



State of Israel
State Comptroller and Ombudsman
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Ensuring the Innovational and Technological Advantage of the Israeli Economy

Abstract

Ensuring the Innovational and Technological Advantage of the Israeli Economy

Background

The State of Israel is known in the world as the start-up nation, in part because of the large number of start-up companies established in the country, its R&D facilities, and the number of international buyouts of Israeli companies. This status was partly achieved by a business culture that encourages innovation and risk taking by entrepreneurs, the academic level of its universities, and a government policy supporting innovative initiatives. A partnership among the government, the academe, and the private sector has resulted in groundbreaking technologies in the field of water, agriculture, communications, life sciences, space, and more.

Key figures

NIS 58 billion

i.e. 4.5% of the GDP: the national expenditure on civilian R&D in 2017

77%

the high-tech companies in the country operate in the central region and Tel Aviv

40%

of total exports of the State of Israel in 2017 were high-tech exports

NIS 55 billion

state income from taxation of the high-tech sector in 2015-2018

24%

of those employed at high wages in the high-tech sector were women; fewer than 2% were Arabs and ultra-Orthodox

290,000

the number of employees in the high-tech sector, accounting for 8.3% of the total number of employees in 2017

78%

of the salaried positions at start-up companies are concentrated in the central region and Tel Aviv

NIS 1.7 billion

the 2018 budget of the National Authority for Technology and Innovationx

NIS 450 million

the amount of royalties collected by the Authority in 2018 The royalties were transferred to the Ministry of Finance






20%

of the support provided as part of the R&D fund are provided for innovation in traditional industries, even though they contribute approximately 38% of the GDP

Scope

 From August 2018 to March 2019, the State Comptroller's Office examined what the government has done to preserve the state's technological advantage. The audit was conducted at the Innovation Authority, the Ministry of Economy and Industry, the National Economic Council at the Prime Minister's Office, the Budgets Department at the Ministry of Finance, the Capital Markets Insurance and Savings Authority, Israel Securities Authority, the Ministry of Social Equality, the National Council for Civilian Research and Development, and at the Planning and Budgeting Committee, which operates within the Council for Higher Education in Israel.

Key Findings

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-  **The scope of foreign investments** in Israeli high-tech companies and these companies' dependence on such investments required the relevant entities to examine the subject in depth. The entities must conduct a study of the tools providing a regulatory response if foreign investment in the Israeli high-tech industry is reduced, including encouraging funds of institutional entities in Israel to expand their investments in this sector.
 -  **The government's program to fill available positions** in high-tech professions has not led to a sufficient response to the problem of a lack of professional employees.
 -  **Because of the difficulty in transferring knowledge from academia to companies in the industry**, the full extent of academic knowledge is not translated into applied research. The Innovation Authority and the Planning and Budgeting Committee have yet to finalize a workable plan that will bring about full utilization of the knowledge gained by research in academia and the healthcare system.
 -  **Despite efforts on the part of the Innovation Authority and the Ministry of the Economy to promote innovative procedures in traditional industries**, the demand for assistance provided by the Authority to industry to assimilate innovative technologies is still low.
 -  **A decision has yet to be made by the Innovation Authority Council to promote research in the field of commerce**, even though productivity in the sector is low compared to OECD countries and other industry sectors.



Strengthening high-tech in Jerusalem: The extensive work of the Jerusalem Development Authority and other local NGOs in setting up communities of entrepreneurs, provide grants, and generate connections with academia has led to significant growth in the number of start-ups operating in the city.

Innovation in traditional industries: In 2018, the Innovation Authority supported 246 R&D projects with a total of NIS 125 million. Around half the sum was invested in the periphery.

Human and intellectual capital: The Innovation Authority has assisted in analyzing various issues related to the under-representation of different populations in the high-tech sector and in conducting courses and retraining of employees from other professions to increase the number of high-tech employees.

Collaboration between the Innovation Authority and the Ministry of the Economy is an important part of assimilating innovative technologies in manufacturing industries and advancing R&D procedures in these industries.

Key recommendations

- 💡 In view of the major impact of global economic changes on the Israeli high-tech industry, it is important that a **government entity with a wide perspective examine the challenges faced by the high-tech industry in Israel**, formulate a long-term strategy, and suggest suitable tools to maintain Israel's capabilities and lead in this sector.
- 💡 So that international R&D centers do not hurt local R&D companies and ensure that the technological advantage of Israeli high-tech companies in the global arena is maintained, **increasing the supply of manpower with advanced degrees in relevant subjects must be considered a national goal**. Achieving this goal requires cooperation between government ministries and academia and the pooling of resources.
- 💡 With the cooperation of the relevant government ministries, including the Ministry of the Economy and the Ministry of Finance, the Innovation Authority must be proactive **in promoting innovation and a larger scale of R&D in traditional industries to enable them to transition to the next stage in the industrialized world**.
- 💡 **To extend the influence of the high-tech sector to other areas of the country**, the National Economic Council and the Ministry of the Economy, in cooperation with

the Innovation Authority, must examine additional ways of developing innovation in the periphery and to develop the eco-system required for high-tech companies in the metropolises.



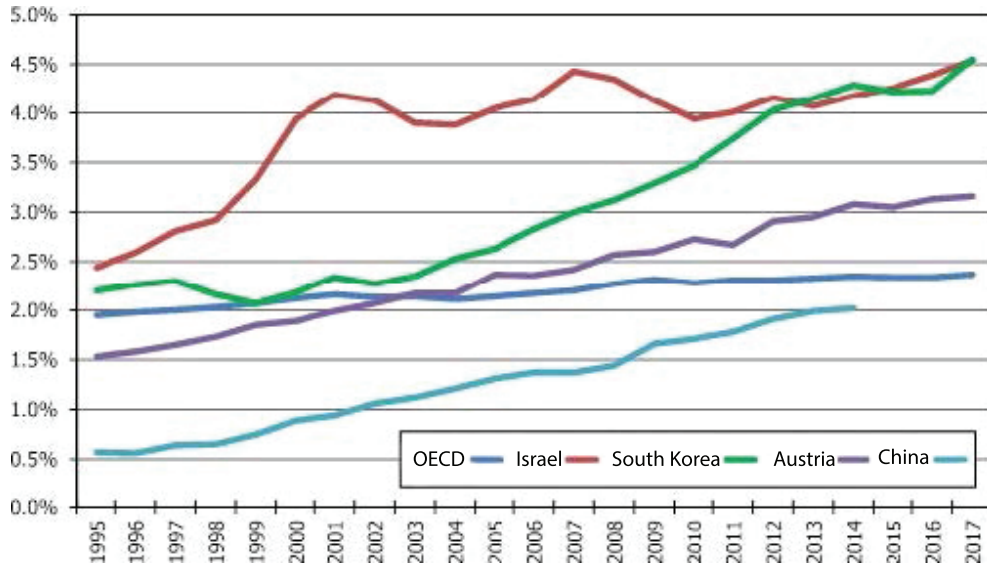
The Innovation Authority, as one of the entities operating to expand the participation of a variety of populations in the high-tech professions, must be assisted by the relevant government ministries in order to **map the technological fields in which it will be possible to integrate the Arab and ultra-Orthodox populations in quality employment** so they are able to participate in innovative processes.

Summary

The Israeli high-tech industry has a big impact on the economy of the State of Israel, on quality employment, and on the resilience of the Israeli economy in international indices. Turning the Chief Scientist's Office at the Ministry of Economy into the National Authority for Technology and Innovation as an independent authority was a welcome step that allowed the Authority flexibility to act and provide a fast, effective response to the challenges facing the high-tech industry. The findings of the audit show that there are gaps in various areas liable to lead to the loss of Israel's advantage in the technological arena and make it difficult for industry to deal with future challenges. To maintain Israel's advantage in the technological arena, there is a need for full coordination of those involved. Therefore, there is great importance to the existence of a government entity with a wide perspective and integrative capabilities having the necessary authority to pool resources. Such an entity would be able to formulate a long-term strategy and propose suitable tools for maintaining Israel's technological advantage.



The rate of expenditure on R&D in select nations and OECD members (1995-2017)



Source: OECD

