

# DEVELOPMENT OF A HUMAN CAPITAL MODEL FOR CUSTOMS OFFICES OF WESTERN IRAN

## DESENVOLVIMENTO DE UM MODELO DE CAPITAL HUMANO PARA AS ALFÂNDEGAS DO OESTE DO IRÃ

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**Abstract:** The main objective of this study was to develop a model of human capital management (HCM) for customs offices of western Iran. This was an applied study based on the exploratory sequential mixed methods design. The qualitative statistical sample included 15 HCM experts as well as managers, deputies and experienced experts of customs offices in western Iran who were selected by snowball sampling method. The quantitative statistical sample also included all these individuals who were selected by complete enumeration (N=102). The qualitative and quantitative data were collected by semi-structured interviews and an author-made questionnaire, respectively. Qualitative data were analyzed by grounded theory (GT) and quantitative data were analyzed in LISREL. The results showed that an optimal HCM model for customs offices in western Iran consisted of 3 independent variables, i.e. organizational factors, individual factors, and external factors, and 2 mediating variables, i.e. strategic agility and excellence.

**Keywords:** Customs offices of Western Iran; Human capital management; mixed methods study; Model.

**Resumo:** O objetivo principal deste estudo foi desenvolver um modelo de gestão do capital humano (HCM) para as alfândegas do oeste do Irã. Este foi um estudo aplicado baseado no delineamento exploratório de métodos mistos sequenciais. A amostra estatística qualitativa incluiu 15 especialistas em HCM, bem como gerentes, deputados e especialistas experientes de estâncias aduaneiras no oeste do Irã, que foram selecionados pelo método de amostragem em bola de neve. A amostra estatística quantitativa também incluiu todos esses indivíduos que foram selecionados por enumeração completa (N = 102). Os dados qualitativos e quantitativos foram coletados por entrevistas semiestruturadas e um questionário do autor, respectivamente. Os dados qualitativos foram analisados pela teoria fundamentada (TFD) e os dados quantitativos foram analisados no LISREL. Os resultados mostraram que um modelo HCM ideal para estâncias aduaneiras no oeste do Irã consistia em 3 variáveis independentes, ou seja, fatores organizacionais, fatores individuais e fatores externos, e 2 variáveis mediadoras, ou seja, agilidade estratégica e excelência.

**Palavras-chave:** Gerenciamento de capital humano; Estâncias aduaneiras do Irã Ocidental; Keywords: estudo de métodos mistos; Modelo.

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## Introduction

Employees are considered the heart of any organization, and no organization can survive without its employees. These are the individuals who establish an organization and direct it to success and productivity. Employees spend most of their time in workplaces and offices pursuing organizational objectives and aspirations. If employees are constantly motivated, they will have a sense of belonging to and dependence on the organization and do their best to realize organizational goals. Every employee in any job position can acquire a set of skills through experience, training, and observation. Therefore, employees can increase their productivity and contribute to organizational success by broadening their knowledge. Nowadays, value-added outweighs that of other resources. That is why it is generally believed that many of our today's problems are not related to equipment and facilities, but they have roots in human resources (Saadat, 2011). If we admit that human capital is the largest and most valuable asset of any organization and country, it can be then stated that more valuable factors and resources can underlie further organizational growth and progress. Given the importance of human capital in administrative transformation and its major role in the change process, human capital can guide an organization to either growth, productivity, and excellence or collapse and corruption. The logical process of behavioral changes in employees can serve as a prelude to administrative transformation in an organization. This means that the attitudes of humans gradually change as they acquire the necessary knowledge and information, and then they act based on their new attitudes towards humans, work, society, and other components (Kalhor, 2012). Organizations that apply better practices of human capital management are considered to be successful. Such organizations need to constantly rejuvenate and improve themselves to establish long-term growing life for themselves and their members (Hagen *et al.*, 2014). Additionally, today's organizations need to regard human resources and their capabilities as an essential strategy to be able to survive in the current highly competitive and knowledge-based competitive environment (Salavou *et al.*, 2015). Accordingly, there is an increasing need for specialized and innovative human capital in organizations to survive, grow, and compete with other organizations. Such a mission can be accomplished only by amazingly creative individuals. Clearly, human capital plays a major role in organizational innovation, effective and efficient completion of activities, and value-added creation (Tabarsa *et al.*, 2012).

## Literature review

Human capital is considered to be the largest asset of organizations at the beginning of the 21<sup>st</sup> century. Any organization needs strategies and plans to achieve progress and development. As the main organizational source, human capital plays a major role in these strategies and plans. The main objective of human capital management is to create strategic capabilities by guaranteeing the recruitment of skilled, committed, and motivated employees (Abili *et al.*, 2015). HCM practices are considered the pillar of progress and development in any organization. Such practices are so important that they can substantially affect other organizational resources (Iwamoto *et al.*, 2015). Many recent studies show that HCM practices can improve organizational performance by influencing organizational climate. Strong and internally cohesive HCM practices can affect and enhance all organizational levels. Given the growing significance of HCM for the competitive advantages of organizations in today's varying and knowledge-based environment, some researchers have focused on investigating the factors affecting the selection of HCM practices and their effects on organizational outcomes such as productivity, efficiency, and financial performance (Chang *et al.*, 2014). Although previous studies have focused on the effects of HCM practices on various organizational outcomes, a few studies have dealt with the factors affecting capital management. HCM can influence and modify the attitudes, capacities, capabilities, and behaviors of employees to achieve organizational goals and plays a major role in providing the necessary conditions for guiding employees towards the development of innovative activities (Kozioł-Nadolna *et al.*, 2020). HCM practices, including recruitment, training, performance appraisal, and payment, can be employed by organizations as a strategy for motivating employee commitment and participation in creative thinking and innovation. Therefore, HCM strategic practices can greatly influence both individual and orga-

nizational performance (McGuirk *et al.*, 2015). In fact, the efficiency and productivity of any organization depend on the behavior and performance of its human resources, and employee performance is one of the indicators for comparing the organizations (Chang *et al.*, 2014). Human resources are the main organizational tool for shaping and influencing the skills, attitudes, and behaviors of individuals in performing their job tasks and thus achieving goals. Human resources of any organization can modify and influence the attitudes, capacities, and behaviors of employees to achieve organizational goals and play a vital role in providing the necessary conditions for guiding employees towards the development of innovative activities (Jahanian and Hadadi, 2015). Dramatic changes in organizational environments and the intensified competition in today's world have made organizations seek to attract and, more importantly, retain and develop individuals to carry out their current and future processes (Joseph *et al.*, 2016). It can be certainly stated that human capital has the greatest effect on organizational growth and survival. The significance of human capital has recently expanded in all areas in a way that it is now considered an influential factor in the economic growth and development of societies (Dalvand, 2016). It is noteworthy that manpower is regarded as the most important and valuable organizational capital and source and the only organizational intelligent component that plays a major role in coordinating other organizational factors. To put it simply, organizations cannot achieve their goals without recruiting efficient individuals. As a result, human capital can lead to either growth, dynamism, and development or failure and destruction of an organization (Seyyed Javadin and Almasi, 2003).

The study scope was customs offices of western Iran, including the general administration of customs in Kermanshah, Kurdistan, Ilam, Hamedan, and Lorestan provinces. As the economic frontier, the Islamic Republic of Iran's Customs Administration plays a pivotal role in coordinating the input and output boundaries and is responsible for enforcing the laws on customs affairs and other laws and regulations related to the export, import, and transit of goods, receiving import and customs duties and related taxes, monitoring the technical requirements, and facilitating and ensuring healthy trade and passenger traffic. Considering the pivotal role of customs in economic growth in the field of exports and imports as well as its function as a gateway to international markets, the activities of customs and its personnel are very important. Employees working in customs, as an international trade and commerce watchdog, are committed to being equipped with specialized science and knowledge in their profession. On the other hand, customs is one of the oldest organizations in Iran with an old HCM structure. A large number of its experienced personnel, like many other Iranian organizations, will retire over the next few years. Moreover, it needs to recruit specialized personnel familiar with new technologies, something which can be achieved through HCM. That is why customs officials have recently focused on the recruitment of efficient personnel to advance organizational goals. Based on what mentioned above, the main research question is as follows: What are the components of the optimal HCM model for customs offices in western Iran?

Dalvand (2016) conducted a study titled "Proposal of a transformational HCM model for the staff of higher education institutions in Ilam Province" and concluded that "innovative human resources" was one of the major components of a transformational HCM model. This means that innovative human resources affect transformational human capital. In a study titled "The role of human capital of higher education staff in their tendency to organizational innovation", Abili *et al.* (2015) showed that human capital influenced organizational innovation, and knowledge and expertise were the most important components of human capital leading to organizational innovation. Jahanian and Hadadi (2015) conducted a study titled "An investigation into the relationship of intellectual capital with innovation and creativity of human resources" and concluded that there was a direct positive relationship between intellectual capital and human resources innovation and creativity in organizations. In other words, intellectual capital exhibited a significant positive relationship with human capital, customer capital, structural capital, and employee creativity. In a study titled "Human resources and innovative operations in organizations", Anahid (2015) showed that human resource performance in terms of recruitment, training, participation, performance appraisal, and reward has positive effects on organizational innovation and influences the attitudes and behaviors of employees. Babashahi

*et al.* (2013) carried out a study titled “Effects of innovative HCM strategies on organizational entrepreneurship: an explanation for innovative climate” and concluded that the encouragement of innovative organizational climate paved the way for organizational entrepreneurship. They also showed that innovative organizational climate had a significant positive relationship with innovative training, innovative performance appraisal, and compensation for innovative services.

Joseph *et al.* (2016) stated that innovative human capital had significant effects on organizational intelligence and innovative human capital also affected information processing. McGuirk *et al.* (2015) conducted a study titled “the effects of innovative human capital on the desire of small- and medium-sized enterprises for innovation” and concluded that innovative human capital had significant effects on the desire for innovation. Choi *et al.* (2009) studied the productivity effects of innovative work practices by using measures such as incentive payments, recruitment, teamwork, specialization, flexible work division, job security, communications, and training. The results showed that these innovative work practices provided higher productivity levels compared to traditional approaches, including detailed job descriptions, strict work rules, and hourly payments.

### Research objectives

The main objective of this study is to develop a human capital model for customs offices in western Iran.

### Special objectives

- 1- Identification of the HCM components in customers of western Iran.
- 2- Measurement of interaction between different components of HCM in customers of western Iran.
- 3- Ranking of the HCM components in customers of western Iran.

### Research questions

The main research question is as follows: What is the optimal HCM model for customers of western Iran?

The following are the secondary research questions:

- 1- What are the HCM components in customers of western Iran?
- 2- How do the HCM components in customers of western Iran affect each other?
- 3- How are the HCM components ranked in customers of western Iran?

### Methodology

This applied study used a mix of qualitative and quantitative methods for data collection purposes. GT and structural equation modeling (SEM) were employed as qualitative and quantitative approaches, respectively.

**Table 1.** Research general information

Research layers	Description
Research orientation	Basic-descriptive-applied
Research method	Mixed methods
Research philosophy	Interpretive
Research strategy	Grounded theory (GT)
Research objective	Exploratory-confirmatory
Time horizon	Single time cross-section
Data collection method	Identification of components through coding and analysis of theoretical foundations

**Qualitative research:** In the first stage of the preliminary study, the theoretical foundations related to human resources, human capital, and human resource management were reviewed. To this end, both domestic and foreign references were used. Because of the lack of comprehensive and domestic models in the field of human resources, it is necessary to investigate human resources from the perspective of experts and specialists to effectively identify and develop a model of HCM for customs offices of western Iran.

**Quantitative research:** In this stage, the items of the tool for measuring the variables of the proposed model were developed based on theoretical foundations and the qualitative data obtained from experts and specialists. Then the questionnaire was distributed among the experts to confirm its validity. In addition, the questionnaire reliability was assessed in a pilot study by distributing it among a small sample of the statistical population. To investigate the proposed model, the research questionnaire developed in the third stage was distributed among the participants.

**Qualitative methodology:** Since the research objective was to propose an HCM model, there was a need for detailed qualitative data. Therefore, the first step was conducted based on a qualitative approach. In a qualitative approach, individuals' perceptions, meanings, and knowledge are considered as the primary source of data. Since the present study aimed to identify the participants' perceptions and knowledge of HCM, a qualitative approach was employed. In this research approach, an interview is an acceptable technique for discovering, understanding, and recognizing individuals.

**Qualitative population, sample, and sampling:** The qualitative statistical population consisted of HCM scholars as well as experienced managers, deputies, and experts of customs offices in western Iran. The participants were selected by purposive sampling and snowball sampling. Purposive sampling was done by focusing on those who were more aware of the research subject. To perform snowball sampling, the interviewees were asked to introduce other eminent HCM experts they knew.

**Table 2.** Demographics of experts

Number	1	2	3	4	5	6	7
Specialized field	Human resources management	Financial management	Human resources management	Business management	Human resources management	Educational management	Human resources management
Academic degree	PhD	PhD	MA	PhD	PhD	PhD	PhD
Managerial background (years)	6	5	11	8	14	9	9
8	9	10	11	12	13	14	15
Human resources management	Public administration	Policymaking	Strategic management	Management of organizational behavior	Change management	Human resources management	Business management
PhD	MA	PhD	PhD	MA	PhD	PhD	MA
5 years	15 years	6 years	2 years	5 years	18 years	14 years	11 years

**Qualitative data collection:** The qualitative data were collected through interviews.

**Validity:** Triangulation of data sources and data review by faculty members and colleagues were employed to ensure the research validity.

**Reliability:** The reliability of interviews was assessed by test-retest reliability and inter-rater agreement.

**Qualitative data analysis:** After collecting information using semi-structured interviews, GT was employed for analyzing qualitative data. GT is derived from the data systematically collected and analyzed during the research process. Based on this theory, data collection and analysis and the theories ultimately deduced from the data are closely related to each other. Experts have proposed four main designs for GT theorization, namely systematic, emerging, constructivist, and situational-analytical (Bazargan, 2008). The systematic design was employed in this study to achieve the research objectives and answer the questions.

**Quantitative methodology:** In this stage, the model variables and the relationship between them were investigated by a quantitative method. Then the questionnaire was distributed among the experts to confirm its validity. In addition, the questionnaire reliability was assessed in a pilot study by distributing it among a small sample of the statistical population. The data were analyzed by using descriptive-correlational measures of SEM.

**Quantitative statistical population and sample:** The quantitative statistical population included all managers, deputies, and experts of customs offices in western Iran (Kermanshah, Kurdistan, Ilam, Hamedan, and Lorestan provinces) (N=102). Since the population size was small, all of them were selected as the sample based on complete enumeration.

**Quantitative data collection:** An author-made questionnaire was developed based on the qualitative results for collecting quantitative data. This questionnaire consisted of 64 items in 4 scales and 14 subscales.

**Table 3.** Output of the qualitative part

Excellence	Strategic agility	External factors				Individual factors				Organizational factors				HCM components
		Social participation	Transformationalism	Standards	Social capital	Team participation	Desire for innovation	Flexibility	Intelligence	Compensation for innovative services	Performance appraisal	Training	Recruitment	Subscales
5	5	4	4	5	5	4	5	4	4	4	5	5	5	Number of items

**Validity:** The validity of the research questionnaire was assessed by content validity and construct validity.

**Table 4.** CVR results

Number of expert panel members	5	6	7	8	9	10	15	20	25	30	40
Minimum validity value	0.99	0.99	0.99	0.85	0.78	0.62	0.49	0.42	0.37	0.33	0.29



Given that the CVI value was greater than 79%, the content validity of the questionnaire was confirmed.

**Table 5.** Construct validity of the questionnaire

Variables	Recruitment	Training	Performance appraisal	Compensation for innovation services	Intelligence	Flexibility	Desire for innovation
AVE	0.59	0.63	0.61	0.66	0.68	0.56	0.58
Variables	Team participation	Social capital	Standards	Transformationalism	Social capital	Strategic agility	Excellence
AVE	0.60	0.65	0.57	0.64	0.69	0.61	0.58

Given that both the factor load and AVE of all 14 variables were greater than 0.50, the construct validity of the research questionnaire was confirmed.

**Reliability:**

**Table 6.** Cronbach’s alpha coefficient of the questionnaire variables

Variables	Recruitment	Training	Performance appraisal	Compensation for innovation services	Intelligence	Flexibility	Desire for innovation
Cronbach’s alpha coefficient	0.60	0.58	0.61	0.63	0.56	0.66	0.52
Variables	Team participation	Social capital	Standards	Transformationalism	Social capital	Strategic agility	Excellence
Cronbach’s alpha coefficient	0.56	0.61	0.54	0.63	0.64	0.59	0.55

Since Cronbach’s alpha coefficient of all variables was above 0.7, it can be stated that the research questionnaire was acceptably reliable.

**Quantitative data analysis:** The quantitative data were statistically analyzed by descriptive statistics and inferential statistics. Descriptive statistics included measures of central tendency (e.g. mean), indices of dispersion (e.g. standard deviation and variance), and other indices such as frequency and percentage. Inferential statistics also included multiple correlation analysis in two steps and multivariate correlation analysis. The quantitative data were analyzed by descriptive statistics and inferential statistics. Descriptive statistics included measures of central tendency (e.g. mean), indices of dispersion (e.g. standard deviation and variance), and other indices such as frequency and percentage. Inferential statistics also included multiple correlation analysis in two steps, the second-order confirmatory factor analysis (CFA), and SEM. SEM is a method for multivariate correlation analysis. This was the best method of analysis for the quantitative section of this research because SEM is usually used for analyzing and testing of theoretical models (Schumacker and Lomax, 2009). Quantitative data analysis and posthoc analyses were performed in SPSS-20 and LISREL.

**Quantitative data analysis: GT**

In this step, the interviews were transcribed, and then the common codes, concepts, and

categories were listed in a table. The qualitative data obtained from interviews were analyzed by GT. The research conceptual model was developed after coding, classifying, identifying, and naming the categories, components, and variables.

**Table 7.** Common codes obtained from interviews (open coding)

Innate talent	Strategic performance
Proper communications	Positive reaction to changes
Social literacy	Systemic attitudes
Credit	Group participation
On-the-job training	Spiritual intelligence
Recruitment of creative individuals	Fair promotion
Organizational excellence	Motivational feedback
Training and strengthening the required skills	Managerial intelligence
Vision clarity	Flexible behavior
Creation of highly functional environments	Suggestion of new ideas
Nurturing alternative human resources	Monitoring and control
Training and strengthening the required skills	Alignment of organizational activities
Identification of strengths and improvable points	Attention to learning
Cooperation	Support for developments
Participation	Superior performance
Quick response to changes	Selection of qualified employees
Continuous improvement	Workshop training
Social belonging	Evaluation of behavioral factors
Desire for growth	Coordination with organizational structure
Standardization of benefits	Spirit of initiative
Cost reduction	Acquisition of new areas of knowledge
Desire for change	Coordination
Group activities	External interactions
Establishment of intimate relationships with others	Adaptation to new conditions
Ability to communicate and interact	Continuous improvement
Alignment of organizational strategies	Emphasis on strategic thinking
Reliance on innovation	Empiricism
Value creation	Emotional intelligence
Compatibility with organizational factors	Fair rewards
Flexibility in relationships	Insurance coverage
Retirement	Management of affiliates
Management games	Internal coaching
Recruitment of specialized individuals	Recruitment of compassionate and competent individuals

As shown in the table above, the 15 interviewees named a variety of features of human capital in customs offices of western Iran. After transcribing the interviews, a total of 64 codes were extracted. According to Table 8, 64 common codes were classified under 14 concepts to summarize and identify the main categories. The concepts with a frequency of at least 5 were decided to be selected as the main components of the HCM model for customs offices of western Iran.



**Table 8.** Classification of common codes (axial coding)

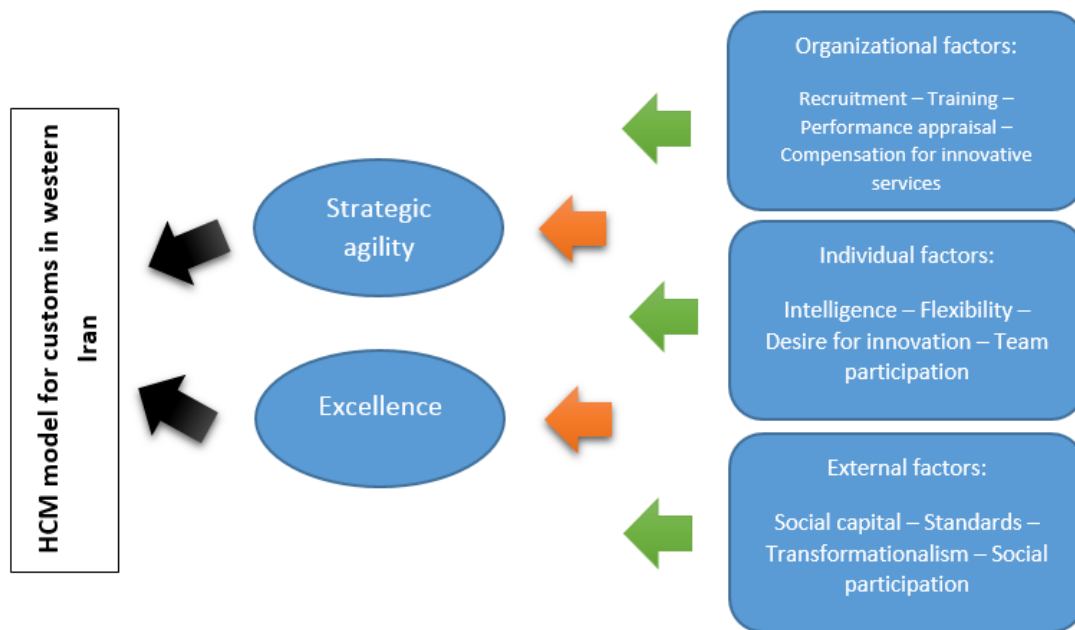
Common codes	Concepts	Experts	Frequency
Innate talent- Emotional intelligence- Spiritual intelligence- Managerial intelligence	Intelligence	1-2-3-4-6-8-9-10-11-12-15	11
Standardization of benefits- Alignment of organizational activities- Cost reduction- Systemic attitudes- Alignment of organizational strategies	Standards	1-2-4-5-6-7-8-11-12-13-14-15	12
Organizational excellence- Continuous improvement- Superior performance- Creation of highly functional environments- Strategic performance	Excellence	2-3-5-8-9-10-13-14	9
Training and strengthening the required skills- Workshop training- On-the-job training- Management games- Internal coaching	Training	1-3-4-5-7-8-9-10-11-13-14	11
Fair rewards- Fair promotion- Insurance coverage- Retirement	Compensation for innovative services	1-2-5-6-9-12-15	7
Flexible behavior- Coordination with organizational structure- Compatibility with organizational factors- Flexibility in relationships	Flexibility	2-4-5-9-11-12-14-15	8
Proper communications – Establishment of intimate relationships with others - Group activities - External interactions - Credit	Social capital	1-2-3-4-5-8-9-10-12-15	10
Monitoring and control – Management of affiliates- Evaluation of behavioral factors – Identification of strengths and improvable points - Motivational feedback	Performance appraisal	1-2-3-4-5-6-8-10-12-13-14-15	12
Spirit of initiative – Acquisition of new areas of knowledge – Reliance on innovation – Suggestion of new ideas - Value creation	Desire for innovation	3-6-7-8-10-13	6
Participation – Coordination – Ability to communicate and interact – Group participation	Team participation	1-2-5-7-9-10-12-13	8
Desire for change – Support for developments – Attention to learning – Desire for growth	Transformationalism	2-5-7-10-13-14-15	7
Quick response to changes - Adaptation to new conditions - Positive reaction to changes - Emphasis on strategic thinking – Vision clarity	Strategic agility	3-5-8-9-12-14-15	7
Participation – Empiricism – Social literacy – Social belonging	Social participation	4-8-10-11-12-14	6
Nurturing alternative human resources – Selection of competent employees – Recruitment of compassionate and competent individuals – Recruitment of creative individuals	Recruitment	1-2-4-5-7-8-10-11-12-14-15	11

**Table 9.** Categorization of common concepts (selective coding)

Common concepts	Categories
Recruitment – Training – Performance appraisal – Compensation for innovative services	Organizational factors
Intelligence - Flexibility – Desire for innovation - Team participation	Individual factors
Social capital - Standards - Transformationalism - Social participation	External factors
Strategic agility - Excellence	Mediating factors

As shown in Table 9, the 14 identified concepts were classified under 4 main categories to include in the proposed model. After several steps of coding the data from 15 interviews, a total of 64 common codes were extracted and then were classified under 14 concepts and 4 categories. As a result, the factors affecting human capital in customs offices of western Iran were presented in the following conceptual model.

Figure 1. The research conceptual model based on qualitative data



**Quantitative data analysis:** In this section, the necessary data were collected using a questionnaire. Demographics were first reviewed and then the measurement tools were analyzed by using CFA. Finally, the research model was examined using path analysis.

**Descriptive statistics:** Demographics, including gender, educational attainment, years of service, and age, were quantitatively described in this section (Table 10).

Table 10. Frequency distribution of respondents

	Number	Classes	Frequency	Percentage
Gender	1	Female	20	19%
	2	Male	82	81%
		Total	102	100%
Educational attainment	1	Associate's degree or lower	12	12%
	2	Bachelor's degree	64	63%
	3	Master's degree or higher	26	25%
		Total	102	100%
Years of experience	1	Under 5 years	8	8%
	2	6-10 years	39	38%
	3	11-15 years	43	42%
	4	Over 15 years	12	12%
		Total	102	100%

	Number	Classes	Frequency	Percentage
Gender	1	Female	20	19%
	2	Male	82	81%
		Total	102	100%
Age	1	Under 30 years	16	16%
	2	30-40 years	56	55%
	3	40-50 years	25	24%
	4	Over 50 years	5	5%
		Total	102	100%

Sampling adequacy test:

**Table 11.** Sampling adequacy test

Variables	Kaiser-Meyer-Olkin (KMO) Test	Bartlett's test (Sig.)
Organizational factors	0.68	0.011
Individual factors	0.73	0.002
External factors	0.66	0.000
Mediating variables	0.69	0.001

### Normal distribution test:

**Table 12.** Results of the Kolmogorov-Smirnov test for examining the normal distribution of data

Variables	Sample size	Kolmogorov-Smirnov statistic	Sig.
Organizational factors	102	0.215	0.062
Individual factors	102	0.351	0.058
External factors	102	0.379	0.071
Mediating variables	102	0.498	0.076

### Correlation test:

**Table 13.** Correlation matrix of relationships between the research variables

Variable	1	2	3	4
<b>Organizational factors</b>	*	0.77	0.81	0.48
<b>Individual factors</b>	*	*	0.72	0.69
<b>External factors</b>	*	*	*	0.75
<b>Mediating variables</b>	*	*	*	*

### CFA of organizational factors:

Organizational factors in this study included 4 concepts and 19 common codes. The results of CFA of organizational factors are presented in two models of standard estimation and significance coefficients.

Figure 2. CFA of organizational factors by standard estimation

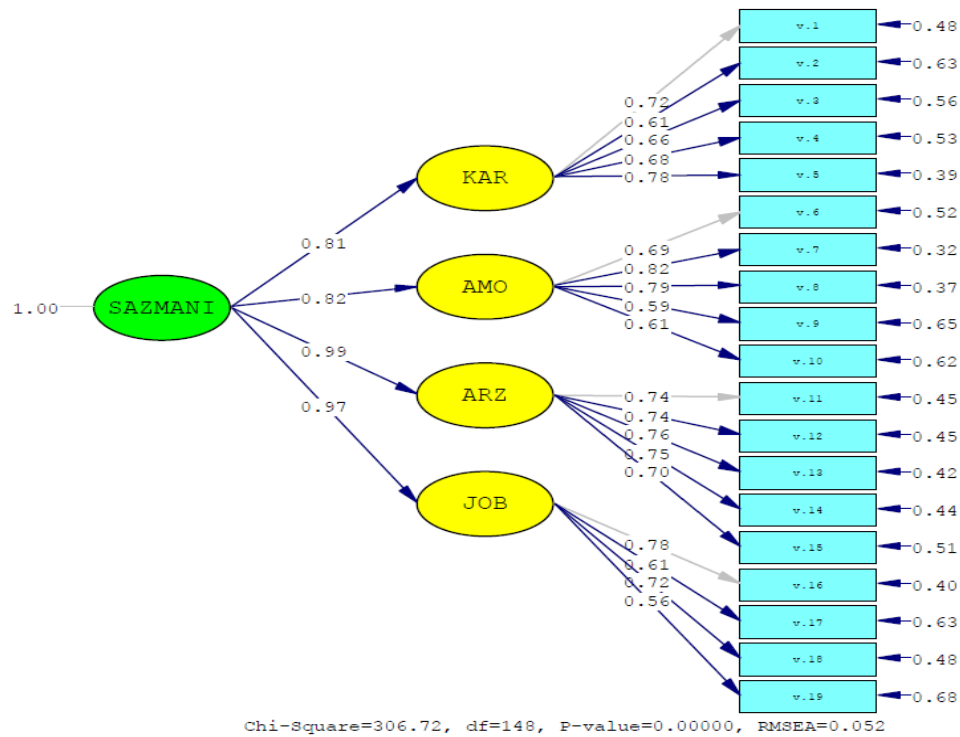
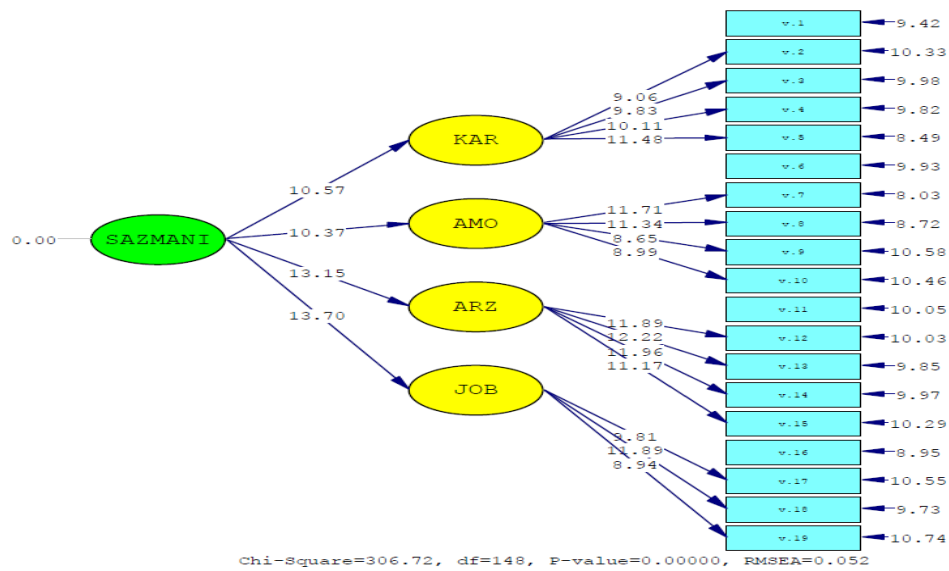


Figure 3. CFA of organizational factors by significance coefficients



The results of the CFA of organizational factors by standard estimation showed that the factor load of all variables was greater than 0.5. The results also indicated that the significance coefficient of all variables was greater than 1.96. Therefore, CFA of organizational factors was confirmed at this stage.

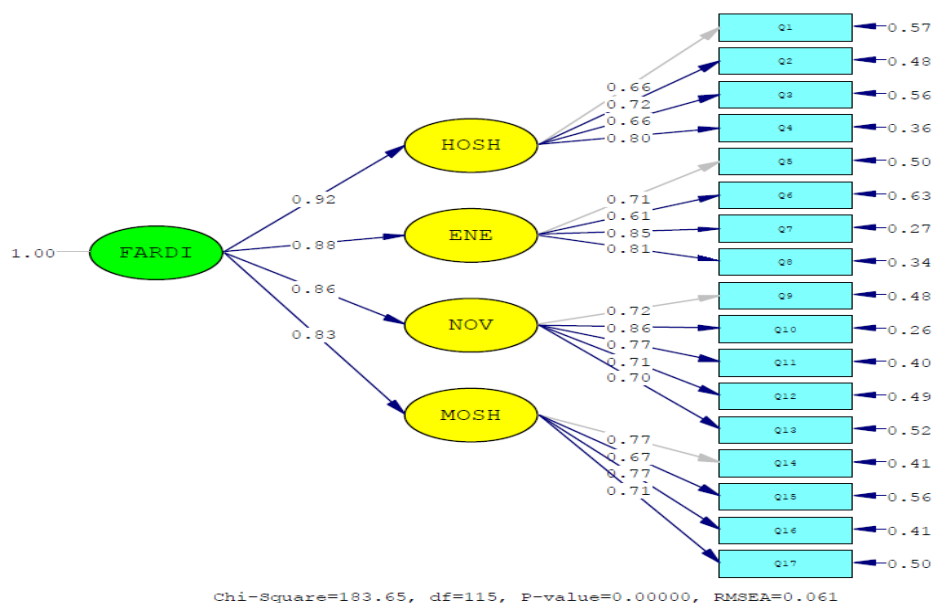
**Table 14.** CFA of organizational factors

Variable	Factor load	Significance coefficients	Concepts	Factor load	Significance coefficients	Result
Organizational factors	0.81	10.57	Recruitment	0.72	-	Confirmed
				0.61	9.06	Confirmed
				0.66	9.83	Confirmed
				0.68	10.11	Confirmed
				0.78	11.48	Confirmed
	0.82	10.37	Training	0.69	-	Confirmed
				0.82	11.71	Confirmed
				0.79	11.34	Confirmed
				0.59	8.65	Confirmed
	0.99	13.15	Performance appraisal	0.61	8.99	Confirmed
				0.74	-	Confirmed
				0.74	11.89	Confirmed
				0.64	12.22	Confirmed
				0.75	11.96	Confirmed
	0.97	13.70	Compensation for innovative services	0.70	11.17	Confirmed
				0.78	-	Confirmed
				0.61	9.81	Confirmed
0.73				11.89	Confirmed	
				0.56	8.94	Confirmed

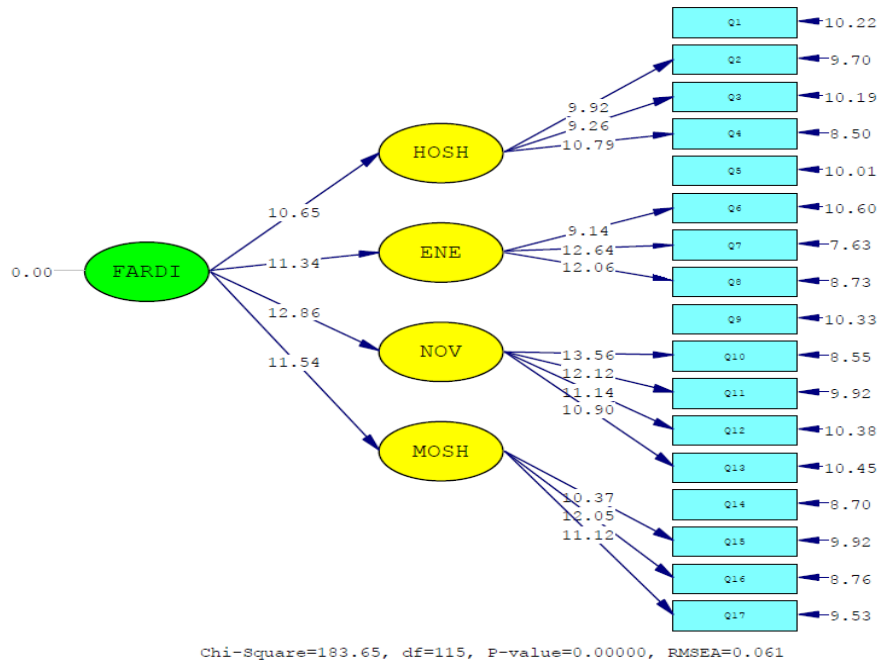
**CFA of individual factors:**

Individual factors in this study included 4 concepts and 17 common codes. The results of CFA of individual factors are presented in two models of standard estimation and significance coefficients.

**Figure 4.** CFA of individual factors by standard estimation



**Figure 5.** CFA of individual factors by significance coefficients



The results of the CFA of individual factors by standard estimation showed that the factor load of all variables was greater than 0.5. The results also indicated that the significance coefficient of all variables was greater than 1.96. Therefore, CFA of individual factors was confirmed at this stage.

**Table 15.** CFA of individual factors

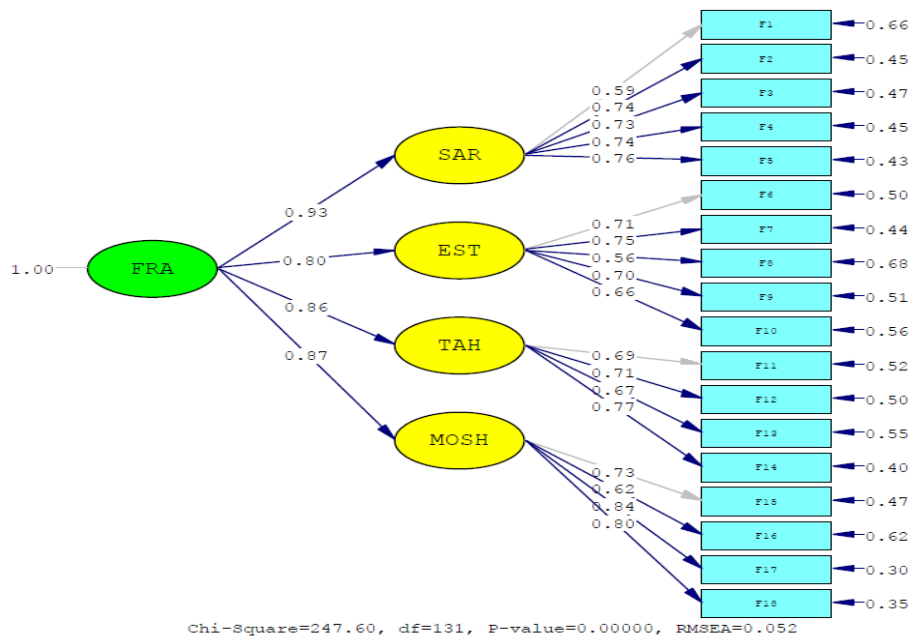
Variable	Factor load	Significance coefficients	Concepts	Factor load	Significance coefficients	Result
Individual factors	0.82	10.65	Intelligence	0.66	-	Confirmed
				0.72	9.92	Confirmed
				0.66	8.26	Confirmed
				0.80	10.79	Confirmed
	0.88	11.34	Flexibility	0.71	-	Confirmed
				0.61	9.14	Confirmed
				0.85	12.64	Confirmed
				0.81	12.06	Confirmed
	0.86	12.86	Desire for innovation	0.72	-	Confirmed
				0.86	13.56	Confirmed
				0.77	12.12	Confirmed
				0.71	11.14	Confirmed
	0.83	11.54	Team participation	0.70	10.90	Confirmed
				0.77	-	Confirmed
				0.67	10.37	Confirmed
				0.77	12.05	Confirmed
					0.71	11.12



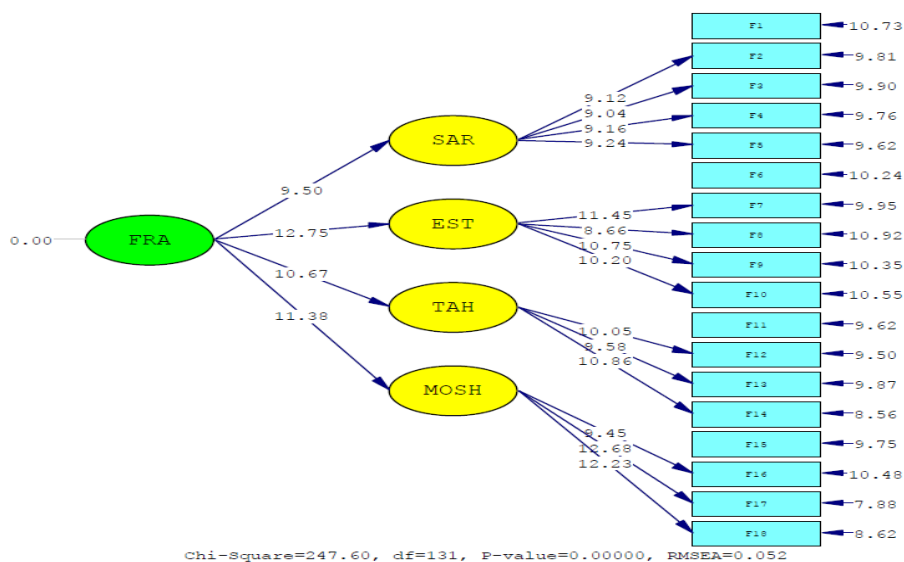
**CFA of external factors:**

External factors in this study included 4 concepts and 18 common codes. The results of CFA of external factors are presented in two models of standard estimation and significance coefficients.

**Figure 6.** CFA of external factors by standard estimation



**Figure 7.** CFA of external factors by significance coefficients



The results of the CFA of external factors by standard estimation showed that the factor load of all variables was greater than 0.5. The results also indicated that the significance coefficient of all variables was greater than 1.96. Therefore, CFA of external factors was confirmed at this stage.

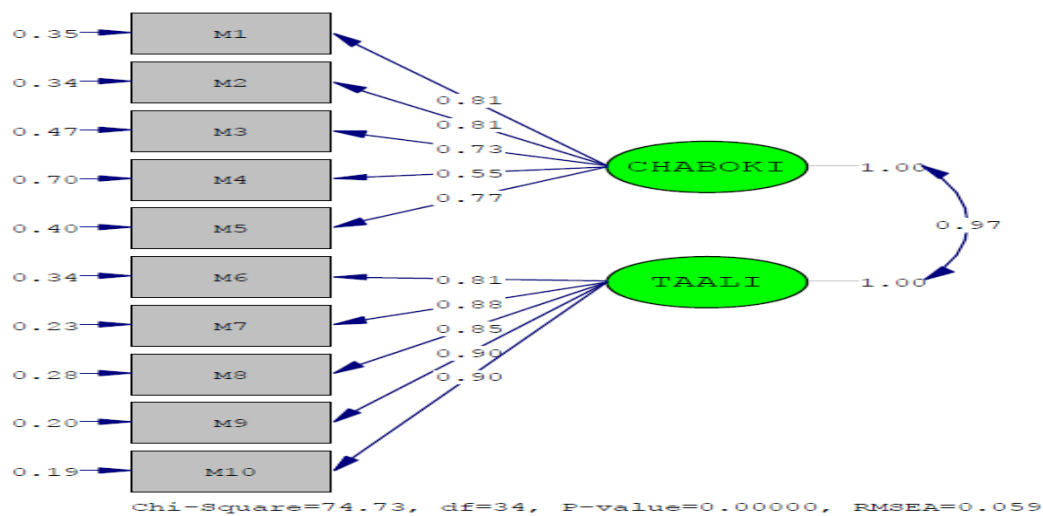
**Table 16.** CFA of external factors

Variable	Factor load	Significance coefficients	Concepts	Factor load	Significance coefficients	Result
External factors	0.93	9.50	Social capital	0.59	-	Confirmed
				0.74	9.12	Confirmed
				0.73	9.04	Confirmed
				0.74	9.16	Confirmed
				0.76	9.24	Confirmed
	0.80	12.75	Standards	0.71	-	Confirmed
				0.75	11.45	Confirmed
				0.56	8.66	Confirmed
				0.70	10.75	Confirmed
				0.66	10.20	Confirmed
	0.86	10.67	Transforma-tionalism	0.69	-	Confirmed
				0.71	10.05	Confirmed
				0.67	9.58	Confirmed
				0.77	10.86	Confirmed
				-	-	-
	0.87	11.38	Social partici-pation	0.73	-	Confirmed
0.62				9.45	Confirmed	
0.84				12.68	Confirmed	
0.80				12.23	Confirmed	

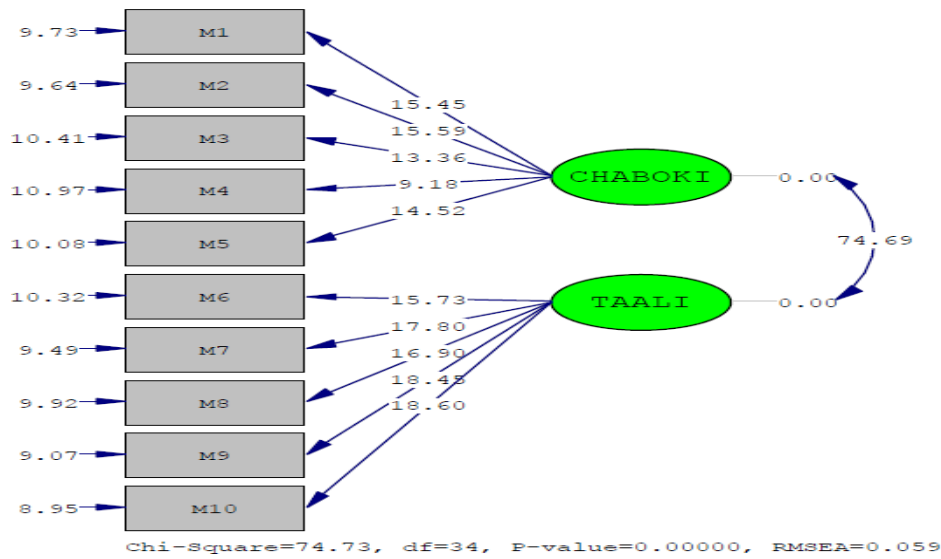
**CFA of mediating variables:**

Mediating variables in this study included 2 concepts and 10 common codes. The results of CFA of mediating variables are presented in two models of standard estimation and significance coefficients.

**Figure 8.** CFA of mediating variables by standard estimation



**Figure 9.** CFA of mediating variables by significance coefficients



The results of the CFA of mediating variables by standard estimation showed that the factor load of all variables was greater than 0.5. The results also indicated that the significance coefficient of all variables was greater than 1.96. Therefore, CFA of mediating variables was confirmed at this stage.

**Table 17.** CFA of mediating variables

Mediating variables	Factor load	Significance coefficient	Result
Strategic agility	0.81	15.45	Confirmed
	0.81	15.59	Confirmed
	0.73	13.36	Confirmed
	0.55	9.18	Confirmed
	0.77	14.52	Confirmed
Excellence	0.81	15.73	Confirmed
	0.88	17.80	Confirmed
	0.85	16.90	Confirmed
	0.90	18.45	Confirmed
	0.90	18.60	Confirmed

### Structural model of human capital components in customs offices of western Iran

The human capital model proposed in this study for customs offices of western Iran consisted of 4 categories and 14 concepts. The results of the path analysis of the model are reported below.

Figure 10. Path analysis of human capital components by standard estimation

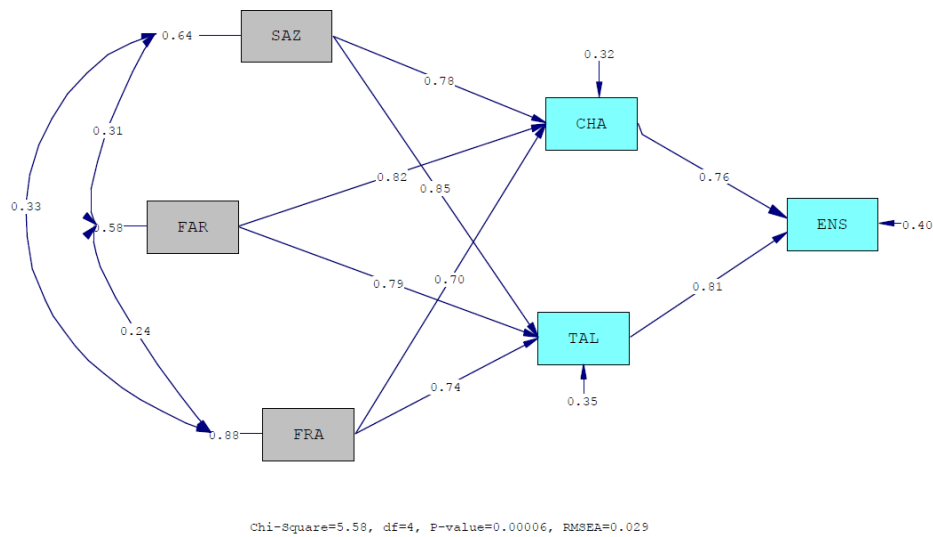


Figure 11. Path analysis of human capital components by significance coefficients

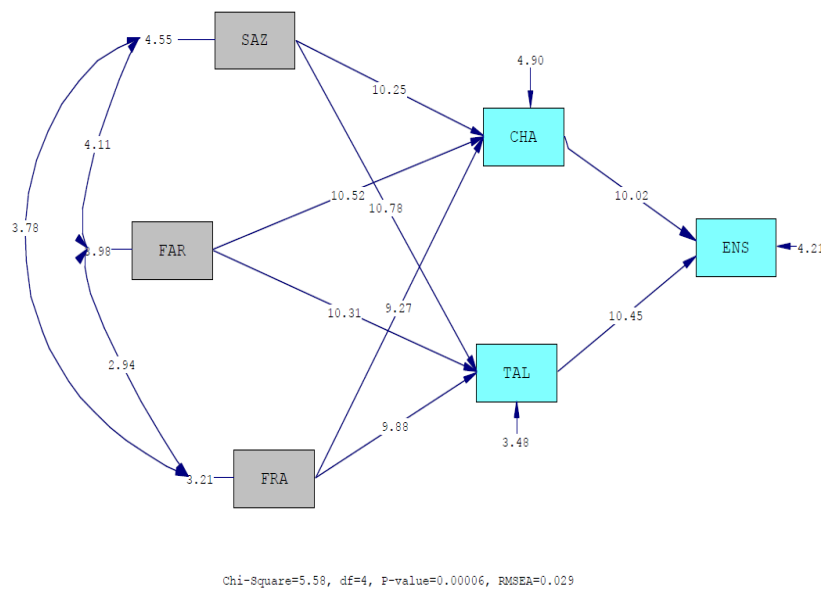


Table 18. Path analysis of human capital components by significance coefficients

Path	Sig.	Path coefficient	Significance level	Result
Organizational factors ----> Strategic agility	0.002	0.78	10.25	Confirmed
Organizational factors ----> Excellence	0.001	0.85	10.78	Confirmed
Individual factors ----> Strategic agility	0.002	0.82	10.52	Confirmed
Individual factors ----> Excellence	0.000	0.72	10.31	Confirmed
External factors ----> Strategic agility	0.003	0.70	9.27	Confirmed
External factors ----> Excellence	0.001	0.74	9.88	Confirmed
Strategic agility ----> HCM in customs offices of western Iran	0.000	0.76	10.02	Confirmed

Excellence ----> HCM in customs offices of western Iran	0.000	0.81	10.45	Confirmed
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### Indicators of the structural model fit

In this study, the qualitative model was developed in LISREL. The model's goodness of fit was investigated by the indicators listed in the following table.

**Table 18.** Comparison of the model's goodness of fit indicators with allowable values

Indicators	Allowable value	Calculated coefficients of the research model	Result
GFI	Over 0.9	0.93	Good fit
AGFI	Over 0.9	0.999	Good fit
RMR	Close to zero	0.03	Good fit
NFI	Over 0.9	0.90	Good fit
IFI	Over 0.9	0.92	Good fit

Based on a rule of thumb, a proposed model has the goodness of fit when the calculated coefficients of Table 4-19 are in the allowable range. Otherwise, it can be concluded that the model of the intended indicator has been poorly fitted. The status of the indicators of the research structural model is shown in Table 4-19. A comparison between the allowable values and calculated coefficients of the research model indicates that the model's goodness of fit indicators were appropriate.

### Comparison of results with previous studies

The study results showed that organizational factors (recruitment, training, performance appraisal, compensation for innovative services), individual factors (intelligence, flexibility, desire for innovation, and team participation), external factors (social capital, standards, Transformationalism, social participation), and mediating variables (strategic agility and excellence) had significant positive effects on HCM in customs offices of western Iran. Some of these concepts have been invigilated in previous studies. Dalvand (2016) showed that transformationalism had significant positive effects on HCM in the higher education system. Rashidi *et al.* (2016) classified the most important factors of HCM in public organizations under organizational and external factors. In another study, Aghababaei Sharmeh and Aziz Mohammadi (2018) states that excellence is the most important factor in developing human capital in organizations. McGuirk *et al.* (2015) showed that the desire for innovation had significant positive effects on HCM. Choi *et al.* (2009) reported that innovation and innovative work practices, including compensation for innovative services, had significant effects on HCM in organizations. McDuffie (1995) employed four measures, namely recruitment, service compensation, situational barriers, and educational barriers to investigating HCM.

### Practical suggestions

Based on the study results, the following suggestions are made for the successful implementation of HCM in customs offices of western Iran:

- Drawing the support of senior managers and emphasizing Article 162 of the Customs Law concerning financial support for HCM departments in order to improve the performance of human resources in this economic organization. According to Article 162 of the Customs

Law, Islamic Republic of Iran's Customs Administration is obliged to allocate 10% of resources contained in Article 160 of this law to training and research, improvement of awareness, skills, and knowledge of customs staff, and other affairs related to the productivity of customs staff and receipt of government rights. Article 160 of the Customs Law states that 2% of revenues will be deposited in a special account in the Treasury called Islamic Republic of Iran's Customs Administration, and its equivalent will be provided to the organization from the special credit contained in the annual budget laws.

- To ensure the health and quick transit of goods at borders, the Islamic Republic of Iran's Customs Administration is recommended to take advantage of the wisdom of the crowd and participation of experienced customs experts and also recruit specialized, committed, reliable, and clean-handed individuals, especially at corruption bottlenecks.

- To enhance human capital in customs offices of western Iran, these organizations are recommended to hold workshops of at least 4 hours for senior managers with an emphasis on the significance of training in customs organizations. These workshops can be held on different subjects every two months; for example, at the beginning of spring to draw financial supports for the training departments and at the end of fall to support the training departments to plan for the next year.

- Annual research-based assessment of the training needs of employees can increase the effectiveness of training courses and workshops and improve their learning level.

- It is recommended to enlist the cooperation of the Ministry of Science, Research, and Technology in order to carry out the PICARD program, which requires an interaction between universities and customs offices. In this regard, it is necessary to set meetings, attended by senior officials of the Islamic Republic of Iran's Customs Administration and the Ministry of Science, Research and Technology, on the PICARD program to broaden the knowledge of customs staff and nurture future human resources for customs offices.

- If the employees of an organization are not confident in their job future and always have a fear of being fired or dismissed, their sense of belonging to the organization will gradually fade and may turn into a sense of alienation and even enmity. However, when there is no discrepancy between individual and organizational objectives, there will be a promising solution to the philosophy of participation. Employee participation in organizational affairs requires the alignment of individual and organizational objectives. In organizations where employees are unfamiliar with organizational missions, goals, and plans, do not have a sense of belonging to the organization, and are not motivated enough to participate in organizational affairs, they will be indifferent to organizational events.

- Development of practical training resources to meet the training needs of employees by research departments of customs offices.

- Recruitment of experts highly proficient in training for research and capacity-building departments of customs offices to prepare individuals to go through the career cycle before reaching the managerial positions in these departments.

## Research limitations

Limitations are an integral part of scientific research and can pave the way for the future and new studies. The present study was no exception to this rule. Some of the limitations of this study were as follows:

- 1- Geographical distribution of experts and difficulty of access to them for interviews.
- 2- Employee conservatism in answering questions that could affect results and findings.
- 3- Shortage of resources, articles, and books related to the research topic due to its novelty.

- 4- Another research limitation was related to the inherent limitations of questionnaires. The statements contained in a questionnaire cannot fully and accurately measure what is in the minds of the respondents. These limitations apply to more or less all questionnaires, including the one used in this study.

- 5- Another research limitation was related to time. Since the present research was a cross-sectional study, the generalizability of the results may reduce over time.



- 6- Low cooperation and reluctance of experts to participate in interviews.
- 7- Shortage of similar studies for comparison.
- 8- Since the present study was conducted on customs offices of western Iran, the results cannot be generalized to customs offices in other areas of Iran.

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