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# Designing a Business Management Competency Model for Iranian Industrial and Manufacturing Organizations

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## Abstract

This study aims to design a management competency model for Iranian industrial and manufacturing organizations. This study uses a descriptive-survey method in which 256 managers of Iranian industrial and manufacturing organizations were sampled by purposive sampling and then studied in 2012 and 2013. Data collection was carried out by a research-made questionnaire. The instrument validity was assessed and verified based on the comments of university professors who were dealing with the subject of this study, while taking advantage of principal component analysis method and latent variables measurement fit using confirmatory factor analysis. The reliability was measured by Cronbach's alpha which revealed a reliability of (R=90%), and as it can be claimed that the instrument enjoys a good reliability. To test the hypotheses of this research, structural equation modeling was used. The results verify all leading and alternative hypotheses of this study and reveal the existence of relationship between the competencies of management competency model for Iranian industrial and manufacturing organizations. The variable of business management enjoys the highest level of effectiveness. In other words, it enjoys the most significant relationship with management competency and then come the variables of managing others and managing self, respectively.

## Key words

Management Competency Model, Business Management, Structural Equations, Industrial and Manufacturing Organizations

## INTRODUCTION

Organizational management has now been forced to focus on the recently-developed phenomena such as global competition, increasing and changing expectations of key customers, growing unions, partnerships, mergers and purchasing the ownership of organizations, as well as rapid technological advances and increasing and changing expectations of the employees concerning working conditions, and the presence of talented people in different countries including Iran and ever-increasing globalization of organizations. Globalization of business, development of new information and communications technologies, growing significance of the role of human resources, quality orientation and customer orientation as well as increasing number of business plans and competitiveness, etc have forced many organizations (large and small, public or private) to be flexible, learning and competitive in responding to such challenges and also to focus more than ever on promoting their leadership and management competencies. Hence, management development is being more increasingly used in many organizations and the urgency of applying management competency model is deeply felt especially in the industry and manufacturing sector.

A matter that is being more widely discussed during these years is that competencies and their roles help an organization deal with an increasingly changing setting (Heffernan & Flood 2003:32). The development and assessment of managerial competencies have been addressed by organizations since mid-1980s. The main reason for such an attention was rooted in this belief that the development of managerial competencies brings numerous interests and profits to organizations. This belief is still working (Heffernan & Flood 2003:32). As a fundamental strategic principle, the competency-driven approach toward the personnel can be considered as a link between the employees and their organization. Relying on the competencies of its employees, an organization can compete with other organizations at international level (Dubois and Rothwell, 2004).

## Competency

Professional competencies can be differently defined and applied from one organization to another, based on the purposes and objectives they aim to reach (Lee, 2006). Basic competencies are defined as knowledge,

attitude, skill and behaviors that lead to a better accomplishment of plans (Maddy et al, 2002). Ulrich, Brockbank, Yeung & Lack (1995); Blancero, Boroski & Dyer (1996); Mirabile (1997); Armstrong (1999); Kitano (2001); and Bonder (2003) described competency as knowledge, skill, ability and other behavioral characteristics required for job performance, while other researchers such as Spencer (1994); Fleishman, Estrogen, Ullman, Marshall & Mies (1995) believe that competencies represent a combination of motivation, self-concept characteristics, attitudes, values, behavioral knowledge or skills which can differentiate between middle and senior management. Some others like Strobler & Green (1999) have taken competencies as equivalent to the written description of work habits and minimum measurable performance standards. McLagan (1996); Slivinski (1996); and Mitrani, Dalziel & Fitt (1992) have defined competency as an underlying characteristic of a person which results in effective or superior performance in a job (Latifi, 2004).

According to Prahalad and Hamel (1990) cited in Biham & Myer (2000), organization competencies (a) provide us with the opportunity to access different markets; (b) play a significant role in coming to a common understanding of organization interests so that it will be much more than the value and interests of competing organizations; (c) it is not easy for competitors to imitate.

Managerial competencies consist of a set of knowledge skills, abilities and motivations for proper accomplishment of tasks prescribed by manager (GGN Consulting Institute, 2004).

### **Competency-Based Management**

Competency-based management (CBM) is a coherent approach and a coherent and consistent framework for long-term management of human resources and it is compiled based on a shared set of competencies related to national macro-strategies.

Theoretical concepts of CBM have been analyzed based on different approaches. Some of most significant approaches are: psychological or psychometric approach, strategic approach, empowerment approach, leadership approach, and system approach (Ramezani, 2004).

### **Features of Competency-Based Management System**

The main goal of competency-based management system is to develop the spirit of managing-self and to improve individual and collective behavior based on effectiveness and empowerment. Hence, such an organization has a participative management and widely provides the opportunity for improvement and growth based on competitive processes. In such an organization, quality assessment criteria are comprehensive and rely on end come, learning process and growth, and multiple sources (employees, customers, managers, etc) are referred to for the evaluation of individuals, and the upgrading is applied based on competency-based seniority. Regarding structural features, in a competency-based system structures are not fixed and stable and depend on horizontal values and their scope of performance is based on national, regional global developmental attitude (Dehghanan, 2001).

### **Competency-Driven Approach**

Hunt and Wallace have identified 3 approaches for the subjects concerning the competency of managers:

1. Competency is the characteristics of people and includes knowledge, skills and specialties all of which are measurable and quantifiable based on preset criteria (Klemp & McClelland, 1986; Gonezi, Oliver, 1990).
2. Competency is attributed to the specifications by which one can perform the jobs expected in certain situations in the best possible manner (National Training Board, 1990., Dallalba, Sandberg, 1995). Based on this approach, the specifications of people is identified and evaluated based on specific organizational needs or prescribed tasks.
3. Determination of the bases of competency and specialty is situation-dependent (Hunt & Wallace, 1989; Buchanan & Boddy, 1992). This means that the best way for coming to a successful performance is to recognize the major mechanism of organization and its strategic activities and then, to determine the skills required for that. Governmental organizations are usually unable to precisely specify strategic goals and to define their useful activities without ambiguities (Kamoche, 1996; Sandberg, 1991).

### **Levels of Competency**

Competency can be distinguished for individual, organizational and strategic competency. At individual level, competency is defined as the potential knowledge and skills, capacities (capabilities) and competences of the employees. At organizational level, it is the specific method used for incorporating various sources of organization. In other words, competency is the mutual combination of knowledge and skills of employees with other resources of organization such as the knowledge of systems, current affairs, technological procedures and productions. At strategic level, competency is the development and maintenance of competitive superiority by a certain combination of knowledge, skills, structures, strategies and procedures (Haunstein, 2000).

## Competitive Advantage

Many studies have been carried out so far for the identification of the main factors affecting competitive advantage and also the ways for preserving the competitive advantage. Distinctive capability (Peters, 1984), organizational culture (Barany, 1986), organizational capabilities (Ulrich, 1992), more access to the resources or customers and limiting the rivals (Punkj, 1986), information technology (Porter and Miller, 1998), geographic advantages (Kevin, 1993), and protection against five competitive forces (Porter, 1979) are referred to the origins for the development of competitive advantage (Hamidizadeh & Hosseinzadehshahri, 2008).

## Competency Models

Freedenberg (2004) has suggested a hierarchical model of competencies that includes reasoning, occupational, effective, communicative, interpersonal, group-based and organizational competencies. Moreover, management competency model of Creep & Mansfield (2003) includes three levels of competency, i.e. at employee level, job level and self-management level. At employee's level, the required competencies are communication, influencing and leading others, and the competencies needed at job level are achievement of results and following up and solving problems, and self-management level consists of the competencies of self-esteem, stress management, reliability, and flexibility. Stone's competency model encompasses personal effectiveness, organizational effectiveness, performance-orientation, communications, development and involvement of others and technical specialty. The competency triangle model suggested by Evens et al (2003) includes strategic business skills, personal capability, cultural skills and change and skills of human resources (Iranian Industrial Development and Innovation Organization, 2005).

Competency Institute (2005) cited in Labadi (2007) has suggested professional competencies of managers as follows:

1. Knowledge competencies including (a) applied foundational knowledge; (b) professional knowledge;
2. Professional Practical competencies;
3. Administrative function and process;
4. Managing-self competencies;
5. Communications;
6. Mobilizing innovation change.

Pedler (1968) listed management competencies as such: social skills, coordination, problem-solving, decision making, mental agility, balanced learning, professional knowledge, relevant professional understanding, emotional resilience and continuing sensitivity to events.

Sherman et al (2001) summarized managerial competencies under seven categories: leadership skills, educational leadership, resource allocation and management, staff management and supervision, planning and reporting, professional development measures and collective involvement.

UNIDO (2002) pinpoints fourteen managerial competencies. These competencies include: strategic thinking and scenario-building, analysis, problem-solving and decision making, planning and organizing, change management, managing organizational groups, team leadership, information management, innovation and creation, mediation and negotiation, mentoring and coaching, facilitation and group moderation, presentation and public speaking, and interviewing.

Koontz et al have referred these four features as the characteristics of managers: tendency to manage, ability to communicate and have mutual understanding, honesty, and experience as a manager (Koontz & Wehrich, 2006).

## Content Analysis Matrix for Competency Models

Here, the content analysis matrix has been presented for some prevalent management competency models applied in industrial and manufacturing organizations of Iran and other countries.

Table 1. Content analysis matrix for management competency models most widely used in industrial and manufacturing organizations of Iran and other countries

	McConnell Research (2003)	Young Research (2008)	Research on International Financial Institutions	Ford Co.	UN	IDRO Model	Industrial Management Organization	Saipa	Gas Co.
1	Analytical thinking	-	Intelligence and Innovation	Innovation	Creativity	Perceptual skills	Analytical thinking Systemic thinking Creative thinking	Basics of thinking	-

2	Communicative skills Effective hearing Writing skills negotiation	Effective hearing	Communications	Communications	Communicative skills and abilities	Communicative skills	Oral communication Written communication Effective communication	Interpersonal skills	Interpersonal communications Written communications Oral communications
3	-	-	Team building Spirit of cooperation	Team work	Team work	Team work	Spirit of cooperation Understanding others Team building and network building	Team work	-
4	Conflict management Coaching Stress management	Developing others	Conflict management	Staff training	Commitment to continuing education	People management	Motivation Training others Participation and delegation	Training others Conflict management	-
5	Flexibility Accountability Initiative Imagination Energy/perseverance	Trust building Flexibility and compatibility	Tenacity/persistence/insistence	Integrity of character Behavioral stability Venture Perseverance, endurance	Accountability and responsibility	Personal traits	Self-confidence Accountability	Personal attitudes	Personal traits and attitudes
6	-	Creating a vision Business talent Entrepreneurship spirit Attracting new customers Customer-orientation Knowledge sharing	Computer and industry knowledge	Business talent Systematic thinking Qualitative methods	Customer-orientation Technologic awareness	Commercial talent	Environmental awareness Financial and economic awareness Realizing competition and market	Commercial thinking Customer-orientation	Technical-specialized

## Review of Related Literature

A review of related literature reveals that the studies carried out by Abtahi (1998); Kio (1993); Abolalaei & Ghaffari (2006); the Industrial Development & Renovation Organization of Iran (IDRO) (2005); Freedenberg (2004); Cary and Goleman (2001); Caret Evens et al (2003); Siugzdiniene, Tobias Ley, et al (2006); Marelli (1998); Sung Yong Chun (2000); Cartwright (2007); Alipour & Dargahi (2007); Rothwell & Dubois (2004); Holey, English & Steffi (1998); Nourani (2001), Shoji translated by Aghdasi (2001); Abbaszadeh (1997); Porter & Miller (1998); Project Management Institute (2004); Van Dama Karan (2004); Orde, Owens & Livas (2008); Helen Abele (2008); Ghafarian (1999); Khajei (2002); Competency Institute (2002) Ramdan (2001); Van Dama Karan (2004); Orde, Owens & Livas (2008); Erma Jane (2005); Helen Abele (2008); Labadi (2007) and Farahi Boozjani (2005) reveal the presence of a significant positive relationship between management

competency model and the competencies of managing self, managing others and business management. They also indicate a significant positive relationship between the competency of managing self and the competencies of self-competence, stress management, time management, flexibility and creativity. There is also a significant positive relationship between the competency of managing others and the competencies of oral communication, group work ability, written communication, team work, and influencing others. Finally, they supported a significant positive relationship between the competency of business management and the competencies of strategic thinking, business talent, customer orientation, knowledge and organizational integrity and coherent.

### Conceptual Model of Research

As management competency model is a crucial issue in Iran, this research seeks to study industrial and manufacturing industries of Iran focusing on their enjoyment from the components of management competency model. After studying and analyzing the theoretical literature and the suggestions made by experts of this field, and carrying out content analysis on patterns and models and the comments provided by different competency models implemented in Iran and other countries including the competency model of American Management Association (2008); Prentice studies (1996); Margerison & Kakabars (1986); Cameron (1984); Husinger (1978); Spance and Pratagus (2004); Peteraf & Bergen (2003); Ray (2004); Hamel & Prahaland (1994); Hamel & Prahaland (1990); Gold & Campbell (1994); Project Management Institute Model; Project Manager Competency Development Model; Slocum Competency Model; Bodille Management Competency Model (1985); Competency Model of Richardson & Thompson 4 (1995); Project Management Competency Model (2004); McConnell's Research (2003); Young's Research (2008); Ford's Model; UN; IDRO's Model; Industrial Management Organization; Saipa; Gas Co; and the studies carried out by Rohani (2010); Ardalan (2010); Dehghan (2011); Feiz (2010); Eskandarzadeh (2011); Katter (1990); Koontz & Poncer (2007); Gonzales (2004); Spendura (2007); Land (2003); Harvey (2004) and Rezayat (2011), then the main components and variables related to each component were specified. These components include managing-self (self-confidence; stress management; time management; flexibility; creativity); managing others (team work; the ability of group work; oral communication; written communication; influencing and affecting others); and business management (strategic thinking; business talent; customer-orientation; knowledge and organizational solidarity). Then, confirmatory factor analysis was used to study the relationship between variables. The conceptual model is illustrated in figure 1.

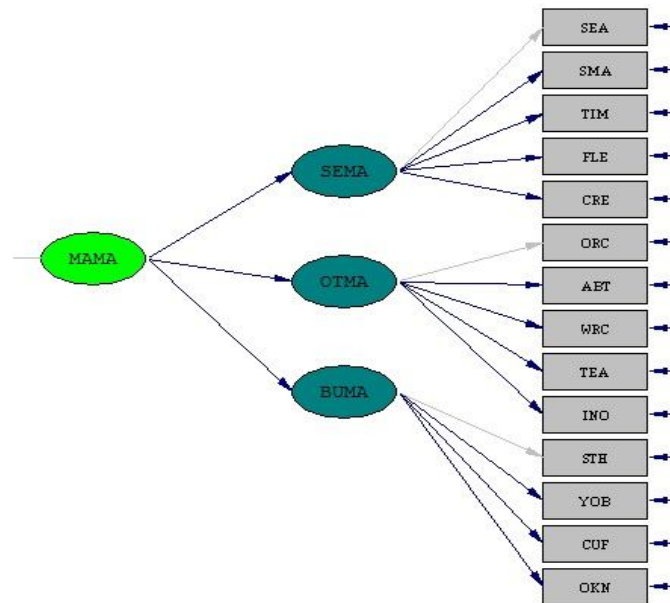


Figure 1. Conceptual Model of Competency Management in Iranian Industrial and Manufacturing Organizations

Table 2. Management Competency Model

Management Competency Model of Iranian Industrial and Manufacturing Organizations			
Row	Managing-self	Managing others	Business management
1	Self-confidence	Oral communication	Strategic thinking
2	Stress management	Ability of group work	Business talent
3	Time management	Written communication	Customer orientation
4	Flexibility	Team work	Knowledge and organizational solidarity
5	Creativity	Influencing others	

### Leading Hypotheses of Research

1. Management Competency Model has a significant positive relationship with managing self;
2. Management Competency Model has a significant positive relationship with managing others;
3. Management Competency Model has a significant positive relationship with business management;

### Alternative Hypotheses of Research

4. The competency of managing-self has a significant positive relationship with the competencies of self-confidence, stress management, time management, flexibility and creativity.
5. The competency of managing-others has a significant positive relationship with the competencies of oral communication, group work ability, written communication, team work, and influencing others.
6. The competency of business management has a significant positive relationship with the competencies of strategic thinking, business talent, customer orientation, knowledge and organizational solidarity.

## METHODOLOGY

### Research Method

The purpose of this study is to identify the causal relationships between the competencies of managing-self, managing others and business management with management competency model. Hence, this study is an applied study with regard to its purpose, it uses a descriptive method of data collection and data analysis; more precisely it applies correlation models specifically, Structural Equation Modeling. Structural Equation Modeling is a general and strong multivariate analysis technique from the group of multivariate regression analysis. In other words, it is the expansion of general linear model that enables the researcher to test a set of regression equations simultaneously. Structural Equation Modeling is a comprehensive statistical approach for testing the hypotheses on the relationships between the manifest variables and latent variables, sometimes called covariance structure analysis, causal modeling or Lisrel modeling (Hooman, 2005).

### Statistical Testing Methods

Statistical techniques of SPSS and LISREL were used in this study to carry out data analysis. For descriptive data analysis, frequency distribution tables, central tendencies (frequency and mean), distribution indices (standard deviation) were used. Considering the hypothesis, specifications of variables, sample size and statistical assumptions, the statistical techniques of structural equation modeling, especially covariance matrix analysis was used separately for each hypothesis to carry out inferential data analysis.

### Research Instrument

A researcher-made questionnaire was designed in this study based on behavioral criteria, sub-criteria and indicators used in management competency model including 14 components (sub-criteria) derived from 3 main components (criteria) which results from the integration of different competency models. The questionnaire includes 42 items based on which three components of managing-self, managing others and business management are measured. It should be noted that the validity of the questionnaire was verified by consulting with professors and specialists. To ensure the validity of the instrument, latent variables model fit was assessed using confirmatory factor analysis.

Cronbach's alpha, which is number between zero and one, was used to assess the reliability and internal consistency of the questionnaire and result showed a reliability of 90%. This reliability, which is calculated through distributing 30 questionnaires in the statistical population in pre-test step and then collecting them, shows the internal consistency of

the questionnaire.

Table 3. Cronbach's Alpha for different sections of the questionnaire of Management Competency Model

Row	Main Factors	Cronbach's Alpha
1	Managing-self	0.934
2	Managing others	0.932
3	Business management	0.930

### Statistical Population and Sample

The statistical population consists of all elements and individuals sharing one or more attributes within a certain geographic scale (Hafeznia, 2008, p. 119). The statistical population of this study includes senior managers, intermediate managers and staff of industrial and manufacturing companies of Iran, most specifically Khorasan Steel Complex Co., Mobarakeh steel Co. and several other organizations. The data collection was carried out on a cyclical basis in 2012 and 2013.

Sample usually consists of a group of the population members who represent that population, that is to say, they possess the features and specifications of the members of that community. Relying on the structure of the statistical population, the sample was selected based on purposive sampling and the sample size was 256 managers.

### Descriptive Statistics

Here, the descriptive features of the main and secondary variables of the study.

### Describing research variables

Three variables of managing-self, managing others and business management have been studied focusing on management competency model.

Table 4. Descriptive Results of Research Variables

Variable	Frequency	Mean	SD	Min.	Max.
Managing-self	256	2.8000	.44174	2.00	3.80
Managing others	256	3.0000	.42101	2.00	3.60
Business management	256	2.9167	.43245	2.00	3.75
Self-confidence	256	3.0000	.55429	2.00	4.00
Stress management	256	3.0000	.53221	2.00	4.00
Time management	256	2.6667	.58515	1.67	4.00
Flexibility	256	3.0000	.60110	2.00	4.00
Creativity	256	2.6667	.56641	2.00	4.00
Oral communication	256	3.0000	.52985	2.00	4.33
Group work ability	256	3.0000	.58164	2.00	4.33
Written communication	256	3.0000	.56914	2.00	4.33
Team work	256	3.0000	.53766	2.00	4.33
Influencing others	256	3.0000	.57075	2.00	4.00
Strategic thinking	256	3.0000	.58510	2.00	4.00
Business talent	256	3.0000	.55941	2.00	4.00
Customer orientation	256	3.0000	.54069	1.67	4.33
Organizational knowledge and solidarity	256	3.0000	.55231	2.00	4.00

As the data analysis reveals the competency of managing others enjoys the highest mean among all other competencies and business management and managing-self stand in the following positions with the means of 3.95 and 3.92, respectively.

## ANALYSIS OF FINDINGS

### Structural Equation Modeling for Management Competency Model

Here, Structural Equation Modeling (SEM) is used to analyze the conceptual model of research. Firstly, the correlation between manifest and latent variables was investigated, and then the model fit was analyzed based on standard coefficients and t-test as well as model fit indicators and the model was suggested based on them.

### Correlation Analysis of Manifest Variables of Management Competency Model

Table 5. Correlation of Manifest Variables in the Model

Variable	Self confidence	Stress management	Time management	Flexibility	Creativity	Oral communication	Group work ability	Written communication	Team work	Influencing others	Strategic thinking	Business talent	Customer orientation	Organizational knowledge and solidarity
Self confidence	1													
Stress management	0.17**	1												
Time management	0.15**	0.17**	1											
Flexibility	0.13**	0.18**	0.20**	1										
Creativity	0.11**	0.13**	0.20**	0.20**	1									
Oral communication	0.08**	0.12**	0.14**	0.16**	0.15**	1								
Group work ability	0.09**	0.09**	0.10**	0.13**	0.14**	0.15**	1							
Written communication	0.10**	0.12**	0.10**	0.12**	0.11**	0.16**	0.19**	1						
Team work	0.10**	0.07**	0.11**	0.10**	0.11**	0.11**	0.16**	0.14**	1					
Influencing others	0.14**	0.13**	0.13**	0.10**	0.08**	0.12**	0.13**	0.13**	0.13**	1				
Strategic thinking	0.15**	0.12**	0.13**	0.14**	0.12**	0.12**	0.14**	0.13**	0.14**	0.17**	1			
Business talent	0.14**	0.13**	0.09**	0.11**	0.13**	0.13**	0.14**	0.12**	0.11**	0.17**	0.18**	1		
Customer orientation	0.17**	0.11**	0.10**	0.10**	0.11**	0.07**	0.12**	0.09**	0.13**	0.11**	0.15**	0.13**	1	
Organizational knowledge and solidarity	0.18**	0.16**	0.13**	0.13**	0.12**	0.12**	0.10**	0.09**	0.09**	0.13**	0.14**	0.14**	0.13**	1

\*\*P&lt;0.01

The results of this table reveal that the most correlation exists between the variables of flexibility and time management; the variables of creativity and time management; the variables of creativity and flexibility with the correlation of 0.20 and the smallest correlation exists between the variables of team work and stress management; and customer-orientation and oral communication with the correlation of 0.07. There is a significant relationship between all variables in the correlation model (P<0.01).

### Correlation Analysis between the Latent Variables of Management Competency Model

Table 6. Correlation of Latent Variables in the Model

Variable	Managing self	Managing others	Business management	Management competency model
Managing self	1			
Managing others	0.72**	1		
Business management	0.82**	0.84**	1	
Management competency model	0.84**	0.86**	0.98**	1

\*\*P&lt;0.01



The results of this table indicate that the highest correlation exists between the variable of management competency model and business management with the correlation coefficient of 0.98 and in the second position stands the correlation between management competency model and managing others with the coefficient of 0.64. The lowest correlation coefficient was observed between the variables of managing others and managing self with the correlation of 0.72. The significance level of these correlations is 0.01.

**Management Competency Model Fit**

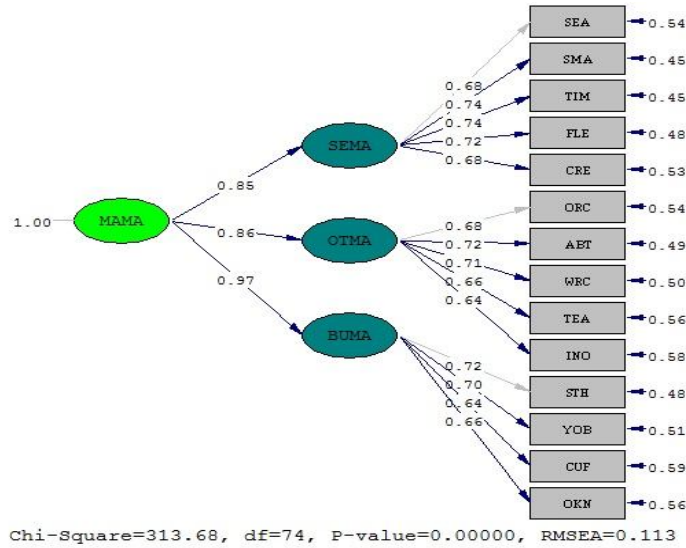


Figure 2. Standardized Coefficients of Second-Order Confirmatory Factor Analysis for Management Competency Model

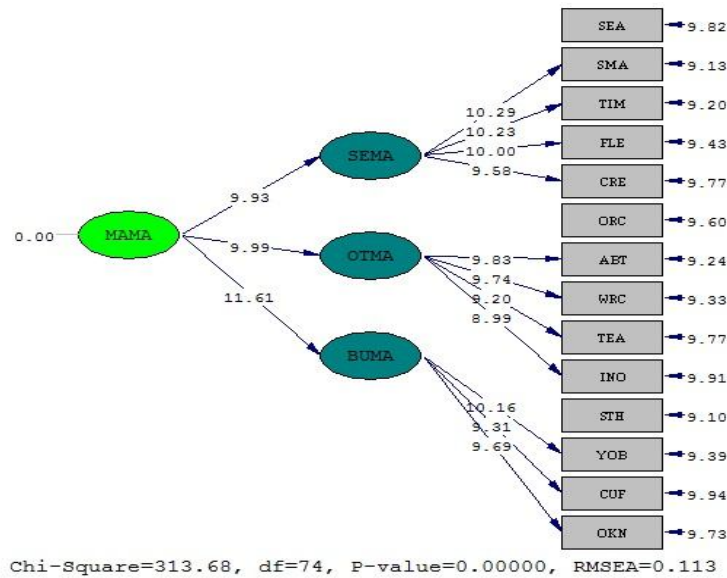


Figure 2. T-test results for the significance of Second-Order Confirmatory Factor Analysis Model for Management Competency Model

The data of table 35-4 was used to analyze the fit of model tested by conceptual model because the data provides us with the opportunity to interpret fit indicators together.

Table 7. Fit Indicators of Research Model

Fit Indicator	Suggested Criterion	Results of this Study	Conclusion
RMSEA	≤0/10	0.011	Verified
$\chi^2/df$	>5	4.91	Verified
GFI	≥0.90	0.85	Verified
AGFI	≥0.90	0.79	Verified
CFI	≥0.90	0.94	Verified
NFI	≥0.90	0.93	Verified

According to the results obtained in figure 2-4, it is concluded that all coefficients calculated in the modified model are significant ( $t > 1.96$ ). Moreover, the results of the table reveal that the model obtained here enjoys good adaptive indicators and fit indicators indicate that the model is a useful one. RMSEA equals 0.011 which is considered as a good fit for the model. Other fit indicators such as NFI, CFI, AGFI and GFI, specially CFI (0.94) are also considered as good model fit indicators with values close to 1.

## Findings on Research Hypotheses

Here, the hypotheses are tested based on the model.

### Leading Hypotheses of Research

First Hypothesis: Management Competency Model has a significant positive relationship with managing self.

Table 8. Analysis of the Relationship between the factor of managing self and the factor of competency model

Direction	Standardized coefficients	t value	Sig.	N	Result
Competency Model → Managing Self	0.85	9.93	0.01	256	

The results of structural equation modeling indicates that the relationship between competency model and managing self is 0.85 and considering t-value of 0.93 which is larger than 1.96, this hypothesis is verified at significance level of 0.01 and it can be concluded that competency model has a positive relationship with managing self.

### Second Hypothesis: Management Competency Model has a significant positive relationship with managing others.

Table 9. Analysis of the Relationship between the factor of managing others and the factor of competency model

Direction	Standardized coefficients	t value	Sig.	N	Result
Competency Model → Managing others	0.86	9.99	0.01	256	

The results of structural equation modeling shows that the relationship between competency model and managing others is 0.86 and considering t-value of 0.99 which is larger than 1.96, this hypothesis is verified at significance level of 0.01 and it can be concluded that competency model has a positive relationship with managing others.

### Third Hypothesis: Management Competency Model has a significant positive relationship with Business Management.

Table 10. Analysis of the Relationship between the factor of business management and the factor of competency model

Direction	Standardized coefficients	t value	Sig.	N	Result
Competency Model → business management	0.97	11.61	0.01	256	

The results of structural equation modeling shows that the relationship between competency model and business management is 0.97 and considering t-value of 11.61 which is larger than 1.96, this hypothesis is verified at significance level of 0.01 and it can be concluded that competency model has a positive relationship with business management.

**Fourth Hypothesis: Competency of managing-self has a significant positive relationship with the competencies of self-confidence, stress management, time management, flexibility and creativity.**

Table 11. Analysis of the Relationship between the factors of self-confidence, stress management, time management, flexibility and creativity, and the factor of managing-self

Direction	Non-Standardized coefficients	Standardized coefficients	t value	Sig.	N	Result
Managing-self → self-confidence	0.38	0.68	--	0.01	256	
Managing-self → stress management	0.40	0.74	10.29	0.01	256	
Managing-self → time management	0.44	0.74	10.23	0.01	256	
Managing-self → flexibility	0.44	0.72	10.00	0.01	256	
Managing-self → creativity	0.39	0.68	9.58	0.01	256	

As it can be observed, based on what is obtained from structural equation modeling it can be concluded that among all indicators and components of self-management competency, stress management and time management with standardized coefficient of 0.74 and t-values of 10.29 and 10.23, respectively, show the highest degree of relationship with self-management. The next position belongs to flexibility with standardized coefficient of 0.72 and t-value of 10.00. The competencies of creativity and self-confidence reveal to be the last indicators of self-management with standardized coefficients of 0.68 and t-values of (09.58) and (-), respectively.

**Fifth Hypothesis: Competency of managing others has a significant positive relationship with the competencies of oral communication, ability of group work, written communication, team work and influencing others.**

Table 12. Analysis of the Relationship between the factors of oral communication, ability of group work, written communication, team work and influencing others, and the second-order factor of managing others

Direction	Non-Standardized coefficients	Standardized coefficients	t value	Sig.	N	Result
Managing others → oral communication	0.36	0.68	-	0.01	256	
Managing others → ability of group work	0.42	0.72	9.83	0.01	256	
Managing others → written communication	0.40	0.72	9.74	0.01	256	
Managing others → team work	0.36	0.66	9.20	0.01	256	
Managing others → influencing others	0.37	0.64	8.99	0.01	256	

As it can be observed, based on what is obtained from structural equation modeling it can be concluded that among all indicators and components of the competency of managing other, the ability of group work and written communication with standardized coefficient of 0.72 and t-values of 9.83 and 9.74, respectively, show the highest degree of relationship with the competency of managing other. The next positions belong to the competencies of oral communication and team work with standardized coefficients of 0.68 and 0.66, and t-values of (-) and 9.20, respectively. The competency of influencing others reveals to be the last indicator of the competency of managing others with standardized coefficient of 0.64 and t-value of (08.99).

**Sixth Hypothesis: Competency of business management has a significant positive relationship with the competencies of strategic thinking, business talent, customer orientation, organizational knowledge and solidarity.**

Table 13. Analysis of the Relationship between the factors of strategic thinking, business talent, customer orientation, organizational knowledge and solidarity, and the second-order factor of business management

Direction	Non-Standardized coefficients	Standardized coefficients	t value	Sig.	N	Result
Business management → strategic thinking	1.26	0.68	-	0.01	256	
Business management → business talent	0.39	0.70	10.16	0.01	256	
Business management → customer orientation	0.34	0.64	9.31	0.01	256	

tation							
Business management→ organizational knowledge and solidarity	0.36	0.66	9.69	0.01	256		

As it can be observed, based on what is obtained from structural equation modeling it can be concluded that among all indicators and components of the competency of business, business talent with standardized coefficient of 0.70 and t-value of 10.16, show the highest degree of indication or relationship with the competency of business management. The next positions belong to the competencies of strategic thinking and organizational knowledge and solidarity with standardized coefficients of 0.68 and 0.66, and t-values of (-) and 9.69, respectively. The competency of customer orientation reveals to be the last indicator of the competency of business management with standardized coefficient of 0.64 and t-value of (9.31).

## DISCUSSION AND CONCLUSION

The increasingly dominant belief during these years is that competencies and their roles help the organization confront this changing situation of business. In this regard, competency-based approach focuses on individuals and underlines the significance human resources for reaching organizational objectives (Heffernan & Flood, 2003:32).

This study investigates the effects of competencies that have been used for the development of management competency model by Iranian industrial and manufacturing organizations. The findings show that all three leading hypotheses suggested regarding the relationship between these competencies and management competency model have been verified; therefore, it can be concluded that the factors of managing-self (self-management), managing others and business management have significant positive relationship with management competency model.

On the other hand, these findings reveal a significant relationship between the components and factors. That is to say, the indicators establishing the conceptual model of this study all of which are selected based on the available literature are fit for assessing the factors in mind. The results of leading hypotheses testing based on structural equation modeling reveal that: the competency of managing self has a significant positive relationship with the competencies of self-confidence, stress management, time management, flexibility and creativity at significance level of 0.01.

The competency of managing others has a significant positive relationship with the competencies of oral communication, group work ability, written communication, team work and influencing others at significance level of 0.01.

The competency of business management has a significant positive relationship at significance level of 0.01 with the competencies of strategic thinking, business talent, customer orientation, organizational knowledge and solidarity. The conclusion is that the causal model of management competency enjoys a good fitness.

It is highly significant for the management competency model used in Iranian industrial and manufacturing organizations to be consisted of competencies with significant positive relationships. The conceptual model and structural equation modeling had two results: classification of more significant components of each variable and verifying the hypotheses on significant relationships among factors affecting management competency model. The findings of this study are in agreement with the results obtained in previous studies of Abtahi (1998); Kio (1993); Abolalaei & Ghaffari (2006); the Industrial Development & Renovation Organization of Iran (IDRO) (2005); Freedenberg (2004); Cary and Goleman (2001); Caret Evens et al (2003); Siugzdiniene, Tobias Ley, et al (2006); Marelli (1998); Sung Yong Chun (2000); Cartwright (2007); Alipour & Dargahi (2007); Rothwell & Dubois (2004); Holey, English & Steffi (1998); Nourani (2001), Shoji translated by Aghdasi (2001); Abbaszadeh (1997); Porter & Miller (1998); Project Management Institute (2004); Van Dama Karan (2004); Orde, Owens & Livas (2008); Helen Abele (2008); Ghafarian (1999); Khajei (2002); Competency Institute (2002) Ramdan (2001); Van Dama Karan (2004); Orde, Owens & Livas (2008); Erma Jane (2005); Helen Abele (2008); Labadi (2007) and Farahi Boozjani (2005). Among all variables of management competency model, the variable of business management has the biggest relationship with management model and the variables on managing other and managing self have the second and third highest relationship with management competency model.

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