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Evaluation of National Science and Technology Policies in Iran

Reza Mahdi[a]*

[a]*Institute of Social and Cultural Studies (ISCS),Tehran, Iran*

Abstract

Science and technology (S&T) is the engine and innovation and entrepreneurship is jet engine to sustainable development, and they are also the major solution to the socio-economic progresses, growths and crisis. Science, technology and innovation are connected rings in synergy chain of science and wealth. Looking back at the growth and development histories, most major revolution was closely linked with transformative breakthrough in S&T, which had a far-reaching impact on the rise and fall of a nation and the destiny of a country as well. The countries that were able to seize the opportunity and achieve the socio-economic take-off, had taken the lead in fulfilling development. Iran's national S&T (higher education, research and technology system) policies, including 6 main titles 34 subtitles, have approved on September 2014. These policies define and present the position of Iran's higher education, research and technology in dimensions of inputs, processes and outputs, and their interactions with other political, economical, social, cultural systems and world. Also, the policies show the position of Iran's S&T in the long term. In this study, based on the approved and formal policies, the existing situation and performance of the S&T has investigated by analytical method with using focus group technique. With referral to the evaluation can find the situation of S&T in Iran towards the future. By full fulfilling the S&T policies is expected that Iran reach to better level and position in S&T, innovation, entrepreneurship, knowledge-based and sustainable development. The country faces with serious challenges to access to global better position, knowledge-based economy, innovation and entrepreneurship. Of course, Iran has achieved good experiences and developments in S&T field, particularly high and new technologies.

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Keywords: S&T; Higher Education; Research; Innovation; Policy Evaluation.

* Corresponding author. tel.: +98-21-22570666; fax: +98-21-22570722.
E-mail address: iamahdi@yahoo.com or mahdi@iscs.ac.ir

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1. Introduction

Technology is a game for the rich, a dream for the poor, and a key for the wise, technology is the master key for development (Sharif, 1983). Science and technology (S&T) is the engine and innovation and entrepreneurship is jet engine to sustainable development, and they are also the major solution to the socio-economic growths, crisis and progresses. Science, technology and innovation are connected rings in synergy chain of science and wealth (Tabatabaian et al, 2012). Looking back at the development (modernization) history, most great revolution was closely linked with transformative breakthroughs in S&T, which had a far-reaching impact on the rise and fall of a nation and the destiny of a country as well (Yongxing, 2010). The countries that were able to seize the opportunity and achieve the socio-economic take-off, had taken the lead in fulfilling development. Contemporary modern societies are formed based on successful technologies, most of them have been established based on scientific discoveries (Best, 1990). Technology is considered the product of new development of human civilization, determining of essential element in social, economical and political exchanges in the communities. It is expression of advancement level and empowerment and a superior parameter of a society (Webster, 1991). The main goal of research and scientific production of technical-engineering groups is creation of wealth and power through the production of knowledge of technology development (Pestre, 2000; Ashley et al, 2000; Davari, 2000). Developments in the last two centuries in industrialized countries are due to attention to the production and application of S&T more than other factors. Various relatively fixed ranking of the first seven science productive countries in the world during recent years in one hand, and similar position of them in number of filed patents in the other hand, show positive relationship between knowledge and technology production (Salamon, 2000). Technology production as infrastructure of social and economical development has important place in today's world. Present time is era of knowledge-based societies, economies and institutions. Promotion of national development and international position of countries in the competition depends on production and application of knowledge (Delanty 2001). Science and technology are a basic and fundamental factor to the sustainable development and a necessary element for the progress and development. S&T can be considered as the most principal component of capabilities of countries today which are at the center of attention of governments more than other capabilities such as social, economic and political capabilities, possession of natural gifts and etc (Mahdi & Pourgol, 2011). In the study, The Iran's approved and formal S&T policies were evaluated. The policies are included 6 main titles, 34 subtitles. The policies define and present the position of Iran's higher education, research and technology in dimensions of inputs, processes and outputs, and their interactions with other political, economical, social, cultural systems, world and countries. Also, the policies show the position of S&T in the long term. In this paper, the existing situation of Iran's S&T has investigated by analytical method and focus group technique. With using this evaluation can identify and predict the situation of Iran's S&T towards the future. Of course, the future is belongs to wises.

In the investigation and evaluation of Iran's S&T policies have been attention to four packages of national policies including Iran's total scientific map (approved 2011 by the supreme council of Cultural Revolution), Iran's vision 2025 (approved 2003 by the supreme leader), resistive economy policies (approved 2014 by the supreme leader) and Iran's fifth development plan (approved 2011 by Iran's parliament). The policies of these acts have interactive and synergic relations with the S&T policies (fig.1). For example, In Iran's national economic policies act emphasizes on relations of university-industry and knowledge-based economy.

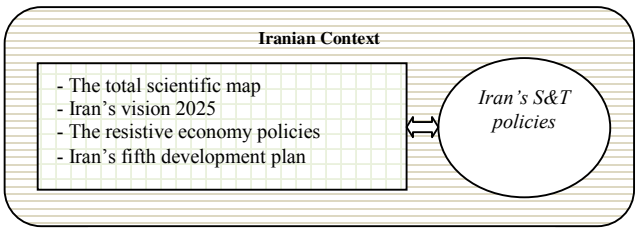

Fig.1. Interactions of S&T policies