

Identification and Analysis of Effective Factors on the Strategic Intelligence of Education Districts Managers of Tehran City and Provide an Appropriate Model

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Article history:

Received date: 2022/02/5

Review date: 2022/06/15

Accepted date: 2022/06/21

Keywords:

Strategic Intelligence, Managers, Education

Purpose: This research was conducted with the aim of identification and analysis of effective factors on the strategic intelligence of education districts managers of Tehran city and provides an appropriate model.

Methodology: The present study in terms of purpose was applied and in terms of implementation method was descriptive from type of quantitative. The study population was managers, deputies and experts of the education nineteen districts of Tehran city in 2020 year, which based on the Krejcie and Morgan table the sample size was estimated 120 people who were selected by randomly sampling method. The research instrument was a researcher-made questionnaire of effective factors on the strategic intelligence of managers (113 indicators) which after two Delphi rounds with Kendall coefficient of 0.678 was designed by 15 experts and its content validity was confirmed by experts and its reliability was calculated by Cronbach's alpha method 0.921. Data were analyzed by exploratory factor analysis and structural equations modeling in SPSS-22 and Smart PLS-3 software.

Findings: The findings showed that the effective factors on the strategic intelligence of managers had 113 indicators in 21 components and 2 dimensions; So that the intra-organizational dimension were included 11 components of intelligent planning, support processes, communication processes, power of change and transformation, knowledge management, educational intelligence, moral intelligence, informational intelligence, organizational process intelligence, human resource intelligence and financial resources intelligence and extra-organizational dimension were included 10 components of business intelligence, environmental intuition thinking, technological intelligence, planning intelligence, social intelligence, competitors intelligence, policy-making, communication with people intelligence, targeting intelligence and environmental macro intelligence. Also, the factor load of all dimensions and components was higher than 0.40, their average extracted variance was higher than 0.50 and their reliability was higher than 0.70. In addition, the model of effective factors on the strategic intelligence of education districts managers had a good fit and the model had a significant effect on the intra-organizational and extra-organizational dimensions and the mentioned dimensions on the relevant components ($P < 0.05$).

Conclusion: The results showed two dimensions of intra-organizational and extra-organizational for the model of effective factors on the strategic intelligence of education districts managers. Therefore, to increase and enhance their strategic intelligence can be done by improving the dimensions and components of each of them.

Please cite this article as: Miri Rami SF, Delgoshaei Y, Mahmoudi AM. (2022), Studying Identification and Analysis of Effective Factors on the Strategic Intelligence of Education Districts Managers of Tehran City and Provide an Appropriate Model, *Iranian Journal of Educational Sociology*. 5(1): 113-125.

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1. Introduction

Organizations of today's era with large and small complex formations surround us and provide most of the various needs, in this situation, the administration and management of organizations require strong management, paying attention to the increasing changes and transformations of the internal environment, external environment and human capitals (Azadi, Eidipour, Bakhit & Ghaemi, 2021). Today's business world is a world full of rapid changes and transformations in today's complex environment, and for this reason, organizations are always faced with the challenges of environmental changes and transformations caused by the turbulence of the external environment, and the use of strategic intelligence can play an important role in their management (Nesello & Fachinelli, 2019).

The intelligence of the organization is a wide field of intelligence applications in the field of monitoring and analyzing various processes to optimize, predict, check the homogeneity and discover the processes of the organization, which identifies bottlenecks and bottlenecks and their causes in order to give the organization a better, more realistic and comprehensive understanding of how Provide implementation of business processes (Berges, et al, 2021). Strategic intelligence is the most extensive organizational intelligence, which is the basis of information, and during the process of strategic management, it can create opportunities and properly deal with challenges, and it helps organizational officials to make more appropriate and effective decisions in line with the success and realization of organizational goals (Arcos, 2016). Having intelligence and strategic thinking is the starting point of creating a vision, and managers and planners can draw the future vision of the organization by increasing their intelligence and strategic thinking skills and use appropriate strategies to realize them (Al-Dahhan & Al-Dahhan, 2019). Strategic intelligence is the most extensive organizational intelligence that brings necessary knowledge and information to the organization and helps the organization to design appropriate strategies to create value and cause the growth, development and progress of the organization (Alobidyeen & Al-Rawashdeh, 2020).

Intelligence means a set of abilities that gives a person the opportunity to solve or manage existing problems based on a specific cultural, social, political, economic, etc. environment in order to achieve appropriate productions (Azevedo, Duarte & Santos, 2022). Strategic intelligence means a realistic and appropriate understanding of the existing conditions and using it to formulate appropriate strategies to adapt to the changing environment and achieve organizational goals (Fachinelli & Alberdi, 2014). Therefore, strategic intelligence is the assessment of changes in today's competitive world in a certain period of time, which is created through awareness and changes in structure, competitors, new product substitutions and creative achievements (Falah & Anwar, 2021). Strategic intelligence means the ability to create the highest levels of information management in the competitive economic and political market through the collection, processing, analysis and dissemination of available information that enables the organization to act correctly and appropriately and make strategic decisions (Coyne & Bell, 2011).

Strategic intelligence is the ability to adapt and adapt to the ever-changing conditions of society, as opposed to moving in a fixed and smooth path. Because society is constantly changing and all the signals and signs of today's competition call us to adapt to changing conditions (McKie & Heath, 2016). This intelligence consists of the accumulation of different types of intelligence, which creates synergy or synergy with the interaction of business intelligence, competitive intelligence and knowledge management; So that it uses knowledge and information by creating added value in the organization's strategic decisions, and by providing information and knowledge and by creating added value in strategic decision-making, it creates suitable conditions to face future challenges and opportunities to increase the organization's success (Albarwari Sheri, Nori & Gupta, 2021). Strategic intelligence includes laws and guidelines, financial and tax affairs, economic and political scope and the category of human resources of the organization and this structure observes and analyzes the social, political and economic behaviors of an organization and based on components such as strategic vision, having human resources and Social, economic ability and political events are evaluated (Barnea, 2020).

Strategic intelligence plays an important role in strategic decision-making and creates competitive advantage and competitive intelligence in an organization (Mandel & Irwin, 2021). With the help of strategic

intelligence and using it, you can get a correct understanding of the current processes of society, predict and manage future changes, and use appropriate strategies to create added value (Locicero, et al, 2008). Therefore, strategic intelligence helps the organization to gain a correct understanding of the business environment, predict, control and manage future changes and developments, create value for the customer, and through the adoption of appropriate strategies, make the organization profitable in the current and future markets (Walsh & Harrison, 2021). In general, strategic intelligence supports the managers of organizations who are responsible for designing and implementing the organization's strategies and provides them with knowledge and information with added value for strategic decisions. In other words, this intelligence collects, networks, combines and analyzes information from the internal and external environment of the organization and helps managers to collect, analyze, analyze and distribute information (Zolfaghari, Karbala Aghaei Kamran & Hossinzadeh Shahri, 2018).

Although relatively many researches have been conducted on types of intelligence, few researches have examined the factors affecting strategic intelligence, and the results of the most important related researches are reported below. The research results of Zare, Noorbakhsh, Nourbakhsh, Shajie & Kafchek (2021) showed that the strategic intelligence model included 133 indicators in six components of macro-environmental intelligence, organizational resource intelligence, competitive intelligence, organizational process intelligence, managers' strategic intelligence and knowledge management. Dehghan Dehnavi, Nayeibzadeh & Falsafinezhad (2021) came to the conclusion that in the paradigm model of organizational intelligence, technological factors, organizational resources and innovations as causal conditions, organizational culture and structure as background conditions, macro factors and management factors as intervening conditions, process And organization strategy, extra-organizational communication and organizational knowledge were identified as strategies and organizational participation and organization performance as its consequences. In another study, Shehenaz Fadhil, Buraq Talib & Adel Abbas (2021) reported that strategic intelligence had four components: information systems, knowledge management, competitive intelligence, and business intelligence, which played an important role in creating sustainable competitive advantage. Aramseresht, Bagherzadeh, Mehrara & Tabari (2020) researched the comprehensive model of strategic intelligence including six components of information management intelligence (with the sub-components of infrastructure preparation, database storage, clarification, measurable criteria, correct information and detection of deviation from goals), management Knowledge (with the sub-components of documentation, use of people's knowledge, decisions based on knowledge, knowledge sharing, implementation of people's ideas and documentation), business intelligence (with the sub-components of extracting, transforming and loading information to transfer them, information circulation, access levels, existence of information , sharing information and comparing program and performance), human resource intelligence (with the subcomponents of the quality of the software system used, motivation, cooperation, reward, pride in the workplace and pursuing goals), intelligence of organizational processes (with the subcomponents of information forms, policy support, atmosphere ready for change, structural fit, alignment of activities and forecasting) and macro-environmental intelligence (with the sub-components of understanding environmental changes, transferring information to the reservoir, obeying the rules, adapting to the environment, recognizing the need for change and paying attention to changes).

The research results of Yousefi, Mostaghimi, Nasiri & Gorji (2019) showed that factors affecting competitive intelligence included market intelligence, strategic intelligence, competitors' intelligence, technological intelligence, social intelligence, and institutional intelligence. Kaskeh & Shokatabadi (2017) concluded in a research that the factors affecting the strategic intelligence of managers in national media included seven factors of emotional intelligence, creativity, self-directed learning, wisdom and reason, practical intelligence, cultural intelligence and social intelligence. In another study, Shariatnejad & Hakkak (2015) reported that the factors affecting strategic intelligence included two dimensions of internal strategic intelligence and external strategic intelligence; So that internal strategic intelligence includes four components of human resource intelligence (with the subcomponents of human resource ability, effort and perseverance, and organizational

support), organizational process intelligence (with the subcomponents of the main process, support process, and development process), information intelligence (with the subcomponents of communication technology, the power of knowledge and the power of information) and the intelligence of financial resources (with sub-components of financial information analysis, budgeting and risk management) and external strategic intelligence including four components of technological intelligence (with the sub-components of improving existing technology, identifying technological leaps and applied and fundamental research), intelligence of competitors (with the sub-components of pricing policies, understanding competitors' activities and competitor development policies), customer intelligence (with the sub-components of identifying current customer needs, identifying future customer needs and creative and new opportunities) and economic intelligence (with the sub-components of obtaining economic information, market analysis and direct access to information). Agha, Atwa & Kiwan (2014) introduced the factors affecting strategic intelligence including three factors of perspective motivation and ability to predict the future. Pellissier & Kruger (2011) concluded in a research that the three factors affecting strategic intelligence as a tool for strategic management include originality/value, identification and appropriate decision-making, which can lead to creating competitive advantage and continuous innovation in the organization.

The dynamics of today's organizations depends on appropriate, timely and effective decisions, which is created through intelligent and wise leadership, and leadership is one of the most important challenges of the current and future business world, and one of the main competencies that lead to success and effective leadership in managers Strategic intelligence. On the one hand, few researches have been conducted about strategic intelligence inside the country, and on the other hand, most of the researchers investigated its relationship with other variables, and little research was found on the identification and analysis of factors affecting it. Another important point is that the results of the present research can help specialists, officials and planners of different organizations, especially the education organization, in designing programs to improve various organizational characteristics, including creating and promoting the strategic intelligence of managers. As a result, this research was conducted with the aim of identifying and analyzing the factors affecting the strategic intelligence of the managers of education districts in Tehran and providing a suitable model.

2. Methodology

The current study was applied in terms of purpose and descriptive in terms of quantitative type. The research community was managers, assistants and experts of nineteen educational districts of Tehran in 2020, according to Karjesi and Morgan's table, the sample size was 120 people who were selected by random sampling. In this sampling method, a list of all managers, assistants and experts of nineteen education regions was prepared and a code was assigned to each of them, and with the help of a random number table, 120 of them were randomly selected by lottery.

The method of conducting the research was as follows: firstly, the theoretical foundations of the factors affecting the strategic intelligence of managers were studied, and based on that, a questionnaire was designed, and then experts were identified in the field, and the opinions of 15 of them were reviewed and applied through the Delphi method in two rounds became. In the first round of Delphi, Kendall's coefficient was 0.543 for 206 indicators and 0.678 for 113 indicators in the second round, which were significant at a significance level smaller than 0.001. Then, a list of all managers, assistants and experts of nineteen educational districts of Tehran was prepared and the desired sample was selected from among them. The samples were explained about the importance of the research and how to respond to the research tool, and after their consent to participate in the research, they were asked to answer the research tool presented below honestly and completely.

In this research, to collect data, a researcher-made questionnaire of factors affecting the strategic intelligence of managers was used. This tool was designed after two Delphi rounds with 15 experts with 113 indicators; So that each index is scored according to a five-point Likert scale of one (strongly disagree), two (disagree), three (no opinion), four (agree) and five (strongly agree) and a higher score indicates the more effective

factors in managers' strategic intelligence. In addition to confirming the researcher-made questionnaire of the factors affecting the strategic intelligence of managers after two rounds of Delphi by 15 experts with Kendall's coefficient of 0.678, the content validity was confirmed by the experts' tool and its reliability was calculated with Cronbach's alpha method of 0.921. Data were analyzed with exploratory factor analysis and structural equation modeling methods in SPSS-25 and Smart PLS-3 software.

3. Findings

In the findings section, first the assumptions of the report analysis method and then the results of the hypotheses are examined. Before conducting the exploratory factor analysis, its assumptions were checked that the KMO index with a value of 0.824 and Bartlett's sphericity test statistic with a value of 960.31 were significant at the 0.001 level, which indicated the adequacy of the sample and the necessary correlation. The results of the exploratory factor analysis of factors affecting the strategic intelligence of education managers in Tehran showed that the factors affecting the strategic intelligence of managers had 113 indicators in 21 components and 2 dimensions; So that the intra-organizational dimension includes 11 components of intelligent planning, support processes, communication processes, the power of change and transformation, knowledge management, educational intelligence, moral intelligence, information intelligence, organizational process intelligence, human resource intelligence, and financial resource intelligence, and the extra-organizational dimension includes 10 components. It was business intelligence, intuitive environmental thinking, technological intelligence, planning intelligence, social intelligence, competitors' intelligence, policy making, and communication intelligence with people, smart targeting and macro environmental intelligence. Also, the factor load of all dimensions and components of the factors affecting the strategic intelligence of managers was higher than 0.40, their average variance extracted was higher than 0.50, and their reliability was higher than 0.70 (Table 1).

Table1. The results of exploratory factor analysis of factors affecting the strategic intelligence of education managers in Tehran

Dimensions	Components	Average	factor load	AVE	Reliability (Cronbach's alpha)
Internal organization	11 components	3/416	0/823	0/725	0/891
	Smart planning	3/029	0/712	0/681	0/864
	Support processes	3/553	0/563	0/715	0/833
	Communication processes	3/507	0/681	0/841	0/765
	The power of change and transformation	2/998	0/715	0/563	0/922
	knowledge management	3/543	0/438	0/715	0/941
	Educational intelligence	3/070	0/713	0/621	0/840
	Moral intelligence	3/513	0/706	0/684	0/756
	Information intelligence	3/607	0/681	0/760	0/890
	Intelligence of organizational processes	3/565	0/846	0/655	0/935
	Human resource intelligence	3/612	0/581	0/591	0/815
External organization	Intelligence of financial resources	3/579	0/760	0/548	0/765
	10 components	3/556	0/817	0/714	0/934

Business intelligence	3/539	0/516	0/649	0/864
Environmental intuitive thinking	3/501	0/715	0/672	0/785
Technological intelligence	3/510	0/643	0/680	0/911
Planning intelligence	3/645	0/681	0/643	0/890
Social intelligence	3/560	0/792	0/592	0/764
Competitors' intelligence	3/538	0/812	0/580	0/861
policy	3/537	0/710	0/715	0/953
Intelligence to communicate with people	3/540	0/694	0/681	0/942
Smart targeting	3/591	0/719	0/712	0/815
Macro environmental intelligence	3/601	0/821	0/694	0/736

The fit indices of the model of factors affecting the strategic intelligence of education managers in Tehran indicated the appropriate fit of the said model. Because the value of R² index for endogenous constructs was equal to 0.562 and the value of GOF index for the overall fit of the model was equal to 0.524, these results indicated the appropriate fit of the model of factors affecting the strategic intelligence of education managers in Tehran. The results of structural equation modeling of the factors affecting the strategic intelligence of education managers in Tehran showed that the mentioned model is based on both intra-organizational and extra-organizational dimensions and the intra-organizational dimension on all 11 components of intelligent planning, support processes, communication processes, the power of change and transformation, knowledge management, intelligence Educational, moral intelligence, informational intelligence, organizational process intelligence, human resource intelligence, financial resource intelligence, and extra-organizational dimension on all 10 components of business intelligence, environmental intuitive thinking, technological intelligence, planning intelligence, social intelligence, competitors' intelligence, policy making, communication intelligence with People, intelligent targeting and macro environmental intelligence had a significant effect ($P < 0.05$) (Figures 1 and 2).

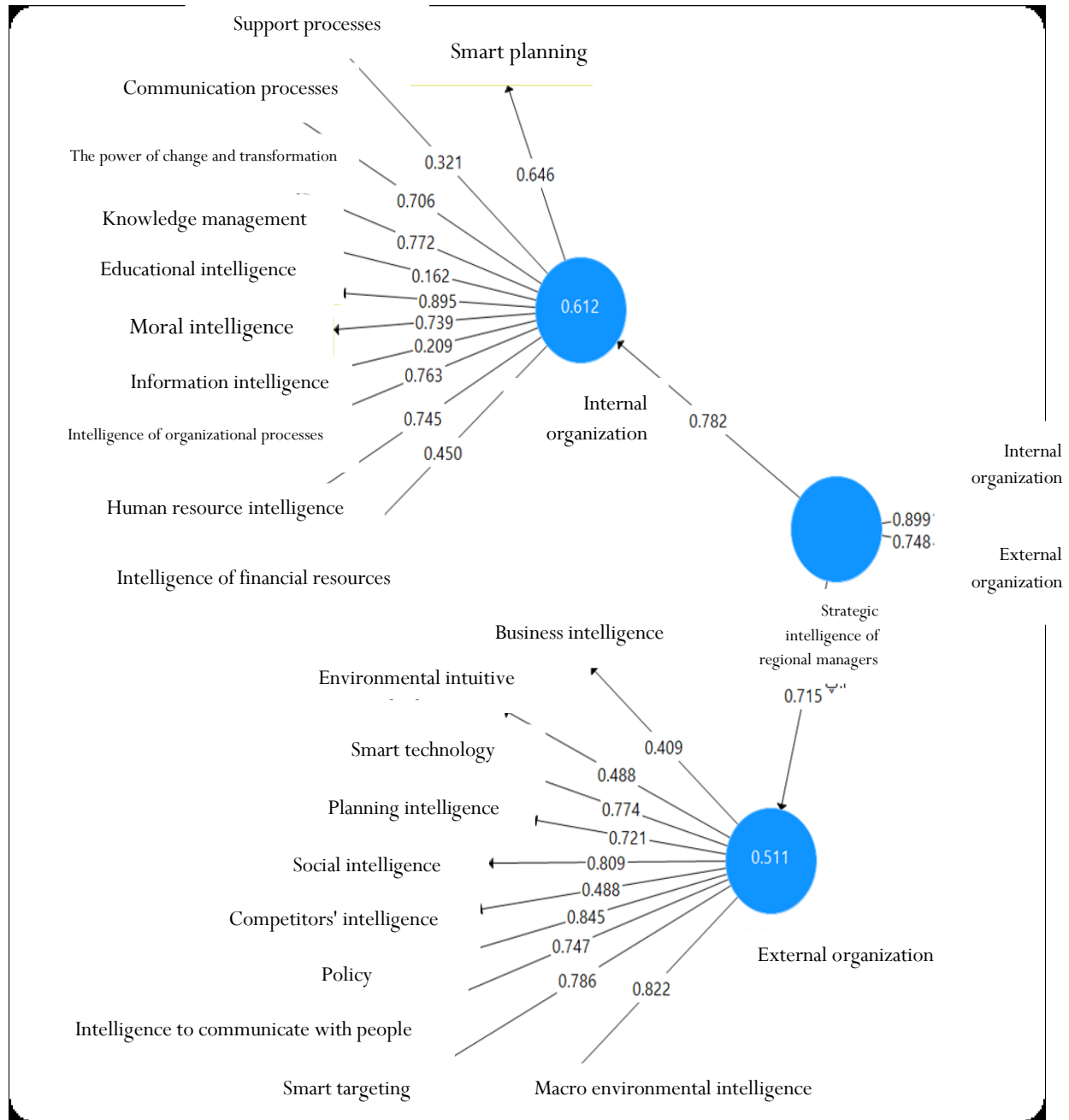


Figure1. The results of structural equation modeling of factors affecting the strategic intelligence of education managers in Tehran in the case of standard coefficients

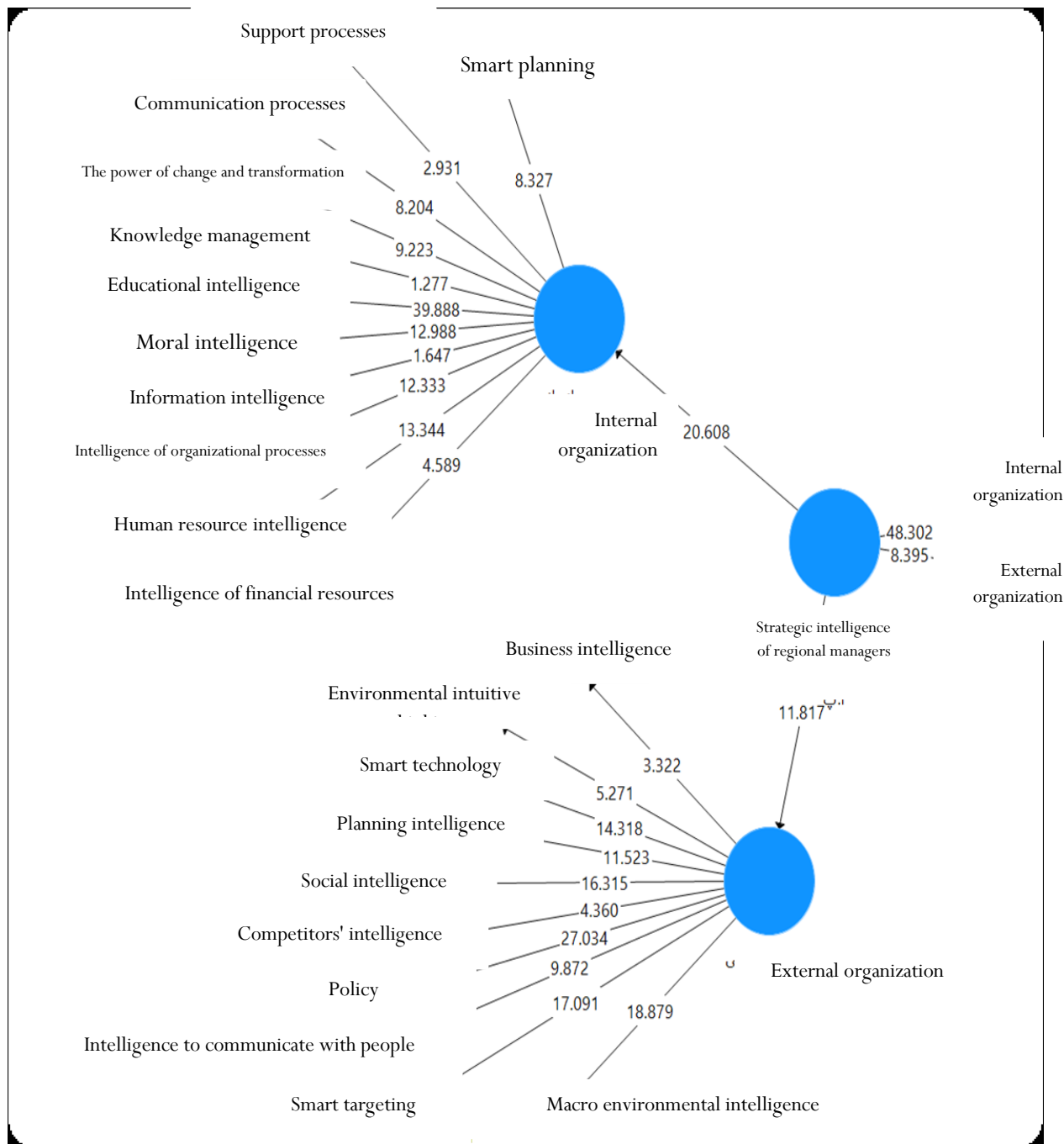


Figure2. The results of structural equation modeling of factors affecting the strategic intelligence of education managers in Tehran in T-statistics mode

4. Conclusion

Strategic intelligence is the strategic effort of an organization to apply intelligence in the organization and has an effective role in the success, performance and effectiveness of the organization. As a result, this research was conducted with the aim of identifying and analyzing the factors affecting the strategic intelligence of the managers of education districts in Tehran and providing a suitable model.

The results of this research showed that the factors affecting the strategic intelligence of managers have two intra-organizational dimensions (with components of intelligent planning, support processes, communication processes, the power of change and transformation, knowledge management, educational intelligence, moral intelligence, informational intelligence, organizational process intelligence, intelligence human resources and financial resource intelligence) and the extra-organizational dimension (with the components of business intelligence, environmental intuitive thinking, technological intelligence, planning intelligence, social intelligence, competitors' intelligence, policy making, communication intelligence with people, intelligent targeting and macro environmental intelligence). Also, the factor load, average variance extracted and the validity and reliability of all dimensions and components of the mentioned model were confirmed. In addition, the model of factors affecting the strategic intelligence of the managers of education and training regions had a good fit and the said model had a significant effect on the internal and external dimensions and the said dimensions had a significant effect on the relevant components. In some ways, the mentioned results are consistent with the results of Zare, et al (2021), Dehghan Dehnavi, et al (2021), Shehenaz Fadhil, et al (2021), Aramseresht, et al (2020), Yousefi, et al (2019), Kaskh & Shokatabadi (2017), Shariatnejad & Hakkak (2015), Agha, et al (2014) and Pellissier & Kruger (2011).

In the interpretation and explanation of the results of this research about the intra-organizational dimension in the model of strategic intelligence of managers of educational districts in Tehran with the components of intelligent planning, support processes, communication processes, the power of change and transformation, knowledge management, educational intelligence, moral intelligence, information intelligence, organizational process intelligence, the intelligence of human resources and the intelligence of financial resources, it can be said that the component of intelligent planning is through operational planning according to goals, planning according to the external environment, determining and identifying useful strategies, paying attention to emerging patterns, moving from past decisions to future decisions, planning To take advantage of current opportunities, use resources, plan to create new initiatives, improve the effectiveness of current operations and human resource planning and exploitation, component of support processes through information support, support of decisions, support of creativity, support of strategic decisions, support of The system of proposals and support for development processes, the component of communication processes through effective communication, communication with customers, systems Intelligent communication, extra-organizational communication, intra-organizational communication system, communication for the exchange of information and knowledge, organizational learning, creating partnership and teamwork, the skill of exchanging ideas and starting a business, the ability of teamwork in organizational groups, the ability to answer in the field of job and organizational task, Organizational negotiations, inspiration to others and the ability to lead, make decisions and organize time and the component of the power of change and transformation are realized through accepting organizational transformation, welcoming changes, trying to create change, flexibility to changes, the power of trainability and the power of change. Also, the knowledge management component includes the processes of gathering, organizing, analyzing, distributing knowledge among all departments of the organization, recording knowledge and sharing knowledge, the educational intelligence component includes the smart education system, continuous organizational training, diverse training, virtual training, reliable learning, empowerment. professional, specialized cross-sectional training, non-specialized cross-sectional training, motivational training, identification of new educational fields, training through mass media, creating an educational core and avoiding politicization in training, the component of moral intelligence including honesty, impartiality, flexibility, professional ethics, organizational empathy, Organizational commitment, organizational trust, formulation of organizational

ethical charter and policies, negation of government dominance and deterrence, responsibility, avoiding personal opinions, avoiding rework, having conscience and work discipline and responding to people in the field of responsibility and intelligence component of information including gathering and Organization, analysis, distribution of information between the departments of the organization and management and action on the information with respect to the ethical principles that should be considered in order to implement the mentioned components in the intra-organizational dimension of strategic intelligence. to take In addition, the intelligence component of organizational processes through the monitoring and analysis of processes in order to optimize, predict, check the homogeneity and discover the processes of the organization, the intelligence component of human resources through the intelligence of physical resources, rewards and benefits, employee relations, selection and recruitment and The state of the workforce in a competitive environment and the intelligence component of financial resources through the ability to integrate and analyze financial information, forecast budgeting, simulate and manage risk of communication, reporting systems and effective decision-making can create and increase the strategic intelligence of managers.

In the interpretation and explanation of the results of this research about the extra-organizational dimension in the model of strategic intelligence of the managers of the educational districts of Tehran with the components of business intelligence, environmental intuitive thinking, technological intelligence, planning intelligence, social intelligence, competitors' intelligence, policy making, communication intelligence with people, intelligent targeting and Macro-environmental intelligence can be said to be a component of business intelligence through obtaining economic and commercial information, direct access to information and analysis of the market situation, understanding the market, setting the stage for private sector suppliers, establishing the purchasing power of educational services for the organization, formulating a suitable supply and demand mechanism, Establishing incentive and punitive laws and guaranteeing the quality of service delivery, the component of intuitive environmental thinking through intelligent opportunity seeking, systemic perspective, understanding the situation based on learning and understanding cognitive concepts, the component of technological intelligence through setting information needs, selecting sources, collecting data and evaluating information. , the amount of applied and fundamental researches, the number of articles and publications, having healthy industrial processes, methods, norms and industrial processes, improving existing technology, identifying technology mutations Logical and applied and fundamental researches and the intelligent component of planning are realized through new planning systems, short-term and long-term planning, decision-making for individual organizational plans, individual development plans in the organization and group development plans in the organization. Also, the social intelligence component includes determining the practical goals of strategic analysis through negotiation and agreement with stakeholders, supporting colleagues, planning how to conduct the analysis, getting the agreement of people in the area of responsibility, identifying priorities and important activities needed, gathering and analyzing information to understand trends and Developments, assessment of current and future needs, providing strategic briefings and status reports for stakeholders, competitor intelligence component including pricing policies, substitute products, competitor development policies, market intelligence, intelligence related to competitors, technological intelligence, pricing policies and competitor development policies and The policy component included management policies in society, governing laws, government policies, society culture, motivational policies, and participatory policies, which should be considered to implement the aforementioned components in the extra-organizational dimension of strategic intelligence. In addition to that, the intelligent component of communicating with people through the exchange of current and potential publishers, their personal characteristics and information and the exchange of information, knowledge and the growing desires of the target community, identifying the current and future needs of customers and designing existing creative opportunities, the intelligent targeting component through Realism in formulating goals, paying attention to visions and values, examining organizational realities, knowing the intentions of competitors in setting goals, determining the main organizational strategies, evaluating organizational abilities, resources and capabilities, helping to update strategies in formulating goals, formulating goals based

on perspectives, formulating The goals are based on the market and functional responsibilities of the organization and monitoring and pursuing the goals and the macro environmental intelligence component through creating an approach in the government towards strategic intelligence, creating a culture of organizational intelligence, spreading the culture of organizational intelligence, socializing the culture, strengthening morale and empowering culture in the organization. Create and increase the strategic intelligence of managers.

This research did not face any significant limitations other than the difficulty of implementation due to the spread of covid-19, but among the common limitations, it can be pointed out that the research community is limited to managers, assistants and experts of the nineteen educational districts of Tehran and the use of a researcher-made questionnaire. Both make it difficult to generalize to other groups and their results are more biased compared to the results of researches that use observation or interviews instead of questionnaires. Because it is possible that people do not have enough self-reflection when completing self-report tools such as questionnaires and do not answer the items responsibly, which will reduce the accuracy of the results to some extent, but this problem is less seen in observation and interview; However, observing and interviewing requires a lot of expertise and will require more time and money. Therefore, it is suggested to conduct a research to identify and analyze the pattern of factors affecting the strategic intelligence of the managers of the cities of Tehran province and even other provinces and compare it with the current research pattern. Another research proposal is to use the present research questionnaire to check the amount of effective intra-organizational and extra-organizational factors and the components of each of them in managers, assistants and education experts and design programs for their improvement and promotion. The results of this research showed two intra-organizational and extra-organizational dimensions for the pattern of factors affecting the strategic intelligence of managers of education and training areas and a number of components for each dimension. Therefore, to increase and improve their strategic intelligence, it is possible to improve the dimensions and components of each of them. Another practical suggestion to the officials and planners of the education and training organization is to hold a face-to-face training course for developing and promoting strategic intelligence for managers, assistants and education experts, or even implement this course virtually for all educators.

Acknowledgments

At the end, the participants in the research and other people who helped in the implementation of the research are thanked.

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