or judgmental sampling has been used to achieve theoretical saturation. Finally, using the resources used and basically based on the theory, the research model was designed.

The statistical population of the research consists of the academic and executive experts of human resources management in Tehran, as well as managers and experts with more than 10 years of service in the headquarters of the Social Security Organization. Although there is no specific rule for sample size in the grounded approach, for homogeneous groups, 6 to 8 units and for heterogeneous groups, 12 to 20 units are suggested (Hooman, 2009). In this research, 4 faculty members in the field of public administration and

human resources, 6 general managers and staff deputies and 8 department heads and experts over 10 years of experience, totally 18 people were interviewed, which after the ninth interview, data repetition was observed. Repetition of data indicated theoretical saturation. In qualitative research, information and data collection is stopped when the information about all categories is saturated, and this occurs when the theory or topic is completed and new information related to the subject under study is not obtained. Therefore, in qualitative research, the sample size is synonymous with the completion of data or the saturation of data.

Corbin and Strauss (2008) have proposed acceptance criteria for evaluating researches which are based on grounded theory, rather than the validity and reliability criteria. Acceptability is the extent to which the findings of the research are reliable and valid in reflecting the experiences of participants, researcher and reader on the phenomenon studied. Ten indices have been introduced for acceptability criteria, five of which have been used in this research to improve scientific accuracy, validity, and reliability. The audit strategies used were the researcher's sensitivity, methodology coherence, sample matching, repetition of a finding, and the use of informed feedback. In order to validate the categories and their relations, attempts were made to re-evaluate the theory with repeated returns to the research data and make necessary edits so that the theory, in addition to the conceptual density, has also a sufficient conceptual distinction.

4. Finding

In this study, the method of deep and semi-structured interviewing, studying books and related articles, and notes for data collection were used. The data quality analysis was performed in three stages of open source, axial and selective coding based on the stages of the theory of data. Finally, the final model was obtained from the above steps.

A) Open Coding: The analytical process is the naming of concepts and classification, and the discovery of their features and dimensions in the data, through a continuous comparison (flip-flop technique), in which the researcher considers the concepts from different angles from inside and outside or upside-down to examine and analyze different points of view about the importance and place of concepts (Corbin and Strauss, 2008). At this stage, the grounded theorist forms the initial categories of information about the phenomenon under study by segmentation. The researcher bases the categories on all collected data, such as interviews, observations, and events or notes (Krsul, 2005).

B) Axial coding: Axial coding is a series of procedures that connect the data through the link between categories and subcategories. In this way, central coding refers to the process of forming the categories (primary and secondary). This work is done using a paradigm (prototype model) to illustrate the relationships between the causal conditions, the axial phenomenon, the underlying conditions, the mediator conditions, the strategies, and outcomes.

In the meantime, "causal conditions" are the categories that affect the main category and the pivotal phenomenon. "context conditions" are special conditions that affect the strategy. "core categories": The main phenomena of the study core process; "Intervening conditions": General environmental conditions that affect the strategy. "Strategies": Specific actions or interactions resulting from the main phenomenon. "Consequences": the results emerging from the strategies (Corbin & Strauss, 2008).

C) Selective coding (the theory stage): At this stage, the grounded theorist chooses the core category (which other categories turn around its axis and form a whole) is systematically chosen and linked to other

categories to write the theory, which provides an abstract statement for the research studied (Danayi Fard and Emami, 2007).

By identifying and extracting the concepts and main categories of the research through open coding, and the definition of concepts and categories through axial coding, the main classes were developed. The statistics of the concepts and categories, the obtained primary and secondary categories were extracted and summarized based on grounded theory in tables 3 and 4.

Table 3. Concepts and categories extracted according to research perspectives

Item	perspective	Number of categories	Number of concepts
1	Theoretical foundations	18	116
2	Upstream documents	12	33
3	scholars	18	104
4	Prior research	21	204
	total	69	457

Table 4. Frequency of components and class distribution

Item	Class	Class Code	Secondary classes	Number of components
1	Causal conditions	A	1	4
2	Core phenomenon	B	1	3
3	strategy	C	1	1
4	Intervening factors	D	1	4
5	Context factors	E	1	5
6	consequence	F	2	4
	total		7	21

According to the extracted classes based on grounded theory, the final model of the research was described as Fig. 1.

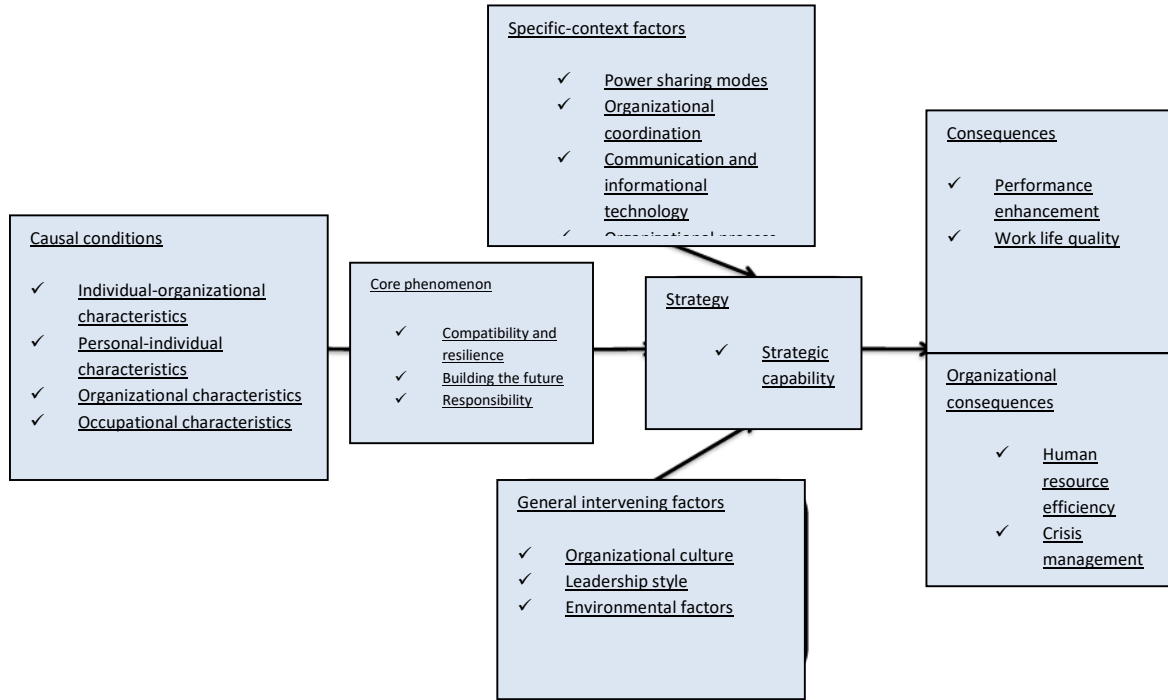


Fig. 1: Research model

5. Discussion

Recent studies have shown that human resources as the main factor of organizational agility can prepare the organization for the use of new technologies and confront the problems caused by environmental changes (Alavi & Dezaraydeh, 2013). Without taking the human resource agility into consideration, it is not possible to achieve the production agility, technology, strategy, and, in general, organizational success and excellence. The present study achieved the human resource agility model using grounded theory. Considering the research question of what is the agility model of human resources and what are the components of the model, based on theoretical foundations and researches that were in line with the human resources agility, as well as the data obtained from the interviews; components, primary and secondary categories classes were explained and the final model was obtained in this regard in the social security organization.

Section I: Based on research data, it includes categories of individual-organizational characteristics, individual-personal characteristics, organizational characteristics, and occupational characteristics. Because these factors are the basis for human resource agility, they have been named as causal conditions in grounded theory. These factors have been identified as the starting point of human resource agility process. The individual's basic organizational abilities, as well as personal, emotional and perceptual characteristics, affect the ability and capacity of employees for agile performance. The initial characteristics of organization, structure, equipment, and infrastructure, and the nature and conditions of the job are among other factors affecting the creation of a suitable context for the human resource agility process. For example, the extent of flexibility of organizational structure and issues, the amount and characteristics of the organization's regulations, the nature of the job, the quality of knowledge management in the organization affect the extent and feasibility of the staff agility.

Section II: After the initial conditions are provided through the causal factors, the concept of human resource agility is shaped by the effect of the causal conditions. This concept is created through the factors

of reconciliation, persistence, future development and accountability of the employees. Due to its impact on the different parts of the data and its central role, it has been named as a core phenomenon.

Section III: This includes factors such as organizational culture, leadership style, self-development, and environmental factors. These factors, which have an indirect impact on the concept of human resource agility, have been identified and categorized as general intervening conditions. With the creation and promotion of a culture of change and empowerment, the organization creates belief for having the ability to change and sense of competence among employees and directs employees towards agility by supporting the spirit of innovation. Organizational leaders also provide grounds for self-evolving behaviors of individuals through leadership style and supportive behaviors and employee participation in decision-making. In the meantime, socio-political, cultural, and competitive and technological factors affect the speed and quality of human resource agility.

Section IV: Other factors influencing the formation of human resource agility include power-sharing, human resource management measures, organizational coordination, communication and information technology, and organizational processes; with the difference that this set of factors directly affects the human resource agility phenomenon and is named by specific contextual factors. Managers, in particular, human resource managers, through enriching and developing jobs and creating self-governing and virtual groups, and quality circles have increased the power of the organization; they have led to the development of knowledge and skills through training and development of various skills of employees. occupational engineering, a fair reimbursement system, performance management, promotion of quality and recruitment and recruitment requirements, strategic management of human assets, and the establishment of individual, group and managerial discipline are other actions of human resource managers that increase the motivation and agile performance of employees. Increasing cooperation and coordination between individuals and different parts of the organization has facilitated the movement of individuals between projects and has a significant impact on the agility of individuals' performance. In the context of communication, the quality of communication increases with the free flow of information in the organization and the ease of negotiation, access to information and knowledge, network communication within the organization, and communication with customers outside the organization. The integration of organizational processes and workflow is also effective on the speed and quality of staff decisions and actions.

Section V: Agility of human resources as a core phenomenon, by influencing the specific contextual factors and the general intervening factors, in the form of an environment called the strategy, creates actions and reactions and interactions. Directives are purposeful actions that present the desired phenomenon and eventually, lead to consequences. In other words, the extent of human resources agility depends heavily on the intensity of the contextual and intervening factors as well as the core phenomenon.

Section VI: As mentioned before, the consequences are generated due to the actions and interactions of core phenomenon and strategy. In this research, the consequences of human resource agility were divided into two categories of individual and organizational. The agility of human resources at the individual level increases the performance and synergy of employees, increases job satisfaction and improves the employees' quality of work life; and at the organizational level, by increasing the effectiveness of manpower, the quality of products and services is upgraded, new ideas and thoughts arise in the organization, and increased competitive edge due to higher profitability and lower time of response to market; and, at the end, the crisis is managed more easily.

Recommendations:

This research is an appropriate starting point for further exploration of the human resources agility. According to research findings, the executive and research recommendations are as follows:

- Given the dimensions obtained for human resources agility and the related categories, it is recommended that these dimensions are specially taken into consideration in planning and implementation of human resource agility programs and activities in the Social Security Organization;

- Among the factors influencing human resource agility; adaptability and resilience (core factor), organizational coordination, human resources management practices, and power-sharing practices (specific contextual factors), individual-organizational, and individual-personal characteristics (causal factors) have been most emphasized. Accordingly, it is recommended that senior managers of the social security organization further integrate these variables into their planning and policy making.

- One of the inherent limitations of qualitative research is its tools, i.e. interviewing, and its variability at different times. Since the present study is one of the few numbers of researches conducted to provide a comprehensive model on agility of human resources and carried out only in the social security organization, due to the difficulties and limitations existing in this organization, the generalization of its results to other organizations should be investigated; therefore, it is recommended to investigate the findings in various organizations and especially other governmental organizations and services in order to assess the reliability and increase the structural validity of the findings of this study.

- It is recommended that quantitative researches be conducted with the aim of testing this model and generalizing the research findings to the statistical population.

References

- Abbaspour, AS Mirkamali, M. Hesam Amiri, R. Moradi, K (2014): Explaining the Role of Human Capital Agility in Strategic Agility Development (Case Study of Ansar Bank), *Quarterly Journal of Monetary and Banking Management*, 2 (4), pp. 1-24.
- Abriaham Kar, M. Abdollahi (2016): The Relationship between Work Force Agility and New Product Innovation (Case Study: Small and Medium Enterprises in the High-Tech Industry), *Business administration*, 2016, Volume 8, Issue 2, pp. 245-258.
- Alavi, S. & Dzuraidah, A.W. (2013). A Review on Workforce Agility. *Research Journal of Applied Sciences, Engineering and Technology*. 5(16), 4195-4199.
- Amin, F Mir, F (2016): The Study of the Effects of Demographic Variables on Human Resource Agility, *Human Resource Management at Imam Hossein University*, 2016, 8, No. 2, 24, pp. 233-255.
- Beatty, R. (2005), *Workforce Agility: The New Frontier for Competitive Advantage*, New York: Price Waterhouse Coopers LLP. (White Paper)
- Breu, K., Hemingway, C.J., Strathern, M., Bridger, D.,(2002). Workforce agility: the new employee strategy for the knowledge economy. *Journal of Information Technology* 17(1), 21-31.
- Chonko, B. Lawrence and Eli Jones (2005), "The Need for Speed: Agility Selling", *Journal of Personal Selling and Sales Management*, Vol.25, pp.371 – 382.
- Corbin, J., & Strauss, A. (2008). *Basic of Qualitative Research (3ed)*, Basic of qualitative research, Techniques and procedures for developing grounded theory. Thousand oaks, USA: Sage.
- Creswell, JW. (2005). *Educational Research: Planning, conduction and evaluating quantitative and qualitative research*. Upper Saddle River, NJ: Pearson.
- Danayifard, H. Emami M. (2007): *Qualitative Research Strategies: A Reflection on the Grounded Theory*, *Management Thought*, 2007, First Year, No. 2, p. 69-97.
- Dove, R. & Wills, D. (1996). Transforming faculty into an agile workforce. in L. Richlin (Ed.), *To Improve the Academy*, Vol. 15, pp. 195-207.
- Dyer, L., and Shafer, R., (2003), "Dynamic organizations: achieving market-place and organizational agility with people", In: Peterson, R.S., Mannix, E.A. (Eds.), *Leading and Managing People in the Dynamic Organization*. Laurence Erlbaum Associates, Mahwah, NJ., pp. 1 -39.
- Forsythe, C., (1997), Human factors in agile manufacturing: a brief overview with emphasis on communications and information infrastructure, *Human Factors and Ergonomics in Manufacturing*, 7, 3–10.
- Goldman, S.L.; Nagel, R.N.; and Preiss, K., (1995), *Agile Competitors and Virtual Organizations: strategies for Enriching the Customer*, Van Nostrand Reinhold, New York, , pp. 32 -39.
- Griffin, B., Hesketh, B. (2003). Adaptable behaviours for successful work and career adjustment. *Aust. J. Psychol*, 55 (2), 65-73.
- Gunasekaran,A. (1999), Agile manufacturing: A Framework for Research and Development, *International journal of Production Economics*, 62, pp.87-105.
- Harvey, C., Koubek, R., & Chin, L. (1999). *Toward a model of workforce agility*. *International Journal of Agile Manufacturing*.
- Hooman, H (2009). *A Practical Guide to Qualitative Research*. Tehran: SAMT Publication.

- Hopp, W.J., and Van Oyen, M.P., (2004), Agile workforce evaluation: a framework for cross-training and coordination, *IIE Transactions* 36, 919 – 940.
- Hormozi, A.M, Agile Manufacturing (2001). The next logical step, benchmarking an international journal, 8(2).
- Ismaili, M. Rabieh, M. Heidari, A. (2013): Identification and Prioritization of Factors Affecting Human Resources Agility in Iran's Automotive Industry, *Public Administration Perspective*, 2013, No. 15, pp. 95-117.
- Jackson, M., and Johansson, C., (2003), An agility analysis from a production system perspective, *Integrated Manufacturing Systems*, 14, 48 2 -488.
- Jafarnejad, A. Shahi, B (2007): *Introduction to Organizational Agility and Agile Production*, Tehran: Mehraban Book Publishing Institute.
- Kathuria, R, Partovi, F, (1999), work force management practice for manufacturing flexibility, *Journal of operations management*, 18.
- Khodami, S. Khodadad Hosseini, h. Moshbaki, A. Azar, A. (2012): Designing a Customer Agility Model with Dynamic Organizational Capabilities Approach: Investigating the Role of IT Competency, Entrepreneurial Awareness and Market Orientation, *Journal of Journalism and New Marketing Research*, 2012, No. 1, 2, pp. 1-24.
- Khosravi, A (2011): PhD dissertation, Human Resources Management Architecture with Human Resources Agility, School of Management and Accounting, Allameh Tabatabaee University.
- Khosravi, A. Abtahi, h Ahmadi, R Salimi, H. (2012): Identification of Delphi Manpower Agility Empowerment Factors in Electronics Industries, *Improvement of Management*, 2012, 6 (4): 153-181.
- Kidd, P.T. (1994), *Agile Manufacturing: Forging New Frontiers*, Addison-Wesley, and Reading, MA.
- Kiyayi, M. (2010): Organizational Agility and Agile Workers, *Public Administration Quarterly*, First Year, No. 1, pp. 93-117.
- Longman dictionary, (2006), Laurence Delacroix.
- Martin, I. B., Roca-Puig (2013), "Promoting Employee Flexibility through HR Practices", *Human Resource Management*, Vol. 52, pp.645–674.
- Meade, L., & Sarkis, J. (1999). Analysing organizational project alternatives for agile manufacturing processes: An analytical network approach. *IJOPR*, 37 (2), 241-261.
- Muduli, A. (2013). Workforce Agility: A Review of Literature. *IUP Journal of Management Research*, 12(3), 55-65.
- Muduli, A. (2016) "Exploring the facilitators and mediators of workforce agility: an empirical study", *Management Research Review*, Vol. 39 Issue: 12, pp.1567 1586.
- Nagel, R.N., Dove, R., (1991): *21 st Century Manufacturing Enterprise Strategy: An Industry Led View*. Iacocca Institute, Lehigh University, Bethlehem, PA.
- Najaty, M. Hassanawi, R Chainsaw Sufi, h Mulaili, M. (2013): Exploring the Paradigm of Agility for a Specific Framework of Agile Manpower and Agile Organization, *Improving management*, seventh year, No. 2, vol. 20, pp. 77-98.
- Plonka, F.S., (1997), Developing a lean and agile work force. *Human Factors and Ergonomics in Manufacturing*, 7, 11 – 20.
- Prahalad, C.K., Hamel, G., (1990): The core competence of the corporation. *Harvard Business Review* 68(3), 79-91.
- Qin, Nembhard, (2010). Workforce Agility for Stochastically Diffused Conditions-A Real Options Perspective, *International Journal of Production Economics*,125, pp.324-334.
- Qin, Nembhard, (2015). Workforce Agility for operations management, *Surveys in Operations Research and Management Science*, 20 (2), 55–69.
- Ripatti, J. (2016). Towards Agile Workforce – Case Study Research in Three Companies, *Management and International Business*, [online] Available: <https://aaltodoc.aalto.fi/handle/123456789/24753>
- Sawhney, R. and Piper, C.J. (1999) Improving plant performance through labor flexibility: management actions that work. *Proceedings of the Decision Sciences Institute*, 1063– 1065.
- Sharifi, H., Colquhoun, G., Barclay, I. & Dann, Z. (2001). Agile Manufacturing: A management and Operational Framework. *Proceedings of the Institution of Mechanical Engineers Part B-Journal of Engineering Manufacture*, 215(6), 857- 869.
- Sherehiy, B., Karwowski, K. (2014). The relationship between work organization and workforce agility in small manufacturing enterprises. *International Journal of Industrial Ergonomics*. *International Journal of Industrial Ergonomics*, 44 (3), 466-473.
- Sherehiy, B., Karwowsky, W., & Layer, J.K. (2007), A review of enterprise agility Concepts: frameworks, and attributes, *International journal of Industrial Ergonomics*, 37,4, pp.445-460.
- Sumukadas, N., and Sawhney, R., (2004), "Workforce agility through employee involvement.", *IIE Transaction*'s, 36, 1011 – 1021.
- Youndt, M.A., Snell, S.A., Dean, J. W., & Lepak, D. P. (1996). Human resource management, manufacturing strategy, and firm performance. *Academy of Management Review*, 39 (4), 835-866.
- Zahedi, Sh. Khosravi, A. Yar Ahmadi, M. Ahmadi, R (2013): Investigating Dimensions and Indicators of Human Resource Agility Capabilities, *Journal of Organizational Behavior Studies*, 2013, No. 4, pp. 1-24.
- Zare Zardeini, H. & yousefi, A. (2012). The Role of Emotional Intelligence on Workforce Agility in the Workplace. *International Journal of Psychological Studies*, 4(3), 48-61.