

# Role of Government in Internationalization of Higher Education in Universities of Medical Sciences of the Country: A Qualitative Research


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## Abstract

**Background & Objective:** Internationalization is an active and intelligent reaction to the phenomenon of globalization. Higher education internationalization in universities of medical sciences is a necessity and priority considering the emphasis of the upstream documents, including the sixth development plan, 20-year vision plan and medical education transformation program. Given the complication and various levels of internationalization of higher education from one hand and dependency of universities of medical sciences on the government system from the other hand, this study aimed to determine the role of the government in the higher education internationalization in universities of medical sciences.

**Materials and Methods:** In this qualitative research, the grounded theory method was employed to evaluate content and reviews with experts. The research population included educational management experts and senior executive managers related to the ministry of health and universities of medical sciences. Interviews were conducted with 20 experts through theoretical and targeted sampling method and continued until data saturation. In addition, data analysis was performed using fixed comparative analysis and performing open, axial, and selective stages.

**Results:** According to the grounded theory, the causal factors of the government were recognized with six factors (ministry of health, legal and policy-making units, national documents, national security, language and culture, information technology). On the other hand, strategies of the government and consequences were recognized with seven (policy research, policy-making, legislation, strategic plan, foreign policy, budget, and commercialization of education) and four (scientific, economic, political, and cultural development) factors, respectively. In addition, the relationship between the mentioned factors was presented in the diagram of grounded theory.

**Conclusion:** As a phenomenon with national and transnational consequences, internationalization of higher education of universities of medical sciences requires the role-playing of the government in the implementation of strategies and realization of expected consequences.



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## Introduction

In the light of globalization, significant changes have made in politics, economics, culture, and communications around the world in the past few decades. Globalization is interpreted as the flow of technology, economy, knowledge, values, and ideas across borders, and countries are exposed to globalization, regardless of history, traditions, and culture (1). Experts believe that universities are affected by globalization, and this phenomenon has deeply affected all levels and dimensions of higher education and has created new challenges in education and research, university structure, and general training strategy (2). In fact, while not all universities are international and global, all of them are affected by global processes and globalization (3). In terms of globalization and internationalization of higher education, Knight has pointed out the dynamic relationship between the two concepts,

where internationalization is an active and ingenious reaction to globalization (1). This scholar defines the internationalization of higher education as "the process of integrating international, intercultural and global dimensions for functions and goals of teaching & learning, research, and services of higher education" (4). Various reasons have been mentioned for internationalization and tendency of authorities and heads of universities toward this phenomenon, the most important of which include political, economic, cultural, social and academic reasons (5). In fact, not only internationalization is a necessity, but also it is a future-based response since a limited and isolated environment can no longer serve the extensive goals of higher education in society (6).

In a research entitled "national policies for internationalization of higher education", Curaj considered strategic thinking the most important role of the government in the internationalization of

higher education, expressing the importance of government policy in countries with public universities. Generally, 41% of international students study in nine countries of the world, where there is a strategic plan for internationalization of higher education at the national level. In addition, two-thirds of these individuals have selected English as their education language (7). In a study by Li in China entitled "the role of the government in the internationalization of higher education", the most important roles of the government were recognized as support, strategic designing and macro planning, being the main supplier of financial resources, macro executive management, coordinating and being the main supervisor of internationalization of universities (8).

In a study entitled "International trends in higher education" performed by Oxford University in 2015, there was an emphasis on the role of governments and their strategic plans in the development of the internationalization of higher education. In Russia, the "5-100-2020" plan has been developed to ensure that at least five Russian higher education establishments will be among the top one hundred universities in the world by 2020, for which a considerable budget has been allocated to advance the program. Another important goal of this plan is motivating students all over the globe to study in Russia in exchange for a scholarship of Russian students to study abroad. This country has paid \$133.3 million for 3000 Russian graduate students to study abroad, and this method is a strategic technique to reduce brain drain.

In its latest developmental plan, Germany has planned on the education of German students abroad until 2020. Providing scholarships to 118000 German students to study abroad in exchange for a 17% increase in the number of international students during a five-year program is one of the government strategies of Germany to develop international higher education. The United States, which is the largest and most attractive destination for the education of students from across the globe, has aimed to increase the number of American students studying abroad through a five-year program of known as "generation study abroad initiative". In addition, Malaysia, Thailand, and Japan have strategic programs at the government level to internationalize higher education, the most important indicators of which are increasing the quality of research and education services, developing the industry-university relationship, decreasing dependency of universities

on government resources, increasing the opportunities to attract foreign investment, developing English language learning, providing scholarships to students, and recruiting foreign students (9).

Based on the viewpoints of faculty members at Shahid Beheshti University of Medical Sciences, Zamani manesh et al. reported the factors affecting the internationalization of medical science education to be political, financial, managerial, information, academic and cultural factors, respectively (10). In another research, Zamani manesh et al. obtained two categories of context (global and regional, cultural and economic, political and security conditions) and superficial (human resources management, scientific cooperation, space and equipment, curriculum, extracurricular activities, supervision and review, academic culture) factors in their model for internationalization of universities of medical sciences (11). In a research to evaluate the status of components of new technologies, English language, international research and scientific cooperation in University of Tehran and Shahid Beheshti University from the perspective of faculty members, staff, and students to determine feasibility of internationalization of the mentioned universities, Arefi and Azizi concluded that the possibility of internationalization of these universities was less than average and the expected level (12). In another research, Fathi Vajargah et al. identified the most important challenges of international higher education in Shahid Beheshti University as financial, cultural, technological, structural, diplomatic and academic factors from the viewpoint of professors (13).

According to the mentioned issues, it seems that the developed and developing countries have employed important and prioritized programs at the state level to internationalize higher education. Internationalization of higher education is a complicated phenomenon and depends on economic, political and cultural actions. On the other hand, this issue has been recognized as a priority in the managerial system of Universities of Medical Sciences based on upstream documents, such as the fourth, fifth, and sixth development plans, the 20-year vision plan, the comprehensive scientific map of the country and the medical education transformation system. Review of the literature revealed that no research had been conducted in the country to assess the role of the government in the internationalization of higher education of

Universities of Medical Sciences. With this background in mind, this qualitative study aimed to evaluate the role of the government in the internationalization of higher education of Universities of Medical Sciences from the perspective of experts.

Materials and Methods

This qualitative research had a grounded theory approach, which, as pointed out by experts such as Glaser and Strauss & Corbin, is applied in areas where little research has been done and there is no theory framework. In fact, in this method, presenting a new theory is emphasized instead of testing a previously existing theory (14). Since the grounded theory method is able to produce data-based theories by employing a social interpretative paradigm, inductive-exploratory argument and analogical approach, it was selected as the research method to assess the role of government in the internationalization higher education in the Universities of Medical Sciences in the country from the viewpoint of experts. With regard to the research paradigm, the main questions included: what is the role of the government in the internationalization of higher education in Universities of Medical Sciences? How should the relationship between the government's various roles in the process of internationalization of Universities of Medical Sciences in the country be?

Required data were collected through a review of content and semi-structured interviews. At first, the researcher studies related books, documents, and valid domestic and foreign articles for data collection and immersion (long-term engagement) in the

research topic. Semi-structured interviews were carried out with experts selected by theoretical sampling, which is the dominant method in the grounded theory approach. In the mentioned method, sampling is performed in a way that it could contribute to theory formation (14). The research population included distinguished professors of educational administration (N=10) and senior executive managers of the presidency, and vice-chancellors for education, research, and international affairs at the level of macro universities in medical sciences areas and the ministry of health, treatment and medical education (N=46). This type of sampling was performed to obtain information required by the researcher from the most efficient individuals. Homan proposed the sample size of six-eight individuals for homogenous groups in targeted sampling (15). Therefore, the researcher contacted the list of experts via telephone calls and achieved their consent for holding in-person meetings or telephone interviews.

Theoretical saturation method was applied to determine sampling adequacy. In this regard, theoretical saturation means that the researcher asks repetitive questions until realizing that new data does not disclose new insights. In the present study, data saturation was achieved after 20 interviews (specifications of which are presented in Table 1) with a mean duration of 45 minutes, during which open questions were asked and content of the previous interviews were assessed. It is notable that the interviews were recorded as audio files and were then transcribed by the researcher after receiving consent from the interviewees.

Table 1: Demographic information on interviewees

variable	Frequency and percentage
Gender	Female: 3(15%) male: 17 (85%)
Age	Average: 52±3 year
Degree	Doctor of Medical Sciences: 15(75%) Doctor of Educational Management: 5 (25%)
Scientific rank	Professor: 6 (30%) Associate professor: 10 (50%) Assistant professor: 4 (20%) University of Medical Sciences: 10 (50%)
Employment place	Ministry of Health: 7(35%) Ministry of Science and Islamic Azad University:3(15%)

Analysis of the grounded theory's data was carried out through constant comparative data analysis, which refers to the comparative analysis of different parts of the data in terms of similarities and differences (16).

To this end, coding was performed in the form of open (coding all concepts and definitions of a

category for each concept), axial (identifying logical and causal relationships between categories and recognizing nuclear categories) and selective (identifying the relationship between nuclear categories and the phenomenon in three categories of causal conditions, strategies, and consequences) coding. Ultimately, the relationship between factors

was recognized by placing each variable in the diagram of the grounded theory. To ensure the quality and validity of the study, we applied the strategies proposed by Strauss and Corbin, including observing the methodology principles (theoretical sampling, theoretical saturation, continuous comparison and construct theory), determining the proper research objective, self-awareness, continued education and study on qualitative research, reflexivity (sensitivity, sympathy, respect and honesty of the researcher), seeking participation (using the opinions of others and theoretical comparison) and methodological awareness (17).

## Results

In order to determine the role of the government in the internationalization of higher education in

Universities of Medical Sciences, 491 concepts were collected through content evaluation and interview with experts. In open coding, a factor was allocated to each concept with regard to its causal and semantic load, and a total of 17 factors were identified. In axial coding, the relationship between factors at a higher level abstractly using constant comparative analysis of data, which led to the recognition of three major factors. On the other hand, selective coding included the determining of the relationship between various factors through classification in three categories of causal conditions, strategies, and consequences and placing in the diagram of the grounded theory. Table 2 presents the results of open and axial coding processes.

**Table 2: Main and Sub-factors of Role of Government in the Higher Education Internationalization in Medical Sciences Universities**

Main Factors	Sub-factors
Governance Factors	Ministry of Health, Treatment and Medical Education
	Legal and policy-making institutions
	Language and Culture
	Information Technology
	National Documents
	National Security
Government Strategies	Policy Research
	Policy-making
	Legislation
	Strategic Planning
	Foreign Policy
	Higher Education Budget
Country Development	Higher Education Commercialization
	Scientific Development
	Economic Development
	Political Development
	Cultural Development

### Governance Factors

#### 1.1. Ministry of Health, Treatment and Medical Education

The higher education system of Iran is classified into two categories of government and non-government universities. The government category includes universities of medical sciences and medical research and education institutions affiliated to the ministry of health, treatment, and medical education. The major part of activities of higher education internationalization of the mentioned ministry is followed up by the international affairs office and the vice-chancellor for education. Given the dependence

of universities of medical sciences on the ministry of health in different aspects of leadership, management, resource supply, and supervision, this organization plays a major role in advancing the internationalization of medical science education. In this regard, one of the education management professors (Code 6) expressed: "to internationalize higher education in universities of medical sciences, the ministry of health must anticipate and implement the strategic plan, necessary structure and resources, coordination between the ministries and other institutions, and monitoring the internationalization process in line with expected goals".

## 1.2. Legal and policy-making institutions

In addition to the ministry of health, there are several legal and policy-making units in the country that focus on the internationalization of universities, including expediency discernment council, supreme council of the cultural revolution, Islamic consultative assembly, ministry of foreign affairs, ministry of information, ministry of interior, ministry of education, the vice-presidency for science and technology affairs, scientific comprehensive map headquarters, Iranian academy of medical sciences, Iranian national commission for UNESCO, Islamic culture and communication organization, Persian language expansion council, education Iran, elite attraction committee, as well as several other government and non-government units. From the perspective of one of the managers of the international affairs of the ministry (Code 4): "the high number of different units in the area of policy-making and decision-making of higher education internationalization is one of the challenges of this field. The synergy of the laws, viewpoints, and objectives of various government and non-government units must be carried out in line with the internationalization of higher education at the macro level."

## 1.3. Language and Culture

### Language

Language is one of the most important tools for exchange of knowledge, values, and national and religious beliefs. Experience of many countries of the world, including India and Southeast Asian countries, shows that using the English language along with the official language of the country plays an important role in the development of international higher education. According to some of the managers and professors (codes 1-10-17-20): "currently, one of the most important barriers to the attraction of foreign students in the country is the issue of language. Planning for the recognition and training of foreign students with Persian language and literature, along with the development of second language skill of university staff and academic professors and the public are considered as internationalization requirements of universities, which require serious attention on the level of government and academic community".

### Culture

The importance of one culture of a country in the internationalization of higher education comes from the fact that the culture of the academic community and the public must accept internationalization.

From the perspective of an education management professor (Code 8): "the process of higher education international must be considered from three aspects, including preserving national -religious identity against globalization, introducing the Iranian-Islamic culture at the international level, and growth of cultural literacy of the society due to increased level of international communication and interaction".

## 1.4. Information Technology

Evaluation of the development of information technology indicators and position of international higher education in various countries has revealed the presence of two-way communication between these two topics. From the viewpoint of one of the heads of universities of medical sciences (Code 3): "moving toward the internationalization of higher education without the development of information technology is not possible. Considering the competition among countries regarding attracting foreign students and academic rankings, planning and policy-making must be carried out at the government level to develop the technology dimensions, including automation, virtual education, speed and access to the Internet, e-learning and technology literacy."

## 1.5. National Documents

Upstream documents are always a major supporter of the realization of this policy. In fact, the topic of internationalization of higher education has been clearly emphasized in various national documents. According to one of the education management professors (Code 2): "it is not enough to compile and communicate national documents for the internationalization of universities. The realization of the expected regional and global status requires planning, coordination, budgeting, and high-level supervision".

## 1.6. National Security

National security includes various economic, political, military, cultural, legal, and environmental dimensions. Security of investment, employment and income from the perspective of economic security, the level of political freedom of the people and the level of political relations of the country with other countries from the perspective of political security, lack of civil wars and the level of preparedness to deal with foreign wars from the perspective of military security, the level of respect of people to intercultural differences from the perspective of cultural security, the existence of a system of litigation and complaints in a fair manner from the perspective of judicial security and the country's attention to environmental

issues from the perspective of environmental security are issues that their development is important in the internationalization of higher education. According to one of the education deputies of universities (Code 5): "when a student or a professor intends to travel to another country, national security of the destination country is the first thing that must be ensured of. In addition, the development of dimensions of national security is one of the most important priorities of the government on the path of internationalization of higher education. On the other hand, the enemies of the Islamic Republic have widely advertised and invested in destroying the public image of the security of Iran in recent years. In this situation, the government authorities and the academic community have a duty to change this mentality in order to reveal the truth and scientific and cultural capacities of the country to the world".

## 2. Government Strategies

### 2.1. Policy Research

The first step toward employing macro policies of the government is research policy, which is important in the present study since policy-making in the field of internationalization of higher education requires identifying and learning the economic, political and cultural aspects and academic system of the country, region and transregional area. It should be noted that failure of notified policies would have a global reflection in addition to high financial and human costs. According to one of the managers of the international affairs of the ministry (Code 9): "The formation of a continuous relationship between policy-makers, executives, and researchers in the internationalization process leads to the strengthening of the knowledge-policy network and improving the rational aspect of policy-making. The implementation of notification policies cannot be guaranteed as long as the ideas, experiences, critiques, and studies carried out by researchers are not welcomed by internationalization policy-makers and decision-makers".

### 2.2. Policy-making

Policy-making as determining the macro policies of the government in relation to the internationalization of higher education is one of the most important measures to be taken at the state level. In this regard, the most important challenges mentioned by senior executive managers and professors in the policy-making of internationalization of higher education (codes 6, 8, 10, 14, 18) included: "the high number of policy-making units, lack of accurate assessment of country's capacities and capabilities, mismatch of

approaches and strategies with goals, lack of involvement of key stakeholders and executives in policy formulation, lack of attention to close monitoring of the implementation of policies, lack of precise prediction of budget and resources required in policy packages and short term management periods in Iran".

### 2.3. Legislation

The complete implementation of a policy requires a support law. Therefore, in addition to policy-making, macro laws and regulations should be issued by legal organizations to support the internationalization of higher education. According to one of the education deputies of the university (Code 7): "the process of issuing visas, attracting foreign students, exchanging professors, using foreign investors, exporting medical services and products, teaching a foreign language, privatizing, and establishing university-industry relations are among the most important issues related to the internationalization of higher education, which requires a review of the regulations and a clear legislation".

### 2.4. Strategic Planning

In the content and interviews related to internationalization, there is an emphasis on the presence of a strategic plan and thinking due to process, development, complexity, intersectoral and multi-sectoral nature of internationalization at the level of the government and universities. At the government level, it seems that the adoption of policies resulting from policy-making and formulation of laws and regulations in the aforementioned content does not make sense without a strategic plan, which would be a road map and a guarantee of policy advancement.

According to an education management professor (Code 6): "the formulation of a strategic plan for the internationalization of higher education at the state level would be successful if, the strategies are in line with reality and have been developed by careful analysis of the weaknesses, strengths, opportunities, and threats of national and academic development with the participation of all stakeholders. In addition, execution warranty of the program and resources required must be at the level of government institutions and universities, and ultimately monitoring of the implementation of the program at all levels must be accurately monitored and audited".

### 2.5. Foreign Policy

The level of political relations of the country with other countries and attention to higher education as the fourth dimension of politics is the major

foundation of internationalization of higher education in the political dimension. According to one of the international affairs managers of the ministry (Code 4): foreign policy is the window of entry of universities into the international arena, and as the political relations of the country are friendly and extended, universities will be more successful in scientific, educational and research exchanges, and displacement of students and professors”.

#### 2.6. Higher Education Budget

In the checklists for evaluation of internationalization of universities (e.g., the center of higher education development and Ashaizawa checklist), attention is paid to the amount and type of structure of the budget allocated to universities for various international activities. In leading countries in the field of internationalization and commercialization of higher education, the government's support for higher education in the budget system is still considerable despite the independence of universities in terms of the dependence on state resources due to their ability to generate an income. On the one hand, the budget of the ministry of health of Iran must meet the public health needs of the people and make ends meet in the area of training the necessary human resources along with research and innovation in the field of medical sciences from the other hand. In this respect, the share of this ministry of the country's budget has always been challenging and criticized. According to one of the heads of universities (Code 3): “To move on the path of internationalization, it is necessary to predict and accurately estimate the required capital since the implementation of internationalization policy and plans will fail without financial support”.

#### 2.7. Higher Education Commercialization

In recent years, higher education has become a lucrative commercial commodity around the world, and the share of this industry in the gross domestic product (GDP) is indicative of the success of universities in generating income and participation in the economic development of countries. According to one of the university research deputies (Code 13): We must move toward higher education commercialization to increase the share of universities in GDP. In this respect, commercialization requires increasing the quality and standardization of academic services, increasing the credibility of academic degrees, participating in valid ratings, attracting foreign students, strengthening university communication with industry, developing entrepreneurship, establishing

growth and technology centers, and developing the export of knowledge-based products and services.”

### 3. Country Development

#### 3.1. Scientific Development

One of the most important consequences of higher education internationalization is scientific development in the country. According to one of the educational management professors (Code 8): “internationalization through the development of ability of professors and students, development of research and innovation at the international level, exchange of students and professors, attracting non-resident and foreign Iranian experts, developing scientific facilities and space according to the international standards, using English language, international accrediting, improving the quality of education services, and developing scientific relations and cooperation at the national level will enhance the scientific position of the country in long-term”.

#### 3.2. Economic Development

Economically, it is argued that the internationalization of higher education can save the economy of the countries. In this regard, the most important factors of economic development caused by the internationalization of higher education are:

##### Higher Education Industry

Higher education produces billions of dollars in turnover for countries that can attract international students or establish branches abroad. Evaluation of GDP of countries shows that all developed and developing countries have macro and long-term higher education programs to increase the share of the economy from higher education. According to one of the educational deputies of the university (Code 5): “higher education is a known industry all over the world, and lack of moving toward this phenomenon is not only a threat to higher education but also negatively affects the economy of the country. Every year, a considerable share of human capital and currency exit the country following the educational emigration of students. Meanwhile, the country's universities have the quality, credibility, and capacity to exploit this capital.”

Attracting Intellectual Capital and Workforce In developed countries, recruiting international students is not just for earning money. In fact, attracting intelligent and talented people from other countries compensates for low population growth and provides the opportunity for economic development through the promotion of human resources indicators. According to one of the heads of universities (Code 11): “

The phenomenon of brain drain along with the exit of human and financial capital imposes irreparable damage to the country. Therefore, movement of universities toward internationalization along with increasing the quality and credibility of degrees, developing graduates' skills, and creating employment opportunities can prevent the occurrence of this problem to a great extent."

#### Tourism Industry

There is a two-way relationship between the tourism industry and the internationalization of higher education since the growth of one of them will have a positive impact on the other one. In this respect, one of the managers of the international affairs of the university (Code 9) stated: "universities of medical sciences have a proper capacity for attracting foreign students to study in medical science disciplines and attracting patients in the form of therapeutic tourism. In addition to income generation, this capacity leads to the development of the tourism industry in the country in long-term".

#### University Income

Internationalization of higher education in many developed countries has led to university income generation and reduced dependency on state resources. From the perspective of one of the senior managers in the field of education of the ministry (Code 16): "internationalization of higher education increase and diversify the income of medical universities by developing research and innovation, receiving fees from international students, attracting grants, establishing entrepreneurship, developing therapeutic tourism, attracting foreign capital, selling education services, and exporting drugs and medical equipment."

#### 3.3. Political Development

Educational and research cooperation between countries is considered as a type of investment for the future of diplomatic relations among nations. As such, many countries seek to develop political relations in the form of a system of education through the exchange of professors, students and educational and research programs. According to one of the international affairs managers of the ministry (Code 9): Exchange of professors, students, and staff of the higher education system with other countries, signing international educational and research memoranda, holding joint training courses, establishing academic branches in other countries, and attending of the academic community in international scientific events are examples of

political development of countries by internationalization of higher education."

#### 3.4. Cultural Development

The international university provides opportunities for students, faculty, staff and the public to learn about the different cultures, religions, languages, and beliefs of other countries. The experience of leading countries in the internationalization of higher education shows that the academic community and the public have great flexibility in accepting cultural and racial differences through contact with different cultures. One of the research deputies of the university (Code 15) expressed: "International higher education provides the opportunity for countries to introduce their own culture to the world and to develop the cognition and cultural literacy of their people. Meanwhile, attention must be paid to preserving the integrity of national culture in order to prevent any change in this regard".

In the present research, we applied the grounded theory diagram to show the relationship between the various factors of the role of the government in the internationalization of higher education in the medical sciences universities of Iran. According to the evaluations, the phenomenon of internationalization of higher education was correlated with three categories of causal conditions, strategies, and consequences. In this context, causal conditions themselves are divided into three categories of causative, intervening, and context. Causative conditions are phenomenon that creates situations, discussions and issues related to the phenomenon and somehow explain how and why a phenomenon is handled by individuals and groups. In terms of causative conditions, three factors of the ministry of health, legal institutions and policy makers, and national documents were recognized as causative conditions that are the main cause of moving toward the internationalization. On the other hand, intervening conditions are broad and general conditions that serve as facilitators and limitations of strategies. In the present research, two factors of language and culture and information technology were recognized as intervening factors. On the other hand, strategies are carried out on the foundation of context factors, which include national security. The relationship between various roles of the government in the internationalization of higher education of universities of medical sciences is shown in Diagram 1.



## Discussion

In the present qualitative research, application of the grounded theory method led to recognizing the role of the government in the internationalization of higher education of universities of medical sciences with 17 factors in three groups of causal conditions (six factors), strategies (seven factors) and consequences (four factors). In this regard, causal factors, which were called governance factors, were classified into three causative conditions (three factors), intervening (two factors) and context (one factor) classes in terms of relationship with the internationalization of higher education of and government strategies. The causative conditions included the ministry of health, legal and policy-making organizations and national documents, meaning that the mentioned factors directly affect the internationalization of higher education of universities, and internationalization will not be realized as long as these factors do not move toward the mentioned phenomenon.

As the main custodian of internationalization of higher education in medical sciences universities, the ministry of health is responsible for determining policies and programs, funding, coordinating, supervising and supporting medical universities on the path to internationalization. Due to the nature of internationalization of higher education, ministries, as well as government and non-government organizations are involved in the policy-making and planning of this issue. The multiplicity of these institutions, the lack of clarity of duties and limits of authority, parallel working, and sometimes overlapping of interests are issues that must be clarified. In this respect, the majority of experts recommended that a specific institution be introduced to pursue internationalization at the state and university levels.

The government announces macro policies by upstream documents. In recent years, while the issue of internationalization of higher education has clearly been emphasized in upstream documents, the realization of the expected goals requires the review of executive guidelines, the provision of an executive guarantee, budget provision and excellent supervision. The intervening condition of the government includes language, culture and information technology. In fact, these factors can either facilitate or prevent the implementation of government strategies. Currently, one of the most important barriers to enrolment of foreign students is the issue of language, as pointed out by the experts

interviewed in the present study. Therefore, it is emphasized to plan and invest in education and learning of a second language at the level of universities, schools and the public in order to lay the foundation for internationalization. Two topics have been proposed regarding culture; firstly, the culture of the university and the society must accept internationalization, which requires respecting inter-cultural differences and can be provided by the education of national culture and familiarity with the cultures of other countries. Secondly, maintaining the national-religious culture of the country is against internationalization, which requires more evaluation and planning to introduce the Islamic-Iranian culture at the international level along with improving the dimensions of national culture. Information technology development is a fundamental strategy for the development of international higher education since information technology is the basis of international communication today.

According to the experts, issues such as the speed and level of access to the Internet, IT literacy, e-learning services, virtual education and, in general, promotion of ICT indicators across the country and universities require planning and investment at the national level. National security was recognized with various economic, political, cultural, legal, military, and environmental dimensions as the context factors of the government, meaning that national security is the foundation for the implementation of strategies, appropriateness of which guarantees and accelerates the implementation of strategies. In terms of exchange of students, professors and educational and research programs with other countries, the issue of national security in the country of destination is the first and most important issue addressed. Therefore, the academic society expects different levels of national security to be provided by the government so that universities can provide educational and research services at the international level.

The government's strategies that must be performed in line with the internationalization of higher education of universities of medical sciences included seven factors of policy research, policy-making, legislation, strategic plan, foreign policy, budget supply and commercialization of higher education. Policy research was recognized as the first step of strategies, aimed at promoting the rationalization of policy making and communication between policy makers, executives and researchers. This concept is an issue that must be considered due to the complicated dimensions of internationalization of

higher education so that the macro policies of the government are determined according to the economic, political, cultural and scientific condition of the country and their rational goals are illustrated. Following policy research, policy-making, which is interpreted as determining the policies and path of movement of the country toward the process of internationalization of higher education, is one of the most important responsibilities of the government. According to the experts, the high number of policy-making units has led to parallel working and dispersed policy-making in the field of higher education internationalization. Therefore, integrating issued policies and creating uniformity at various managerial levels regarding the implementation of policies are emphasized as strategies to improve the policy-making status. The legislation is an action to be taken at the state level in order to formulate transparent laws in line with the internationalization policies of higher education. The existence of incompatible and bureaucratic laws, which are contradictory to communication policies in some cases, is one of the most important legislative challenges that must be addressed and revised. Designing a strategic plan for internationalization of higher education is the main core of government strategies in the area of internationalization. The development of a strategic plan requires strategic thinking, stakeholder engagement, in-depth evaluation, and analysis of the status quo, future research, enforcement, budgeting, and, most importantly, monitoring and review. Internationalization of higher education without the development of political relations with other countries is not imaginable. Therefore, developing scientific diplomacy as one of the dominant foreign policy discourses through the conclusion of educational and research memoranda with other countries, the attraction of foreign students, the exchange of professors, holding international scientific conferences, the presence of the academic community in the international scientific events, and the active participation of the universities of medical sciences in the relevant exhibitions was emphasized by the experts.

For the optimum use of sustainable resources for economic development, the government should consider specifically the emphasis on the issue of higher education. Increasing the contribution of higher education to GDP requires the commercialization of higher education through entrepreneurship, the development of knowledge-

based products, the exchange of professors and students, the promotion of quality and the standardization of university educational services, the quantitative and qualitative development of research centers, therapeutic tourism, and the export of medical products and services. The implications of the internationalization of higher education in universities of medical sciences at the state level as factors that are expected to be realized with the internationalization of universities in the long-term include the development of scientific, economic, political and cultural dimensions.

Regarding scientific development, according to the statements of the Supreme Leader of the revolution in the statement of the second step of the revolution, the issue of education and research is one of the important issues in the comprehensive development of the country. According to the experts, internationalization of higher education will promote the scientific status of the country.

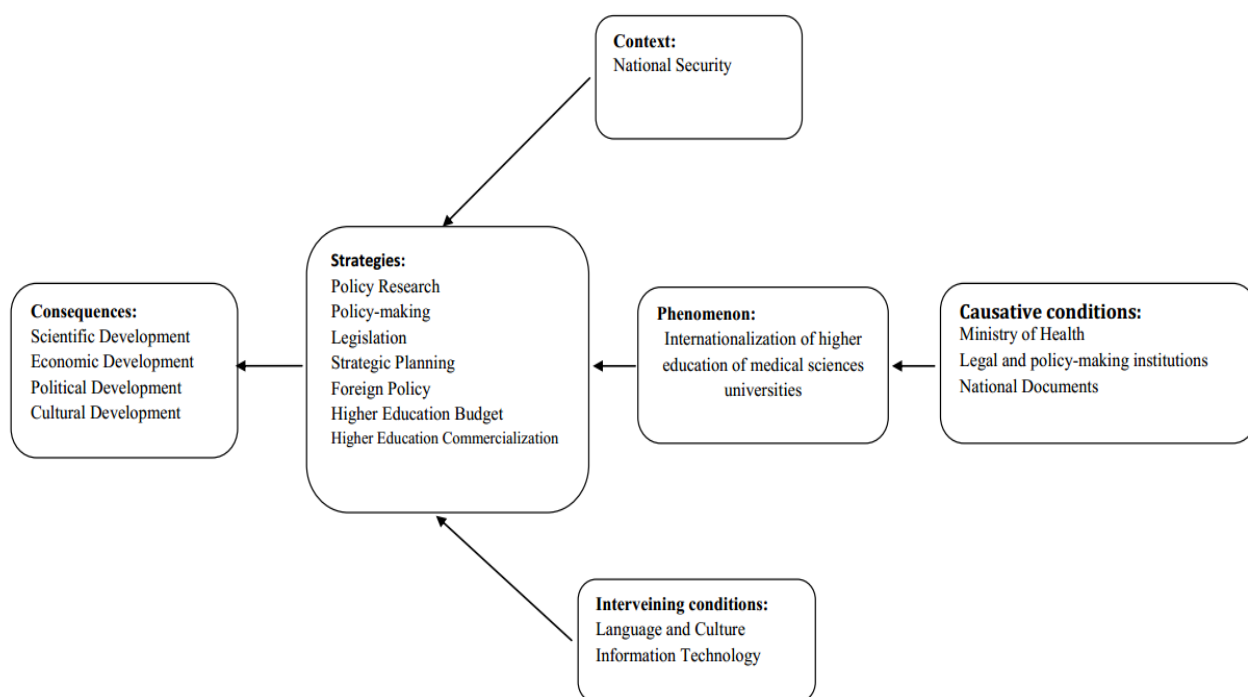
It is expected that the internationalization of higher education in medical universities be associated with increased share of education in GDP and economic development of the country through reducing the dependence of universities on state resources, generating income by attracting students, establishing a relationship with the industry, promoting the community health, creating employment, improving therapeutic tourism, attracting international research credit, and investment by the private and foreign sectors. The political development of the country from the path of international higher education is one of the most important expected consequences since international education and research activity of universities will lead to cooperation with other countries in the long-term.

Since universities have the best capacity for cultural investment, cultural development to preserve and improve the national culture from one hand and introducing the Islamic-Iranian culture at the international level from the other hand are the most significant consequences of internationalization of higher education. In terms of expected consequences of internationalization, our findings are in congruence with the results obtained by Curaj (7), who pointed out the economic, political, social and scientific benefits of higher education internationalization. The mentioned scholar also emphasized the presence of a strategic program, government support, and development of English language on the path of internationalization, which is

in line with the factors for the strategic plan, higher education budgeting, policy-making, legislation, and language in the current study. Li (8) emphasized the support and design of strategies and macro plans and the role of government observer and coordinator in the study of the role of government in the internationalization of universities of China, which is consistent with our findings in terms of governance factors and government strategies. In another research entitled the process of higher education internationalization in Oxford University (9), the role of the government in leading and progressive countries in terms of internationalization of higher education included announcing macro policies, formulating a strategic plan, supporting and funding, which is in accordance with the factors identified in

the present research. According to the results obtained by Zamanimanesh (12, 13), Arefi & Azizi (14), Fathi Vajargah (15), and Haghdoust (16), political, cultural, economic, security, language and technology factors were recognized as effective factors for internationalization of universities. In this respect, our findings confirmed the impact of the mentioned factors on the internationalization of higher education. However, the distinguishing aspect and innovation of the current study were determining the role of the government regarding the aforementioned factors and determining various roles of the government in the internationalization of higher education in universities of medical sciences in the country based on causal conditions, strategies, and consequences.

**Diagram 1: The Relationship between the Roles of Government in the Internationalization of Higher Education in Medical Universities**



## Conclusion

The internationalization of higher education is a necessity and priority for universities of medical sciences to manage the effects of globalization and

emphasize the upstream documents of the country. Internationalization is a complicated and inter-sectoral process that depends on economic, political and cultural actions. Therefore, the role of the

government in the formation of this phenomenon is of paramount importance. In order to move toward internationalization, the government must supply the necessary conditions, including the provision of national security, development of culture and language, developing information technology, designing and issuing national documents and coordinating the legal and policy-making units. The strategies or actions required from the government for internationalization of higher education included policy research, policy-making, legislation, designing strategic programs, budgeting, developing foreign policies and commercializing higher education. Provision of the mentioned factors and strategies by the government will lead to the realization of scientific, economic, political, and cultural development of the country through the internationalization of higher education as the most important consequences in the long-term.

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