

# The Influence of Cultural Intelligence on the Time Orientation of Governmental Decision Makers

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## ABSTRACT

**Objective:** the aim of this study is the methodological explanation of the answer of this question: how and to what extent does the concept of cultural intelligence influence the dimensions of time orientation that are the "past-orientation, present-orientation and future-orientation" of the strategic decision makers of the organizations? **Methodology:** this survey in terms of the objective this study is descriptive – explanatory; in terms of the result it is applicable; in terms of the time it is cross-sectional; in terms of the type of data and variables it is quantitative. The target population of this study includes 261 strategic decision makers of the selected governmental organizations of the two Gilan and Zanjan province. The data were collected through the questionnaires and the stratified sampling method, and they were analyzed through the structural equations with the SPSS software and PLS2 software. **Results:** the enhancement of the level of cultural intelligence only improves the future-orientation level (the third component of the time orientation) of the decision maker managers and decision-making experts in the investigated governmental organizations of Iran; the future-orientation dimension of these managers is (0.52) more than their past orientation (0.43) and present orientation (0.39). But, all of the three components are at the mid-level, and they should be improved. The investigated Iranian governmental decision-making and decision-maker people have the metacognitive cultural intelligence (average of 3.38) more than all of the aspects and have the behavioral cultural intelligence (2.50) less than all of the aspects; the level of the motivational cultural intelligence (average of 3.19) and the cognitive cultural intelligence (average of 2.53) of these people is between the range of those two aspects.

**Keywords:** Cultural Intelligence, time orientation, dimensions of cultural intelligence, the past orientation, present orientation and future-orientation dimensions of time orientation

<sup>1</sup>This article is extracted from the master thesis of the major of human resources management of Mrs. S. Samaneh Nezami Rad under the guidance of Dr. Mostafa Jafari and consultation of Dr. Hosein Azimi which is entitled as the explanation of the effect of Cultural Intelligence and reliance on time orientation of the decision makers of the selected organizations of Gilan and Zanjan provinces.

## INTRODUCTION

Intelligence or sagacity is a mental ability. Intelligence has been defined as the ability to be adapted to the environment. According to Piaget, an intelligent action is an action that helps

the organism to achieve the optimal conditions for survival; hence, intelligence gives the opportunity to the organism to effectively deal with its environment. Since, the environment and humans are constantly changing, "intelligent" interaction between these two should frequently change. Accordingly, intelligence is a dynamic attribute (Olson and Hrgnhan, 2009). In the recent decades, several types of intelligence have been identified and defined by scholars; one type of this intelligence is the "cultural intelligence" that has an increasing importance and it is so effective on the compliance of managers and organizations with the multi-cultural environment (Peterson, 2004). Cultural intelligence is defined by the capability to apply skills and abilities in the different environments.

Time orientation is also one of the critical affecting factors on the decision-making ability of the executives. This concept has been scientifically studied in Iran much less. Since, Iran has both some generations with different time orientations within itself, and increasingly expands its international relations and also the Iranian organizations' managers interact with different time cultures, so understanding the time horizon becomes so important in making decisions.

## SCIENTIFIC FUNDAMENTALS

### **Cultural Intelligence**

Cultural Intelligence or "Cultural Quotient" (CQ) is a relatively new term that is used in the related discussions to trade and commerce, governmental affairs, education, and academic researches. The meaning of Cultural Intelligence is the ability to effectively communicate and interact with the people from different cultures and the capability to work in different cultural contexts. Cultural intelligence is the result of the researches of the people like Soon Ang and Linn Van Dyne on the context of the evaluation and prediction of the cross-cultural performance of people that for the first time was introduced in 2003 by Sun Ang and Christopher Early in the book of "Cultural Intelligence: cross-cultural personal interaction" which was published by Stanford University. Although, this concept initially was used to determine the ability of individuals in the cross-cultural activities, after a short time it was introduced as a new type of intelligence that shows the ability of people in the cross-cultural interactions (Alaee, 2014, page 17). Sun Ang says: Cultural Intelligence means the ability to work effectively among the national, ethnic and organizational cultures.

### **The four aspects of cultural intelligence**

Cultural Intelligence is a four-dimensional program that is based on the years of research on intelligence and cross-cultural interactions. All of the four dimensions are important in order to use the advantages of the Cultural Intelligence. These four dimensions are: Cultural Intelligence motivation, Cultural Intelligence knowledge, Cultural Intelligence strategy, and Cultural Intelligence action that usually in the researches they are mentioned as the motivational Cultural Intelligence, cognitive Cultural Intelligence, metacognitive Cultural Intelligence and behavioral Cultural Intelligence.

### ***Cultural Intelligence motivation (showing interest, confidence and motivation in adaptation with the cross-cultural situations)***

The Motivational Cultural Intelligence indicates one's ability to lead the attention and energy towards learning and acting in the situations in which there are cultural differences. Kanfer & Heggestad (1997) express that such motivational abilities provide the "the control of the factor, the effect of cognition and the behavior that facilitate the achievement of the goal". The people, who have a high level of motivational Cultural Intelligence, lead the attention and

energy towards cross-cultural situations based on the internal interest (Deci and Ryan 1985) and reliance on the cross-cultural effectiveness (Bandura, 2002), (Ang Van Dyne, 2013, p. 27).

***Cultural intelligence knowledge (understanding the issues and cross-cultural differences)***

Cultural Intelligence Knowledge or the cognitive aspect of Cultural Intelligence is the knowledge and awareness of the person from the norms, customs and traditions in different cultural environments. By considering the wide variety of cultures in today's world, the cognitive Cultural Intelligence implies to the understanding of the general and public cultural issues and also understanding the cultural differences. The factor of Cognitive Cultural Intelligence is a crucial element, because having knowledge about the cultural differences and similarities is the base of decision-making and working in the cross-cultural situations.

***Cultural intelligence strategy (planning and understanding the diverse cultural experiences)***

Cultural intelligence strategy, which is also called cognitive Cultural Intelligence, is the Cultural intelligence awareness and person's cultural awareness in the interaction with those people who have different cultural backgrounds. The metacognitive factor of Cultural Intelligence is important at least for three reasons: first is that this factor promotes the active thinking about the people and environments that have different cultural backgrounds. The second is that it leads the critical thinking about habits, beliefs and confined thoughts to a specific culture to mobility. Third is that it allows people to review and evaluate their subjective plans and as result it helps to increase the accuracy of their understanding and cognition.

***Cultural Intelligence action (verbal actions and nonverbal actions during the cross-culture interactions)***

The Cultural Intelligence action or the behavioral aspect of Cultural Intelligence means that how can a person indicate a suitable verbal and nonverbal action in facing and interacting with people who have different cultural context. The behavioral Cultural Intelligence includes a large set or range of behaviors and their application. The behavioral Cultural Intelligence is the essential component of the Cultural Intelligence, because behavior is mostly the salient feature of social interactions. In addition, the non-verbal behaviors have an extreme importance, because they have the role of "non-verbal language" that transfers the meaning with an elegant way and implicitly.

***The role of time orientation or time perspective in life***

Understanding the "time" and its definition has a long background in the history of thinking; we need a criterion, which is time, in order to be able to compare the various processes. Change has no meaning without time; and time will stop without the existence of change. Time can be defined as intervals or moments during which the events occur. Time provides the possibility of comparing different processes (Toffler, 1970, page 22). Time is a multi-dimensional cognitive-motivational-cultural construct (Trommsdorf 1983). Due to its complexity, Fraisse (1984) suggests that time should be viewed as a notion rather as a construct. Time orientation refers to the emphasis of the past and tradition as opposed to living for today or investing in tomorrow (Henry 1976). Evidence suggests that some people are more prone to a past-orientation, whereas others are prone to a future-orientation, depending on their cultural backgrounds. Kluckhohn and Strodtbeck (1961) included time orientation as one of the four fundamental value orientations of different cultures. One's time orientation may help explain one's rate of conducting negotiations, one's rate of adopting product innovations, and one's expected payback period for new products.

As Kluckhohn and Strodtbeck (1961) noted, one's time orientation is largely a product of his/her culture, e.g., a person may be encouraged through a complex socialization process to have a past or future orientation.

Doob (1971) argues forcefully that traditional societies favor a past time orientation, while modern Western societies favor a future time orientation.

In general, people from Far Eastern countries such as China, Japan, and Korea tend to have past time orientations, while Latin Americans are more present-oriented, and Westerners (Americans and Northern Europeans) have more of a future time orientation (Benedict 1946; Graham 1981; Hall 1959, 1976; Meade 1971; Kluckhohn and Strodtbeck 1961; Yau 1988).

Hall (1959, 1976) dichotomizes time-orientations into monochronic (m-time) and polychronic (p-time).

M-time people tend to prefer to do one thing at a time, resulting in a greater reliance on schedules, segmentation, and promptness. Time can be saved or wasted, notions frequently foreign to p-time people. P-time systems are characterized by several things happening at once, and they stress involvement of people and completion of transactions rather than adherence to preset schedules. Hall asserts that Westerners are likely to be monochronic, while p-time systems are more common in Latin American and in the Mediterranean countries. Graham (1981) offers a slightly different categorization of time orientations, those of linear-separable, circular-traditional, and procedural traditional.

The linear-separable time perception, which is characteristic of Anglos, favors a strong future time orientation. If time is perceived as flowing from the past to the future in an irreversible fashion, it should be properly spent so as to achieve a future goal. The circular-traditional time perception, on the other hand, fosters a present time orientation, which is often described as the *manana* spirit in the cultures with Spanish backgrounds. The procedural-traditional time perception is common among those influenced by Confucian values; the reliance on strong traditional values tends to favor a strong past orientation (Kluckhohn and Strodtbeck 1961; Yau 1988). It should be noted that Hall's (1976) notion of monochronic time relates to a strong future orientation, whereas the notion of polychronic time implies present and past orientations.

Having a specific time orientation does not necessarily mean that one's cognitions and behaviors are completely dictated by a single dominant orientation. As Cottle and Klineberg (1974) noted, one's being past oriented does not mean that s/he is totally unaffected by future time; it may be that s/he differs from others in his/her preferential ordering of past-, present-, and future-oriented activities. Relying on the concept of operating culture, Graham (1981) also maintains that a person is able to operate within a variety of different sets of beliefs and time perceptions.

**Future Extension.** For some individuals, the future seems to be perceived as something dynamically changing and for others it is perceived as somewhat more static but extending farther, again depending upon culture. Smith (1952), for instance, maintained that American egos tended to extend forward to the somewhat curtailed future with little attention paid to the past, whereas both Hindu and Chinese egos tended to extend far backward to the past and far forward to the future. According to Wallace (1956), extension refers to the conceptualization of the length of future time. He measured time extension as the range of

years between the subject's actual age and the most distant event envisioned by him/her. Cottle (1976) proposed the experiential inventory method in which the subjects were asked to list the ten most important experiences of their lives and to locate each experience in a particular time zone. People may have a more extended but less structured time perspective or have a less extended but more structured future time. However, the combination of an extended and structured future is not likely, due to limitations in cognitive capacity.

As suggested earlier, having a past time orientation does not necessarily mean that the future cannot be anticipated or envisioned. In fact, there is some evidence that Easterners have a longer future time span. Cottle and Klineberg (1974) argued that humans make of themselves a bridge between past and future; thus, the deeper their ties with the past, the longer their perspectives on the future. Japanese businessmen are reputed to have a longer time horizon than their American counterparts and to emphasize increases in- market share rather than the maximization of short term profits. West (1989) relates Asians' longer view of time to longer histories, a greater sense of the past, and a group-orientation.

Asians have an intergenerational time perspective that considers both current and future generations (Tse, Lee, Vertinsky, and Wehrung 1988). While Americans have a less extended future time orientation, they are more likely to have a better structured and more dynamic future. A monochronic perception of time (Hall 1976; Hall and Hall 1987; McClelland 1961) forces Americans to plan ahead with accuracy. The polychronic time perception characteristic of Arabic, Asian, and Spanish cultures is less conducive to a coherent structuring of the future. In sum, regarding future time perspectives, American consumers experience a less extended but dynamically changing future, while Asians experience a more extended but stable future.

### **The role of time perspective in making decision**

Time perspective is crucial for our present and future plans, for the way we see ourselves in relation to the past, the future and other people, and for the way we act in the present (Lennings, 2000). Lewin (1951) was among the first researchers who emphasized the importance of time perspective (TP) in social science and claimed that behaviour, emotion and motivation are influenced by TP. The socioemotional selectivity theory (Carstensen, 1995; Carstensen, Isaacowitz & Charles, 1999) postulates that the perception of time plays a fundamental role in social goals, with important implications for emotion, cognition and age related motivational changes. Zimbardo and Boyd (1999) assume in their theory of TP that our self-image, our world view and our interpersonal relations are influenced by cognitive processes related to TP. We learn to categorize personal and social experiences into the past, present and future, which helps us to lend order, coherence and meaning to these events. The three time frames (past, present, future) are used for the purpose of encoding, storing and recalling experiences as well as in forming expectations, goals, contingencies and imaginative scenarios. TP is conceived as a fundamental process which is influenced by factors such as culture, religion, social class, education, family modelling and age. Zimbardo and Boyd (1999) argue that, because TP is so pervasive in people's live and is multiply determined, people are rarely aware of its subtle operation, influence, or biasing power. Moreover, Zimbardo and Boyd (1999) state when one time frame dominates, a 'biased TP' occurs and becomes dysfunctional. In contrast, a 'balanced TP' gives the flexibility to switch between the different time frames, depending on the situation, our needs and our values. According to Zimbardo and Boyd (1999) there are five distinct time perspectives

- 1) past negative: a general negative, aversive view of the past ("I think about the bad things that have happened to me in the past."),

- 2) present-hedonistic: a hedonistic risk-taking attitude toward time and life ("Taking risk keeps my life from becoming boring"),
- 3) future: goal planning, and achieving ("I am able to resist temptations when I know that there is work to be done"),
- 4) past-positive: an attitude optimistic, and positive toward the past ("I enjoy stories about how things used to be in the 'good old times'"), and
- 5) present-fatalist: a hopeless attitude toward the future and life ("My life path is controlled by forces I cannot influence").

Zimbardo and Boyd (1999) and Boniwell (2005) maintain that time perspective plays an influencing role in an individual's decision making process and behaviours. These authors argue that an individual's tendency to focus on one temporal frame (i.e., a focus on the past, present, or future) will impact his/her decision making process and subsequent behaviours. For example, individuals with a dominant past temporal orientation may base their decisions solely on previous experiences and an analysis of how those situations turned out. Novel situations may lead to overly cautious behaviours or high levels of anxiety because the person does not have an experience base from which they can make decisions. Furthermore, they may restrict their decision making and behaviours so as to avoid new situations altogether. For individuals with a dominant future orientation decision making is based upon achieving some desired future state. As such, these individuals may forgo the pleasure of today to save for the future. They too may restrict their behaviour, not for fear of the unknown but for fear that it may impact their goal for the future. Unlike the past and future dominant individuals whose decision making involves analyzing the situation for the costs and benefits, individuals with a present temporal orientation tend to focus on the present-moment stimuli, situational factors, and their biological state. These individuals tends to make decisions based on what 'feels right' in the moment and pay little attention to future consequences. An over-emphasis on any one temporal frame can lead to a dispositional style that becomes characteristic of how a person will respond across a variety of circumstances (Zimbardo and Boyd, 1999).

Zimbardo and Boyd (1999) argue that an individual's time perspective is developed and influenced by his/her culture, education, religion, social class, and family. These factors interplay to create situations where one temporal frame may be used more often, potentially leading an individual to adopt it as her dominant temporal orientation.

### **Five simple concepts derived from the time perspective theory**

1. Time is the most priceless resource of everyone.
2. Time horizon is a learned but hidden influencing factor on all of the decisions and actions.
3. When people adopt action-oriented decisions, they apply the time horizon with bias (bias - direction) that this issue leads to the extreme or wastage use of various time horizons.
4. The excessive use of time horizon can make problems, especially when the time horizon is negative and the client (treatment seeker) is captured in one or two time horizons (is limited).
5. The best thing is to create a flexible balanced time horizon in accordance with the current and changing conditions, and thus a more dynamic, accountable and healthy perspective will be created.

### **The concept of three dimensions of the Time orientation**

1. Past. People should learn from history, draw the values they live by from history, and strive to continue past traditions into the future.

2. Present. The present moment is everything. Let's make the most of it. Don't worry about tomorrow: enjoy today.
3. Future. Planning and goal setting make it possible for people to accomplish miracles, to change and grow. A little sacrifice today will bring a better tomorrow. (based on Kohls, 1981)

### **RESEARCH BACKGROUND**

Prado (2006) had studied the relationship between cultural intelligence and the perceived environmental uncertainty of 27 country managers through the Internet World Wide Web. The results of this study showed that cultural intelligence has a very high importance and use in the identification and assessment of the international trade uncertainty. Ang, Van Dyne et al. (2007) had measured the cultural intelligence and the level of its influence on adjustment, decision-making, cultural adaptation and functional performance. The results showed that the dimensions of cultural intelligence are associated with each of these variables and in fact cultural intelligence is introduced as a predictor variable of this variable. Imai (2007) had studied the impact of Cultural intelligence on the effectiveness of the intercultural dialogue among the US and West Asia negotiators in which Cultural intelligence is introduced as the key factor of the effectiveness of cross-cultural dialogue. Also, the explanatory analysis of this study indicates that the cultural intelligence motivation dimension has a stronger prediction power than the other dimensions. Van Driel (2008), by studying, developing and quantitatively evaluating the cultural intelligence as a vital structure at the organizational level in his research, has found that the organizational cultural intelligence has a positive relationship with organizational effectiveness and organizational performance. Harrison (2012) had evaluated the relationship between the five components of the model of personality characteristics (Dickman, 1990), gender and life experiences with the two components of Cultural intelligence and ethnicity-orientation; and he has approved the positive effect of the two components of personality, including openness and adaptation on the Cultural intelligence. Based on his research, growing up in the multicultural environments is effective on language ability, international orientation and cultural intelligence. Marjan Fayazi (2013) in a study entitled as "the assessment of Cultural intelligence and evaluation of the affecting demographic factors on it among the university students" has concluded that the mean score of Cultural intelligence of the students is slightly above average, and there is no significant difference in the scores of Cultural intelligence among the individuals in terms of gender, educational level and field of study.

Ahmadi et al in 2012, in a study entitled as "the role of Cultural intelligence in the employees' conflict resolution ability" have found that Cultural intelligence of the managers and its triple dimensions statistically have a significant and positive impact on the employees' conflict resolution ability, and also they have found that by using the demographic factors such as gender, culture and education we cannot opine on the managers' Cultural intelligence and employees' conflict resolution ability.

### **METHODOLOGY**

#### **The type of research**

This research in terms of the purpose is explanatory; in terms of the result it is applicable; in terms of the time it is cross-sectional; in terms of the research conditions (the level of the involvement of the researcher) it is the type of non-experimental researches, and in terms of the research methodology it is survey.

## Target population

The members of the research target population were the managers and experts of the four organizations of the Gilan and Zanjan provinces; these organizations included: Administration of Cultural Heritage of the Gilan and Zanjan provinces, Department of Education of the Gilan and Zanjan provinces, Department of Islamic Guidance of the Gilan and Zanjan provinces, and the University of Gilan and the University of Zanjan.

## The sample size and sampling method

The number of the members of the study sample was 261 people, and the study sample was calculated according to the Morgan table and was determined by the stratified sampling method. 261 questionnaires were collected that were equal to the total number of members of the sample. The biographical characteristics of the members of the sample are as a table 1:

**Table 1: the biographical characteristics of the members of the target population**

Gender	Frequency	Percent
Man	209	80/1
Female	52	19/9
Age	Frequency	Percent
Less 30 years	16	6/1
30 - 40	102	39/1
40 - 50	124	47/5
Over 50 years	19	7/3
Education	Frequency	Percent
Associated degree	5	1/9
B.A	104	39/8
M.A	111	45/5
P.H.D	41	15/6

## Data Collection tools

The required data and information were collected by two questionnaires. Both of the questionnaires included two categories of questions: multiple-choice and open-ended. In the quantitative part of the research, the concept of "Cultural intelligence" and its components were evaluated through the localized questionnaire of Ang et al. (2004); and the concept of "Time perspective" and its components were evaluated through the questionnaire of Zimbardo (1999). The qualitative part of the component of these two researches was investigated through the open-ended questions which were drafted by the supervisor and another relevant expert. The number of multiple-choice questions and open-ended questions was 24. Each question of a component or element measures the main variables.

## The method of distribution and collection of the questionnaires

The questionnaires were directly distributed among the members of the target population and were collected after completion by the researcher in both parts of the target population - Zanjan and Gilan provinces.

## Hypotheses

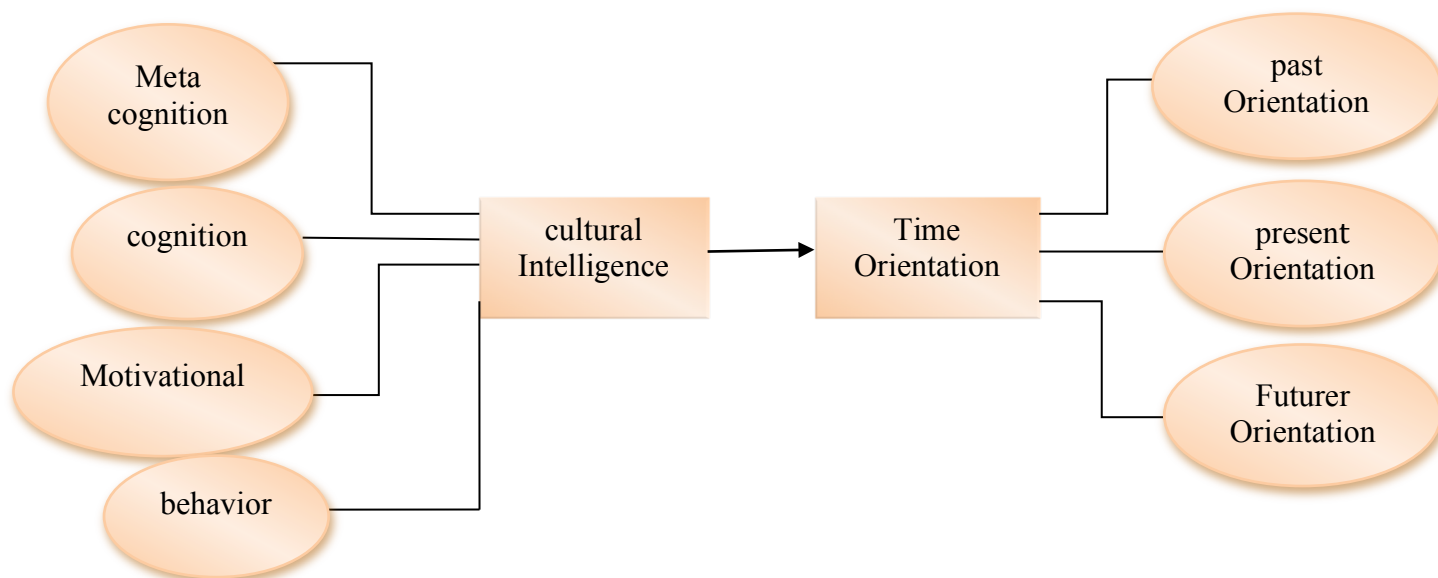
The three hypotheses of this study are as follows:

1. Cultural intelligence affects the past orientation dimension of the managers and experts.



2. Cultural intelligence affects the present orientation dimension of the managers and experts.
3. Cultural intelligence affects the future orientation dimension of the managers and experts.

**The conceptual model of Figure 1: the conceptual model based on the research scientific principles**



***The reliability of the variables***

In Table 2, the number of the designed criteria to measure each latent variable and the Cronbach alpha coefficient of the questions are presented.

The Cronbach's reliability coefficient of all the variables in this study is higher than the minimum value of 0.6, and the measures have a high reliability. Also, Bagozzi and Yi have expressed the high standard of 0.6 for the composite reliability (CR). If the composite reliability value for any structure is higher than 0.7, it indicates the high internal consistency of the measurement model (Davari and Rezazade, 2013). The measurement model has a proper composite reliability.

**Convergent validity measurement**

In order to investigate the convergent validity in the PLS model, the standard Average variance extracted (AVE) is analyzed; this indicator represents the value of the variance that a structure obtains from its markers. All of the related values of AVE to the structures show the value of more than 0.4; hence convergent validity is confirmed.

**Table 2: Reliability and validity of the variables**

Variables	Item	Cronbach $\alpha$	CR	AVE
cultural Intelligence	Metacognition Cognition Motivational Behavior	0.74	0.75	0.44
Metacognition	Metacognition1 Metacognition2 Metacognition3	0.73	0.84	0.65
Cognition	Cognition1 Cognition2 Cognition3	0.73	0.84	0.65
Motivational	Motivational1 Motivational2 Motivational3	0.72	0.84	0.64
Behavior	Behavior1 Behavior2 Behavior3	0.75	0.85	0.67
past Orientation	Past1 Past2 Past3 Past4	0.71	0.82	0.46
present Orientation	Present1 Present2 Present3 Present4	0.72	0.70	0.42
Future Orientation	Future1 Future2 Future3 Future4	0.72	0.75	0.46

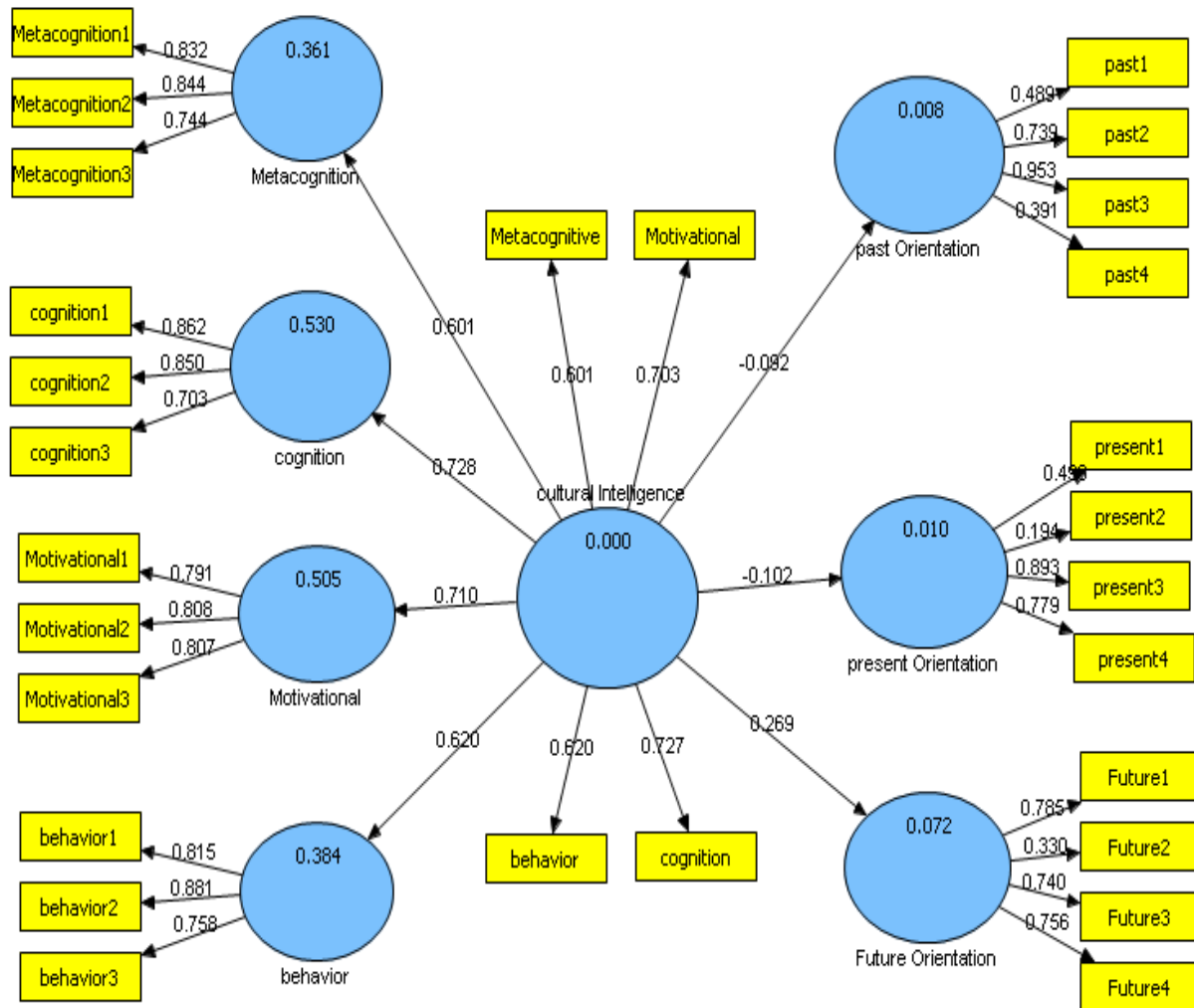
### The reliability of the model

The evaluation of the reliability of each of the markers of the latent variable in the PLS model by the level of the factor loadings indicate that the measurement model has enough reliability in terms of the markers of the latent indicators; all of the t-values are outside the range of (-1.96, 1.96), so this questionnaire has a good validity (Figures 2 and 3).

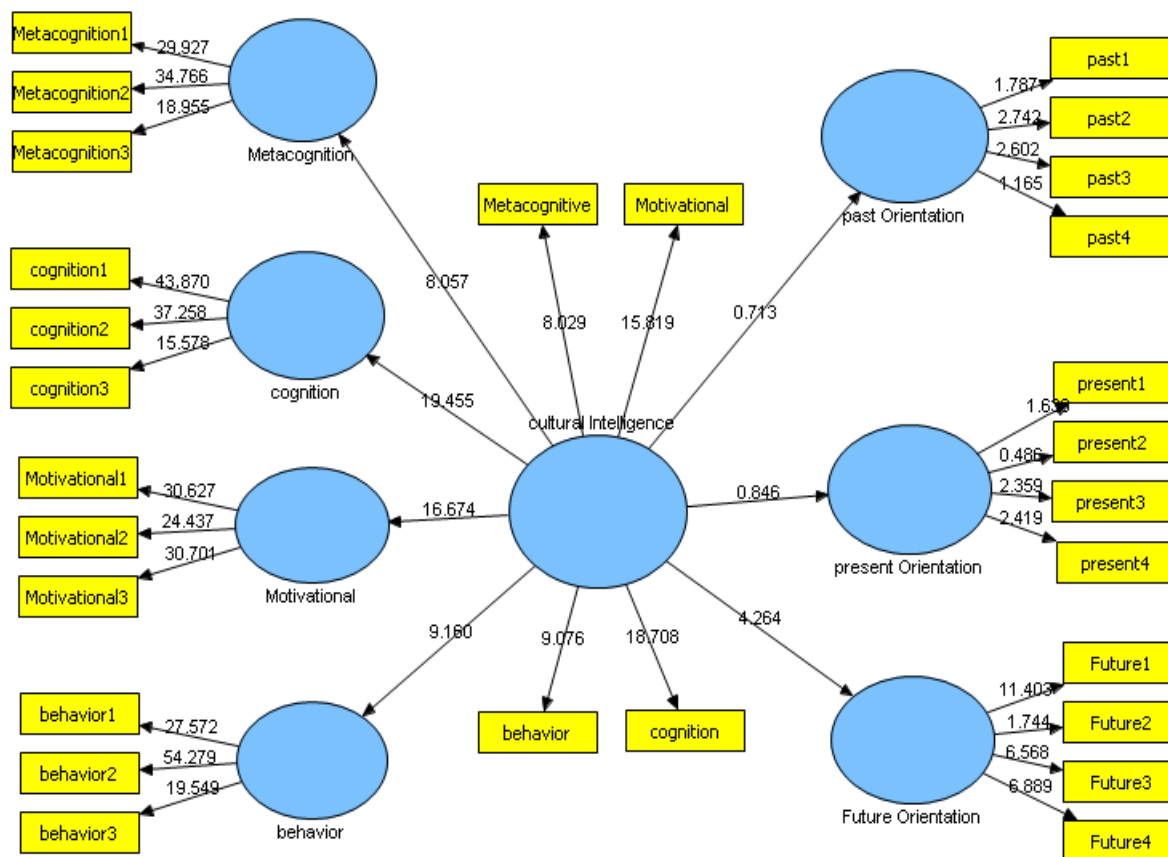
### Hypotheses' test

The hypotheses were tested by using the Structural equation modeling and the partial least squares techniques. The analysis results of the data in the figures 3 and 4 are presented in Table 4. As it can be seen in Table 4, two hypotheses were rejected and one hypothesis is confirmed. Thus, according to the path coefficient, if the probability value (P-Value) is less than the significance level of 0.05 and the significance value is greater than 1.96, it can be concluded that this path coefficient is significant at the level of 0.05, otherwise the hypothesis is rejected.

Figure 2: The research model at the standard estimation status



**Figure 3: The significance model of the level of the effectiveness of the parameters**



The impact of "Cultural intelligence" on "future orientation" is confirmed according to the fact that at the confidence level of 95%, the value of the t-statistic is greater than 1.96. This issue indicates that decision makers have the Cultural intelligence with special ability for future orientation and for conducting the fascinating area of the today's complicated and multifaceted world, and this result increases the research reliability.

**Table 4: Summary of results of relationships between variables**

	Structural relationship	$\beta$	t Bootstrap	Contrast
H1	Cultural Intelligence $\rightarrow$ past Orientation	-0.092	0.713	Rejected
H2	Cultural Intelligence $\rightarrow$ present Orientation	-0.102	0.846	Rejected
H3	Cultural Intelligence $\rightarrow$ Futurer Orientation	0.269	4.264	Accepted

**Model validation assessment**

In order to investigate the quality or Cross-validation of the model, the CV-Communality and the indicator of investigation of CV-Redundancy were used; the share index evaluates the quality of the measurement model of each block. The redundancy indicator measures the

structural model for each endogenous block by considering the quality measurement model. The positive values of these indexes indicate the appropriate and acceptable quality of the measurement and structural model. In Table 5, the values of each of the related indicators to the independent and dependent variables are presented; the indicators are positive and greater than zero, therefore the model has a good reliability.

**Table 5: the evaluation of the model reliability with the CV-Communality (CV Com) and CV-Redundancy (CV Red) indicators**

Variables	CV Com	CV Red
cultural Intelligence	0.083	0.083
Metacognition	0.31	0.24
Cognition	0.31	0.34
Motivational	0.28	0.32
Behavior	0.34	0.27
past Orientation	0.09	0.008
present Orientation	0.05	0.001
Futurer Orientation	0.15	0.02

### Results and findings

This study has been conducted in order to obtain an appropriate understanding of the effect of cultural intelligence on the time orientation dimensions of decision-makers of the selected governmental organizations of the two Gilan and Zanjan provinces.

*The first result:* cultural intelligence is effective on the future orientation dimension of the time orientation of managers and experts (decision makers).

*The second result:* According to hypotheses' test, cultural intelligence does not affect the past orientation and present orientation dimensions.

*The third result:* the priority of the dimensions of the time orientation of the managers and experts are as follows: future orientation (average of 3.12), the past orientation (average of 2.62), and the present orientation (average of 2.38).

*The fourth result:* the level of the enjoyment of the governmental managers and experts from the cultural intelligence components is as follows: metacognitive (average of 3.38), motivational (average of 3.19), cognition (average of 2.53) and behavioral (2.50).

*The fifth result:* half of the respondents have a good metacognitive cultural intelligence.

*The sixth result:* in the cognitive dimension of the cultural intelligence, 51.2 percent of the people have proper status in understanding the issues and cross-cultural differences.

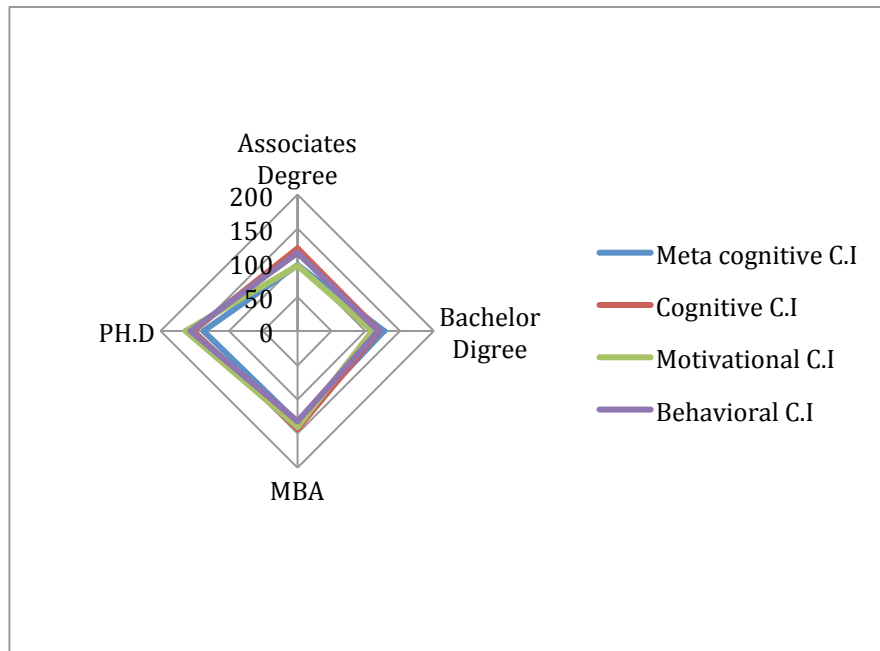
*The seventh result:* 59% of the managers and experts have a consistent interest and motivation in the cross-cultural situations.

*The eighth result:* 44% of the people correct their verbal and nonverbal actions at the time of the cross-cultural interactions.

*The ninth result:* According to the obtained results, we can say that the main disadvantage of the managers and experts in this research is the behavioral dimension of cultural intelligence that includes the verbal and nonverbal behaviors.

*The tenth result:* by increasing the level of education, the cultural intelligence components of the managers will significantly increase (except for the metacognitive cultural intelligence);

Table 6: the relationship between educational level and cultural intelligence.



*The eleventh result:* the four dimensions of cultural intelligence among the managers of governmental organizations (the members of the study sample) have no significant relationship with each other (according to Kruskal-Wallis test).

*The twelfth result:* The mean of the behavioral Cultural Intelligence of the managers of Gilan province is more than the mean of the behavioral Cultural Intelligence of the managers of the managers of Zanjan province; (140.35 vs 1198.84), (according to Kruskal-Wallis test)

## Conclusion

Increasing the level of cultural intelligence only improves the level of future orientation (the third component of time orientation) of the decision maker managers and decision-making experts in the investigated governmental organizations of Iran; the future orientation of these managers is (0.52) more than their past orientation (0.43) and present orientation (0.39). But, all of the three components are at the mid-level, and they should be increased. The investigated Iranian governmental decision-making and decision-maker people have the metacognitive cultural intelligence (average of 3.38) more than all of the aspects, and have the behavioral cultural intelligence (2.50) less than all of the aspects; the level of motivational cultural intelligence (average of 3.19), and cognitive cultural intelligence (average of 2.53) of these people is between the range of those two aspects.

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