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THE INFLUENCES OF THE BRAIN DRAIN OF ISRAELI STUDENTS STUDYING ABROAD ON THE ISRAELI LABOR MARKET WITH COMPARISON TO THE INTERNATIONAL SITUATION

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CONCEPTS OF THE RESEARCH

The actuality of the theme of research. As part of globalization, the problem of international migration of highly qualified labor resources so-called "brain drain" is in the background a shadow of financial, commercial, educational, scientific, technical, environmental, and other planetary processes. Taking into consideration the role of the innovative component of the modern stage of scientific and technological progress, it is expedient to focus our attention primarily on the migration of intellectuals, i.e., relocation of scientists, lecturers, and specialists of the highest qualification.

The relevance and significance of the current research lie in the influence of worldwide macro and globalization processes on the economic and social factors within the worldwide academic world, and their relevance on the academic field in Israel, and from the fact that it deals with a phenomenon that currently preoccupies the senior Israeli academic institutions and the Israeli Council of Higher Education.

The relevance of the current research derives from the proposed economic and educational national and comprehensive model which aims reduce the Israeli brain drain, minimize its dimension, and to reduce the number of Israeli outbound students. The model should be budgeted by the government, in order to deal with the discussed phenomenon of brain drain. Also, the current thesis aims to provide an innovative outlook on various concepts and their connection to the existing reality.

Israel needs to make the transition from a passive statement of brain drain to the economically developed countries of the world economic system to the creation of national tools for regulating the migration of intellectuals.

The object of study is the migration of intellectuals as a source and carriers of change within the framework of the modern world system at the stage of globalization and the formation of the post-industrial society of Israel.

The aim of the thesis is to present the phenomenon of brain drain in global vision, to present comprehensive data and analyses related to the state of Israel, its direct and indirect causes, its effects and implications in all aspects especially academically, economically and on the Israeli labor market, and the solutions offered by the state of Israel in order to deal with the phenomenon by comparison to the adopted solutions by countries around the world.

This leads to the following **objectives of the research:** to give definition to the migration of intellectuals, to identify general and specific migration trends of intellectuals in the modern world-system, to propose a classification of factors causing the migration of intellectuals, to develop a qualitative model of the circulation of intellectual resources in the world economic system, to assess the current regulation of international migration of intellectuals, to formulate the principles of state policy in the sphere of migration of intellectuals and give regional recommendations, to review and assess the existing Israeli policies in this regard, to map the goals of the higher education students and Israeli specialists, and to state innovative solutions and recommendations to the responsible bodies within the state of Israel, which can also be used in solving the discussed problem at the international level.

The research methodology.

The goals and tasks that have been formulated for analyzing the academic mobility of Israeli students and international students determine the use of different

methods, procedures, and instruments of scientific knowledge in economic processes such as classification and comparison of global models for managing [the national challenge in each country, the Central Bureau of Statistics in Israel, scientific abstraction, formulation of new concepts, and analysis, and synthesis of data from reliable sources Such as the OECD, the World Bank, the Council for Higher Education in Israel, The UNESCO, and the Ministry of Economy in Israel .

The methodological support in the proposed research includes various methods of analyzing data and drawing conclusions, which consider the characteristics of the research while making international comparisons. Within the methodological methods, abstraction was made to the economic concepts, socio-educational concepts, models, and approaches dealing with academic mobility in different countries including and comparing to Israel .

.A statistical analysis and comparison of data were performed, on the phenomenon of brain drain, and its impact on the local economy. In addition, there were a classification and comparison of data, scientific abstraction, data grouping and classification, analysis and synthesis, figures, and tables.

In addition, induction and deduction, classification and grouping of information, evolutionary investigation of the events and phenomena investigated, and use of national models from other countries were also conducted. Actually, analysis of several leading academic studies, the professional opinions of researchers from Israel and from the Republic of Moldova and other countries, together with the implementation of the analyzed methods, contributed to the creation of an economic and initial model in Israel, to the supposed recommendations, and the continuation of scientific investigations in this regard.

The scientific research hypothesis - the low salaries in parallel to the high costs of living and the high level of taxes, looking for good and better studies, the high level of unemployment by fields and specializations, looking for better career and better professional opportunities in other countries, the limited number of positions of researchers and academic staff, and the low academic budgeting to Universities and research Institutions which leads to the low quality of Academic education are the main factors for the Israeli brain drain and academic mobility of Israeli higher education students.

Important scientific problem solved. The growing imbalance of the world-system caused by the uneven concentration of specialists due to the undeveloped methods of accounting for the migration of intellectuals and the lack of approaches to the regulation of migration at the national level.

Scientific novelty and originality: development of an innovative economic model and determination of solutions for the movement of intellectual resources; formulation of principles of state policy in the field of intellectual migration; provision of methodological recommendations and innovative recommendations to Israeli ministries aimed at reducing the demand for academic mobility and flight of minds.

Under the proposed model, new and developed programs are to be operated, with the cooperation of entities, ministries, authorities, and related bodies. These programs and partnerships should lead to at least a partial solution to the problem of brain drain and academic mobility within the state of Israel, and even to the adoption of the

proposed model, recommendations, and solutions in countries around the world for dealing with the similar problems.

The value of the solution in the proposed research is divided into three fields:

1. The demand level of academic mobility amongst Israeli higher education students.

2. The solutions in the model should allow actual work and collaboration between the related bodies- Ministries, authorities, and municipalities.

3. The academic-economic model should enable on the one hand a brain drain forecast for Israeli students, academics, and specialists, and on the other hand, to take active steps to prevent them from the drain and to minimize this trend through massive treatment and solutions.

The theoretical importance and the applied value of the thesis. The theoretical importance of the study: regularities and tendencies characterizing migration flows and their supporting infrastructure have been clarified, as well as some regulators by intellectual migration processes, and conceptual foundations of intellectual migration have been formed, opening up additional theoretical possibilities in the field of geo-economics and global studies. The practical significance and value of the study: The theoretical foundations of the phenomenon of brain drain and migration of intellectuals and specialists that have been developed in the proposed research will be used in the educational process in Israeli Universities, as well as the development of international educational programs for extending the joint of foreign partners. Also, the main conclusions can be used for solving Israel's economic problems, while preserving its intellectual potential, and formulating an Israeli development strategy to prevent the outflow of Israeli professional resources.

Approval of the results. The main results, conclusions, and recommendations were presented and discussed in 29 scientific articles that were published in journals with different categories, including category B, in Israel and in Europe, and the main findings were also presented at conferences I have participated in, in Israel and in Europe, while I have actively participated by announcing a post or taking part in a lecture.

Summary of the sections of the thesis. The logic and structure of the work are determined by the aim and objectives of the study. The thesis consists of an introduction, three major chapters, conclusions, and recommendations. The chapters include 22 tables and 20 figures. The thesis includes a list of 248 bibliographical sources, 49 annexes, and 135 pages of main text.

The introduction consists of the conceptual landmarks of the research, which gives a comprehensive picture of the discussed phenomenon- the actuality of the theme of research, and the relevance and significance of the current thesis, then a description of the development of the theme of research, and the specificity of the problem of international migration of intellectuals and how it has been explored in national and international works. Also, the disciplines of the study, the method of processing the statistical data, and the method for the determination of the conclusions were described and discussed in the introduction.

At the same time, emphasis was devoted to the problems of regulation of international migration of intellectuals and brain drain, the global principles of labor

migration regulations, comparing the features of migration standards and indicators of migration flows of the intellectual elite in specific countries, and the specificity of the regulations of this process in Israel.

Actually, many significant contributions have been made in order to understand the foundations of migration of highly qualified specialists, as well as to the methodology of studying the complex problems adjacent to this theme and to understand the different approaches related to the problem of international migration, as they represent the assessments of the process and the role of intellectual migration .

The introduction emphasizes the relevance, actuality, and importance of the problem addressed, the object and subject of the study, and the goals of the dissertation research that predetermined the formulation and implementation of the research objectives**.**

After describing the problem of the discussed phenomenon and presenting the methodological aspects and process, conclusions, solutions, and recommendations were formulated in order to overcome the discussed problem and minimize its dimensions, by addressing the theoretical and practical significance of the study, and by the approbation of the obtained results. All was done based on theoretical and methodological information base related to academic mobility and brain drain at local and national levels.

In the **first chapter "THEORETICAL ASPECTS OF THE EFFECTS OF THE ISRAELI BRAIN DRAIN ON THE NATIONAL LABOR MARKET WITH COMPARISON TO THE WORLDWIDE SITUATION"** the social and economic aspects of the development of migration processes are considered. The chapter reveals the impact of the modern labor market on the migration of highly qualified specialists, as well as the role of Israeli scientists in the production and implementation of scientific knowledge, including the results of academic research and development in Israel. A model of global economic migration of intellectuals is presented, which allows to identify the specifics of the Israeli situation within the framework of the formulated problem. The author compares a number of economic and social measures of profit and loss and finds that accumulation of specialists leads to an increase in market wage rates, population growth, and thus the marginal product of capital and labor force decreases over time. Continuous population growth keeps wages at a minimum level, and so the share of labor in the marginal product must increase, real profits per unit of capital must fall, and then the incentives for further accumulation must fall [18]. Actually, the achievements of technical and scientific progress and the development of high technologies should solve the problem of maintaining the growth of capital and labor force at the level necessary for sustainable economic growth. At the end of the first chapter, in light of the professional literature, reviews, statistics, studies, and the findings presented in the subchapters, author also emphasizes conclusions at the global and local levels, whilst providing a preliminary picture of the worldwide changes which have occurred as a result of the development of the academic zone, of the implications of the globalization, of the worldwide demographic changes, and of the macro-economic influences.

In the **second chapter "AN ANALYSIS OF THE ISRAELI BRAIN DRAIN AND ITS INFLUENCES ON THE ISRAELI ACADEMIC SITUATION AND**

LABOR MARKET IN COMPARISON TO THE INTERNATIONAL SITUATION" includes the description of the international phenomenon of brain drain in several European countries and in the United States. Here the International Relations and Academic – Economic Cooperation were analyzed. This chapter provides and indicates the influences which had changed the needs and preferences of Israeli higher education students and the way in which they perceive the higher education system. Also, it indicates the future consequences of Israeli academic mobility and brain drain in a period of eight-nine years (2015-2023) and an analysis of statistical data and measures of the phenomenon**.** This chapter addresses quantitative data related to the educational, economic, and social implications of the Israeli brain drain. All are related to the academic institutions and R&D, the total government expenditure on education, and the impacts of Israeli academic mobility on the number of outbound students and its impacts on the monetary losses**.** The chapter ends with conclusions of the statistical data that indicate the Interactions between the global and national brain drain and the various main trends that lead to the development of the modern international labor market.

The **third chapter "THE MODEL FOR COMBATING THE ISRAELI BRAIN DRAIN: RESPONSIBILITIES AND RECOMMENDATIONS"** begins with a description of the adopted solutions and strategies related to the phenomenon of brain drain in a global vision. A summarization of the solutions adopted by countries around the world, then proposed solutions of the Israel with a comparative analysis to countries around the world for the deciding how can Israel stop or minimize the academic brain drain and its negative effects. Solutions and policies were offered to overcome Israeli brain drain, and projects and programs were built aimed to bring back the Israeli minds such as the "Centers of Excellence", and several national programs. There is no current actual treatment in this regard. In this context, the author proposes and presents a comprehensive, innovative, and original model for dealing with the analyzed phenomenon, by indicating the most significant factors and bodies related to the phenomenon. The model and recommendations require genuine and proper cooperation of the government, different ministries, and related bodies in order to deal successfully with the phenomenon from the educational, economic, commercial, industrial, cultural, and national aspects. It is important to note that the model proposal has already been submitted to several government bodies representing the main ministries involved in the operation of the model, and there is initial enthusiasm and agreement for the proposed model, which was promised to be adopted once finalized and made certain changes.

General conclusions and recommendations compiled by the author based on the results of the study, not only systematize the data obtained, but also serve as a basis for formulating additional discoveries of the author in the context of improving policies that contribute to stopping the brain drain from Israel in the context of globalization. Based on the identified trends and problems, the author presents targeted theoretical and applied recommendations aimed at addressing such an important problem as the loss of intellectuals. In terms of theoretical recommendations, the author summarizes key concepts and principles derived from an analysis of global trends in brain drain, as well as taking into account Israel's national characteristics. The applied

recommendations, in turn, are concrete steps and activities aimed at addressing specific problems and improving key aspects. The recommendations, in particular the proposed model, carefully argued and adapted to the specifics of Israel, are the basis for developing effective strategies to improve state policy and address the challenges of globalization by integrating the model into Israel's ministries and agencies.

Key words: Brain Drain and intellectuals' migration, Academic Mobility, Higher Education and academic demand, Labor market and employment, Academic studies and R&D Outputs, National Economic-Academic model.

SUMMARY OF THE CHAPTERS

The chapter 1 "THEORETICAL ASPECTS OF THE EFFECTS OF THE ISRAELI BRAIN DRAIN ON THE NATIONAL LABOR MARKET WITH COMPARISON TO THE WORLDWIDE SITUATION", examines the social and economic aspects of the development of migration processes, including the determination of the place of migration of intellectuals in international migration and the modern world economic system in general. The influence of the modern labor market on the migration of highly qualified specialists, as well as the role of Israeli scientists in the production and implementation of scientific, knowledge is revealed including the academic R&D Outputs in Israel. The model of the world economic migration of intellectuals is presented, which makes it possible to identify the specificity of the Israeli situation within the framework of the problem formulated.

Actually, the global transformation of the world economic space fuels the scientific interest in the problems of the labor market, in the interpretation of its economic content, and the scientific and technological revolution caused qualitative changes in international labor migration, the main of which was a significant increase in the share of qualified specialists among migrants. The new features in this process are [13]:

1. “Brain drain” is periodically replaced by “brain circulation”.
2. There has been a diversification of migration directions. while professionals from industrialized countries can take temporary jobs in developing countries, the United States continues to be the accepted center of attraction for professionals.
3. The movement of professionals has become a new phenomenon. This is due to the activities of TNCs and great opportunities for career advancement.
4. The modern level of migration of professionals is characterized as a kind of international corporation of "brain hunters".
5. There is an integration of the higher education system, which suggests for students from different countries around the world continue their studies, which causes them not to go back to their homelands.

Based on different approaches of foreign and Israeli authors in regard to the place of the labor force with different levels of qualifications in the modern world labor market, there are obvious trends in this regard [19, 23]:

1. In the global labor market, the position of highly skilled workers is more stable than low-skilled workers. While skilled workers get permanent basis jobs, foreign low-skilled workers gain seasonal and temporary employment.

2. The global labor market is strongly affected by the spread of information technology. Such global distance communication systems increase and expand the interaction between employers around the world. This requires the use of appropriate tools and unique requirements, so highly skilled labor in such conditions is in a more advantageous position than a low-skilled one.

3. By justifying several studies, while in developed countries, there is a shortage of highly qualified workers and employees, in many developed countries there is already an excess of highly qualified specialists, including local specialists. The demand for highly qualified foreigners can be explained by their lower wages relative to the local specialists.

4. The migration of skilled labor comes mainly from developing countries to developed countries. The main developed and recipient countries of qualified specialists are the USA and then several developed countries in Europe. For European countries, the migration processes occur within Europe itself, so the main concerns about European countries are brain drain from European countries to the USA.

5. Brain migration has unequivocal effects and consequences both positive and negative in the exporting country of experts and in the importing one. These consequences depend on the economic and social situation in these countries, and it is always important to weigh and compare the gains against the losses from labor migration in each country.

6. In developed countries as well as in a number of developing countries, steps, and actions are being taken to raise the level of education, training, and vocational training of workers in order to raise the level and quality of the workforce, which is measured by their level and quality of performance. But still, the process of preparing the workforce suffers from a number of drawbacks, which are reflected in the continuing demand for foreign laborers in developed countries.

7. The difference between the wages of highly-paid and low-paid workers in many developed countries is significant and it even tends to increase for various reasons [9].

The gains and losses of countries of the world system due to exporting and importing specialists and scientists- so-called "brain drain", and its impacts on the subsequent economic growth:

There is no comprehensive picture of the process and its consequences, so, we suggest comparing a number of economic and social indicators of gains and losses. Actually, accumulating specialists leads to an increase in market wage rates, which contributes to population growth and so the marginal product of capital and labor decreases over time. The constant growth of the population keeps wages at the minimum level and so, the share of labor in the marginal product should increase, the real profit per unit of capital should fall, and then, the incentives for further accumulation should fall [18]. Actually, the achievements of technological and scientific progress and the development of high technologies should solve the problem of maintaining the growth of capital and labor at the level necessary for sustainable economic growth.

If we take into account the indicator of technological progress, then the picture will be different because both capital and output will grow faster than the labor force [16, 17].

What really is important is striving for stable economic growth and ensuring the improvement of the well-being of the population and intellectual property. The effective use of mechanisms for the involvement of intellectual property and intellectual resources in economic circulation is the main factor for the sustainable economic growth of all countries including Israel [1, 2].

At the end of the first chapter, in light of the professional literature, reviews, statistics, studies, and the findings presented in the subchapters of the first chapter, conclusions are presented at the global and local levels, whilst providing a preliminary picture of the worldwide changes which have occurred as a result of the development of the academic zone, of the implications of the globalization, of the worldwide demographic changes, and of the macro-economic influences.

At global levels-

1. A study published in 2019 found a high correlation between the level of university funding (normalized to the number of students) and the weighted score in the international rankings. The study found that public funding has a significant effect on the ranking of universities in the rankings. Universities ranked among the top 100 in the QS rankings received double funding from universities ranked 101-200, and funding three times higher than universities ranked 201-300 [3, 10].
2. There are countries that have established excellent programs to promote research through a significant increase in funding for the academic sector. Many of the excellent programs focus on promoting internationalism as a key strategy for recruiting leading researchers and academic talents. Comparing the results of the countries that appear in the rankings, one can see 4 countries whose progress is particularly noticeable: China, Australia, Saudi Arabia, and Taiwan. These countries have at least one excellence program that deals with increasing investment in leading universities [14].
3. The Chinese government has set itself a goal: to put 42 of its universities in the top rankings by 2050. This program is called the "Double World-Class Project" and through it - selected universities will receive a significant budget increase. These excellent programs have been found to be a means of funding that effectively contributes to the promotion of the performance of universities around the world [15].
4. The use of university rankings has risen sharply in recent decades, and with it the discussion of the accuracy and usefulness of the various rankings. The ranking may contribute to the prioritization of individuals, institutions, and countries as well as to promotional competition. However, it is not an exact science and its results depend on the details of the methodologies.

University rankings are based on different combinations of different metrics from a wide variety of sources. The rise in the types of methodologies and criticism indicates that there is no broad consensus on the subject, and yet special attention is paid to these ratings and they also have known practical and economic implications [3, 4, 12]

The level of education and its level of intensity in each country are influenced by the worldwide trends which are based on the economic-social-demographic changes that the world undergoes. Theories and philosophies are changing world orders in all areas, and thus, they affect the various stages of education inclusive of academic education.

5. The concept of "Increase for Academic Mobility" has increased following the initiation of the Bologna Reform in 1999. The academic institutions had opened their gates to the students of higher education and presented them with degrees and tracks. The demand for academic mobility led to the immigration of communities of students, specialists, and researchers between various countries and universities [7].

6. Clarification of the term "academic mobility", and providing a diverse perspective on the meaning of the mobility of higher education students and academic staff (researchers and lecturers), and its consequences on the national gross product.

7. Academic mobility is aimed at acquiring higher education for one's personal and professional development, which was unable to be received in the homeland. Academic mobility is supposed to provide a wide, diverse "academic experience", designed to enrich the world of knowledge and professional experience of the higher education students [8].

8. Academic mobility influences international relations among countries as well as economic and tourist collaborations (academic mobility). Actually, academic mobility creates worldwide moves of immigration for different reasons.

9. In countries that suffer from negative academic mobility, a connection exists between academic mobility and economic-social values.

At the local level

1. Israeli academic centers aspire, within economic relations, to advance the research field which is performed by the teaching staff and higher education students within these institutions, by signing cooperation agreements with leading worldwide academic institutions [11].

2. the issue of emigration from Israel touches one of the country's most sensitive nerves, but attitudes are changing and, as Israel becomes more integrated into the developed world, a rising share of its college graduates have been leaving primarily those who studied in Israel's leading institutions and in some fields most important for ensuring the country's continued and future economic growth. Due to the aggravation of the problem of Israel's brain drain, the proposed study explores and looks at the trends and underlying determinants of academics and skilled professionals leaving Israel and its conclusions are a cause for concern. So, the hypothesis of the research is that there are main factors, from all motives and reasons (dependent variables) that affect the brain drain (independent variable), while the researcher speculates that the reduced investment in academic education along with the relatively low wages are the most explanatory variables [5, 6].

The main goals of the proposed research are:

Analyzing the phenomenon of Israeli brain drain and academic mobility of the Israeli higher education students who choose to study in foreign countries, its direct and indirect causes, its effects on the Israeli labor market, mapping the countries in which the Israeli higher education students and Israeli specialists immigrate to for academic education and work (numbers, faculties, financial costs, etc.), assessing the existing Israeli policies in this regard and accommodating them to the reality in a global and a national vision and the strategies and treatments various countries around the world have adopted to deal with this problem even partially, presenting innovative solutions, and offering a comprehensive national model that offers actions and

strategies for dealing with the discussed problem, resolving it or minimizing its dimensions [20, 21].

This goal can be achieved after reviewing the worldwide trends and solutions for minimizing brain drain and academic mobility, presenting all the variables and observations required for an innovative and initial economic model that will lead to a reduction in the Israeli brain drain and students' academic mobility, and providing innovative recommendations to the Israeli Ministry of Education and the political-social-economic establishment in Israel, what will contribute to the development and economic efficiency of the academic establishment, international relations, and the Israeli economy [22, 23].

For concluding:

1. The goals and tasks that have been formulated for analyzing the academic mobility of Israeli students and international students determine the use of different methods, procedures, and instruments of scientific knowledge in economic processes such as classification and comparison of global models for managing [the national challenge in each country, the Central Bureau of Statistics in Israel, scientific abstraction, formulation of new concepts, and analysis, and synthesis of data from reliable sources Such as the OECD, the World Bank, the Council for Higher Education in Israel, The UNESCO, and the Ministry of Economy in Israel.

2. The methodological support in the proposed research includes various methods of analyzing data and drawing conclusions, which consider the characteristics of the research while making international comparisons. Within the methodological methods, abstraction was made to the economic and socio-educational concepts, models, and approaches which deal with the academic mobility and brain drain in different countries including and with comparison to Israel.

3. A statistical analysis and comparison of data were performed, on the phenomenon of brain drain, and its impact on the local economy. There were also, classifications and comparisons of data, scientific abstraction, data grouping, and formulating, analysis and synthesis of figures and tables.

4. In addition, the author conducted inductions, deductions, classifications, and grouping of information, evolutionary investigation of the events, and the investigated phenomena. There was also a comparative analysis of the adopted models in other countries in this regard.

Actually, the analysis of leading academic studies, and professional opinions of researchers from Israel, the Republic of Moldova, and other countries, alongside the implementation of the analyzed methods, contributed to the creation of an economic-academic initial model and applicable recommendations, alongside the continuation of scientific investigations in this regard.

The chapter 2 "AN ANALYSIS OF THE ISRAELI BRAIN DRAIN AND ITS INFLUENCES ON THE ISRAELI ACADEMIC SITUATION AND LABOR MARKET IN COMPARISON TO THE INTERNATIONAL SITUATION", begins with a description of the international phenomenon of brain drain in several European countries and in the United States, the main reasons and factors which lead to international brain drain, and then a comprehensive analysis and mapping of the data in the context of the Israeli academic brain drain, including sorting by countries and regions in the world.

International Relations and Academic – Economic Cooperation were analyzed including foreign students and highly qualified specialists in Israel, international programs operated in Israel such as Erasmus +, and Tempus, and then focusing on the academic mobility of Israeli higher education students and the influences on the Israeli labor market, with comparison to the international situation.

This chapter provides and indicates the influences which had changed the needs and preferences of Israeli higher education students and the way in which they perceive the higher education system. Also, it indicates the future consequences of Israeli academic mobility and brain drain in a period of eight-nine years (2015-2023) and an analysis of statistical data and measures of the phenomenon .

This chapter also analyzes the main causes of the Israeli brain drain, while salary satisfaction and obstacles and low investment in the higher education system are the main ones, the brain drain in different fields and professions such as physicians, high-tech and computer engineering, math and science, and law studies, and the existing coping attempts while focusing on the institutions of higher education - barriers, obstacles, admission requirements, tuition fees, favorite Universities and faculties, supply and demand, all while comparing and analyzing data and parallel parameters in well-known, leading, and prestigious institutions and centers of higher education around the world.

Actually, this chapter addresses quantitative data related to the educational, economic, and social implications of the Israeli brain drain. All are related to the academic institutions and R&F, the total government expenditure on education, and the impacts of Israeli academic mobility on the number of outbound students and its impacts on the monetary losses.

The chapter ends with conclusions of the statistical data that indicate the Interactions between the global and national brain drain and the various main trends that lead to the development of the modern international labor market, as follow:

1. The Interactions between global and national brain drain, (labor and educational migration) - The Israeli brain drain is a part of a global phenomenon and is expected to increase in the near future. According to statistical data about 28 countries (western economies- in order to have a better comparison to the state of) In the years 2014-2021, the average measure for college and universities graduate immigrants per 10,000 residents is 12.40 while the Israeli number is higher than three times of this number- it is about 41.44.

Although the Israeli brain drain is a global phenomenon, the rate of academic emigration from Israel to the U.S. is the highest and can't be compared to the Western world. for example, the number of Israelis in the top 40 American departments in economics, computer sciences, chemistry, physics, and philosophy as a percentage of their remaining colleagues in Israel, is over twice the overall academic emigration rates from the European countries. Basically, it's an active process of educational immigration which is a part of the labor migration. The Israeli government is concerned about this migration, whether at the general level - labor migration or at the specific level - educational migration.

2. The development of the modern international labor market is affected by various trends such as:

- the international labor market is growing at the expense of migrants from countries with economies in transition;
- increased competition in the global labor market;
- discrimination against migrants continues to exist;
- entrance barriers to the world labor market increase;
- the activity of trade unions, striving to defend the interests of the national labor force, is intensified;

The role of the ILO and other international organizations in the regulation of the international labor market is increasing.

3. The main market forces pushing for labor migration can be summarized as follows:

- the difficulty in finding employment, or the difficulty in finding employment that provides a livelihood in the mother country;
- Excess demand for work in different sectors in certain rations, in parallel with the excess supply of workers in the labor market of other countries;
- Demographic changes;
- political and socio-economic crises;
- Aspirations for career development and availability of promotion channels;
- Widening the wage gap between developed and developing countries, and between them

4. National and international researchers agree with the fact that the “brain drain” from Israel is in its essence a very negative phenomenon for the development of the country and for its place in the world community. The author thinks, consideration of the problem needs approaches on the basis of which the picture of migration of scientists and specialists could appear as a component of the global world system.

The Bologna Reform had managed to connect itself to the State of Israel. Despite its lack of acceptance to the European "academic zone", and being rejected twice, Israel continued establishing an academic response that is consistent with the Reform demands and preserved its academic relevance in comparison to other higher education institutions around the world, by adopting several steps by the Israeli Council for Higher Education.

One of the major reasons for this accommodation was the interest in increasing the demand for academic studies in Israeli academic institutions and raising the mobility of inbound students by operating several international programs in Israel, such as the DARE, TEACHES, and LAHAV Programs. But despite that, it didn`t bring a significant rise in the demand for academic studies in Israel [24].

5. The work process included collecting data from all Israeli universities: Ben-Gurion, Bar-Ilan, the Technion, Tel Aviv University, the Hebrew University, the Weizmann Institute, University of Haifa. Several findings can be deduced from the collected and analyzed data [25, 26]:

There were only a few cases where postdoctoral students abandoned their field of research and moved to completely different jobs unrelated to the fields of study and degrees they received. Seemingly this is a trivial finding, as it is expected that people who have put many years of effort in a certain direction will continue and persevere in

it even though there are few exceptions. In fact, this phenomenon also shows that, as a rule, postgraduate and postdoctoral studies in Israel are appropriate, good, and rewarding.

I. The high proportion of doctoral students who continue to work at the institution where they have studied is noticeable. It is important to note that in order to maintain diversity, there are universities in the world that do not accept their ranks as research faculty members who studied there as students.

II. The proportion of women completing a doctorate is higher than the proportion of men, but this picture is reversed when it comes to post-doctoral studies, especially abroad.

III. A relatively high proportion of doctoral holders who went abroad for a post remained there. That is, the post-doctoral period was the first step in immigration.

IV. The minority of faculty members in academia in Israel leads to about 25 students studying for each faculty member. This is the worst numerical ratio in Western society.

The chapter 3 "THE MODEL FOR COMBATING THE ISRAELI BRAIN DRAIN: RESPONSIBILITIES AND RECOMMENDATIONS", begins with a description of the adopted solutions and strategies related to the phenomenon of brain drain in a global vision. A summarization of the solutions adopted by countries around the world, then the proposed and suggested solutions of the state of Israel with a comparative analysis to countries around the world- How can the state of Israel stop or minimize the Israeli academic brain drain and its negative effects?

Solutions and policies were offered to overcome Israeli brain drain, and projects and programs were built aimed to bring back the Israeli minds such as the "Centers of Excellence", and several national programs .

Actually, the third chapter focuses on the treatments and policies the State of Israel has adopted in order to deal with the phenomenon, with a comparison to the policies and solutions adopted by core countries. It's clear that there is no current actual treatment in this regard.

In this context, the author proposes and presents a comprehensive, innovative, and original model for dealing with the analyzed phenomenon, by indicating the most significant factors and bodies related to the phenomenon. The model addresses the suggested solutions, steps, and responsibilities of each related authority. The author reaches a conclusion that the main factor of the Israeli brain drain, and its` educational, economic, and social implications is the lack of appropriate treatment in this context, which is mainly expressed by salaries dissatisfaction due to the low salaries of Israeli experts compared to experts with the same qualifications in leading countries.

If so, the author states policies, strategies, and recommendations to deal with and minimize the dimensions of the discussed phenomenon, based on the synthesis of the data from the previous chapters, successful treatments, solutions, and steps were adopted by different countries in this regard, along with sharing related and responsible bodies in the state of Israel.

Actually, the model and recommendations require genuine and proper cooperation of the government, different ministries, and related bodies in order to deal successfully with the phenomenon from the educational, economic, commercial, industrial, cultural, and national aspects. The related bodies are the National Council for Higher Education and Academic Institutions and Universities, the Planning and Budgeting Committee

(PBC), various government ministries such as the Ministry of immigrant absorption, the social security, the Ministry of Education, the ministry of tourism and the local municipalities.

The different aspects of the model:

1. Academically:

1.1 Israel's academic ranking at international levels.

1.2 The number of academic institutions, and universities supply.

2. The number of academics, specialists and researchers leaving Israel and the level of salaries they receive.

2.1.The number of experts leaving Israel and their academic conditions, which means: respectful academic status, favorable employment conditions with freedom of choice, a flexible system that is customized to the needs and convenience of the experts alongside the academic and research needs, and more.

2.2.An immediate reform in order to upgrade the higher education system and compete with parallel systems in countries around the world.

2.3.The career paths of doctoral students and the number of academic positions available for post-doctoral students.

2.4.Research grants in academia- Government funding Accelerates and promotes the innovation that leads to job creation, a competitive industry, and entrepreneurial success.

3. Government funding bill for academic and research institutions.

4. Involvement and responsibilities of local councils and municipalities as an advisory and supportive partner organization- Municipalities have a huge responsibility in raising awareness among students and their parents in the earliest stages in everything related to academia such as admission requirements, fields and subjects of study, manner and forms of study, duration of the study, conduct in academia, opportunities and risks, and all relevant information.

5. Encouraging so-called "academic tourism"- This will attract more and more students, which will lead to huge economic benefits, both from tuition, rents, living expenses, and everything related to the arrival of foreign students to the country.

6. Existence of international relations - It is important to get advantages of the stay of Israeli students abroad and of foreign students in Israel, and developing relationships and collaborations with foreign countries. Such collaborations in all kinds of fields: academic, economic (industrial, agricultural, and commercial), tourism, health, technology, political, social, and others, may promote relationships and bring significant benefits to both parties and indirectly to the global level as well.

THE PROPOSED MODEL-

The responsibilities of the ministries and bodies related to the operation, financing, and supervision of the implementation of the model:

1. The Ministry of international relations- Promoting International programs, getting advantages of the stay of Israeli students and specialists abroad and of foreign students and specialists in Israel, and developing relationships and collaborations with foreign countries.

2. The Ministry of Finance-

a. Budgeting and financing the proposed model.

b. Raising the salaries of researchers, lecturers and experts, and improving their academic conditions.

c. The allocation of a larger quota of standards and jobs for experts, lecturers, researchers, and highly qualified educated people.

d. Providing economic benefits and all kinds of discounts and facilitation to lecturers, researchers and high qualified educated people.

e. Increasing the number of academic positions available for post-doctoral students-

f. Increasing the research grants and the sources of funding for academic research in Israel.

g. Budgeting a part of the foreign students' tuition and all that accompanies, and the adjustment of the student's tuition to the international tuition in these programs with similar academic standards and in accordance with the reform. countries in Bologna, Europe, and the OECD countries.

h. Increasing the number of universities.

3. The Ministry of Education-

a. An immediate reform in order to upgrade the higher education system and compete with parallel systems in countries around the world. This means, adopting innovative teaching methods, diverse and up-to-date teaching strategies, available applications, and clear set-ups. In parallel, the tuition of international students in the programs should be adapted to the European countries with similar academic standards and in accordance with the reform countries in Bologna, Europe, and the OECD countries.

b. Increasing the dimensions of productivity in research and development and the rate of academic growth, and increasing all measures of scientific influence in a manner appropriate to the international publications and levels.

c. Diverse student population by diversifying the study subjects and various faculties. Institutions should adopt unique and attractive programs which attract more students and provide a response to the demand of both Israeli and foreign students.

d. Academic institutions should follow and keep pace with the modern technology adopted in developed countries.

e. Formulating recommendations and policy-making related to the careers that doctoral students choose.

4. The Government-

a. Funding and increasing the research grants to academia. Also, it is responsible for legislation regarding government funding for academic and research institutions.

b. Enacting laws and regulations concerning aspects related to the model itself, as well as other aspects related to the responsibilities of the various bodies and ministries.

5. Local Municipalities-

a. Raising awareness among students and their parents in the early stages of everything related to academia.

b. ensuring the arrival of as many foreign students as possible. So, they should take care of everything related to international programs run by the national institutions of higher education, besides all related to hosting conditions and requirements.

6. The Ministry of Tourism-

Refreshing and upgrading the marketing system and "student tourism" regulations.

▪ **In addition, there are related stakeholders and partnerships** such as Universities, Academic Institutions, The Council for Higher Education in Israel, and the Ministry of Justice.

The third chapter ends with the following conclusions:

1. Many countries tried to deal with the phenomenon of brain drain and academic mobility of students and suggested solutions and processes to deal with the phenomenon. These strategies increased the GDP during these years.

2. The Israeli government has a huge responsibility because it needs to find a comprehensive and thorough solution and stop discrimination in favor of Israel's business sector. The Israeli government must support potential start-up entrepreneurs, including Arab entrepreneurs since such support is certainly essential to the Israeli economy.

3. Israel's labor productivity stagnation, its increasing income tax burden on the educated population, and its rising living costs all threaten the country's ability to retain its most skilled citizens. while the number of emigrants may be objectively small, it disproportionally affects the most educated groups, those who help keep Israel on the technological front.

4. To overturn the tides, a sharp pivot in national budgetary priorities is required. That includes investment in education and infrastructure for minorities in Israel, actions that will, in turn, increase the productivity of much of Israel's working population.

5. The academic Universities and Institutions in Israel have established a comprehensive system of academic study frameworks, while the leading universities are Tel Aviv University, Ben Gurion University, and the Hebrew University.

6. The solutions to the phenomenon of brain drain and academic mobility should suggest integrative treatment and an overall policy that includes various components, the establishment of employment centers with appropriate wage conditions, tax benefits for academics, and self-development and professional development options.

7. The suggested model aims to enable national multi-system strategic solutions for dealing with, managing, and reduction of the phenomenon of the Israeli brain drain and even a future forecast. The dependent variable is the number of outbound academic students and the brain drain of professionals and highly qualified academics. The independent variables explain the dependent variable, which is the reason for the Israeli brain drain.

It is important to note that the model proposal has already been submitted to several government bodies representing the main ministries involved in the operation of the model, and there is initial enthusiasm and agreement for the proposed model, which was promised to be adopted once finalized and made certain changes.

The model aims to get the following aspects:

a. A significant increase in investment in education especially in academic education and a significant increase in the number of academic institutions and research institutions in the periphery as well as in the central cities of the country.

b. Government investment in academic infrastructures which include: the establishment of institutions, centers of excellence, tax benefits, raising salaries, positions for researchers, professionals, and academics, personal and professional development options, and housing solutions.

This will lead to an opportunity for the creation of international relations with other countries in order to cooperate with other academic systems in a similar situation.

While the total estimated costs of the model are about 36,100,000 $ per year, in parallel, the practical estimated solutions are mainly Academically and Economically:

1. Educationally:

I. Improving the educational system, including elementary education, due to the biggest obstacles in obtaining a balanced system.

II. The government should demonstrate a sincere commitment to support research while allowing scientists to remain as independent as possible, and creating scope for scientific research.

2. High salaries, equivalent to their specialties.

3. Political and employment stability, besides other solutions.

Actually, although there are a lot of specialists in Israel, it will take a long time for them to attract others and make Israel one of the world's leading nations for technical innovation. But, if this brain drain is in a form of a cycle, there won't be any problems if they assure to come back to Israel. maybe the talents they used and the works they did in other countries were more, but the resources they own always remain. if they can implement the work in Israel there will be a good future in Israel.

GENERAL CONCLUSIONS AND RECOMMENDATIONS

The academia plays a major part in steering the economic-social society towards a better future. Globally, especially in the last year in Israel due to changes in various fields, the security situation, and the social security due to changes in the legislation system, professionals and specialists don't hesitate to move to foreign countries to advance professionally or academically and change their standards and quality of life, while one of the sought-after destinations is New Zealand. In the last year, more than 3000 specialist doctors immigrated to New Zealand.

In the proposed research, the author of the thesis has discussed the phenomenon of brain drain by providing national and international theoretical background, various definitions of related concepts, a presentation of the data, an analysis of the presented data, and most importantly building a preliminary and comprehensive model that offers solutions, strategies and clear formula of actions in order to overcome the problem of the Israeli brain drain, including the ministries, authorities, institutions and other related bodies involved in the process, and presenting the overall conclusions and recommendations, alongside the national model as a practical scientific-economic novelty in order to reduce and minimize the dimensions of the phenomenon of Israeli brain drain and its influences on the Israeli labor.

Conclusions

1. Brain drain is a worldwide social phenomenon; which even developed countries suffer from. lately, due to changes in various fields, professionals and specialists move more than ever to foreign countries, in developed and developing countries, to advance professionally or academically and to improve their standard and quality of life.

2. The State of Israel has to take actual steps to change its economic occupational policies with regard to its major target populations (researchers, lecturers, engineers, medical doctors).

3. The major problem in Israeli Universities is the limited availability in the prestigious faculties and the high admission requirements, such as medicine, which leads to an aggravation of admission requirements for these professions. As a result, many students are not accepted and decide to study outside of Israel where are the easiest admission requirements.

4. Doctoral students and post-doctoral students are key factors in advancing scientific research and contribute a lot to the success of the research fields in academia and research institutes.

5. The most sought-after professions are medicine, pharmacy, nursing, high-tech, engineering, especially computer engineering, architecture, business management, and law.

6. The countries most in demand by Israeli students are, Romania, Germany, Moldova, Italy, and some of the Eastern European countries, and for the Israeli Arabs, also Jordan, and the Palestinian Authorities. Also, the USA is relatively demanded by Israeli students, especially Jewish even though there are high tuition and accompanying costs. The less sought-after countries were Britain, due to high tuition and accompanying costs.

7. The State of Israel does not have a great deal of economic-academic partnerships with other countries, except some countries, and these partnerships are in specific fields such as hi-tech, medicine, and research**.**

8. Yet, the State of Israel, couldn't succeed to solve the problem of the Israeli brain drain and dealing with the increased demand for academic mobility of Israeli higher education students who want to study abroad.

9. the main factors that can stop the phenomenon of brain drain are salary satisfaction alongside investment in all related to the Israeli academy, studies, and research field, academic infrastructures, and the work positions of lecturers, specialists, and researchers.

Recommendations

1. The government should make a significant and practical move, change the way of thinking and acting, change the existing policies and legislation, and precede the practical aspects through the proposed model, which ought to be funded by the government.
2. There should be updated legislation, strategies, and policies for the implementation of the proposed model by the related bodies- relevant government ministries, municipalities, Universities, academic institutions, and the Council for Higher Education in Israel.
3. Related Institutions and ministries are responsible for the operation of the proposed model and the implementation of the suggested recommendations.
4. The Ministry of Education and the institution of higher education are responsible for all the educational and academic elements and issues- professional contents, academic strategies, the academic process, and financial investments aimed at the establishment of new and modern academic institutions.

5. The Ministry of Economics and Finances should be responsible for providing the budget required for the model and covering its costs.
6. The Ministry of International Relations is responsible for activating and developing economic and social relations and interests with core and host countries of Israeli students and "Brains", strengthening relationships with Israeli experts while being abroad, promoting international programs, and getting advantages from foreign students.
7. Municipalities are responsible for running all kinds of programs aimed at raising the awareness of high school students and parents in everything related to academia.

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ANNOTATION

AMOUN-HABASHI MANAL HASSAN. The influence of the brain drain of Israeli students studying abroad on the labor market in Israel in comparison to the international situation. Dissertation for the degree of Doctor of Economics. Chisinau, 2024

Thesis structure: introduction, three chapters, general conclusions and recommendations, bibliography of 248 titles, 49 appendices, 135 pages of basic text, 20 figures, and 22 tables. The results of the thesis were presented in 24 scientific articles.

Keywords: Brain Drain, Academic Mobility, Higher Education and academic demand, Academic Studies and R&D Outputs, Labor Market and Employment, and National Economic Model.

The aim of this dissertation: to present and analyze the phenomenon of the Israeli brain drain and academic mobility, and to propose a national comprehensive model and recommendations to address and minimize the problem.

The objectives of the paper: to provide solutions to the causes of the "brain drain" phenomenon, to propose adaptation strategies; to develop a national model for forecasting and minimizing the extent of the "brain drain"; to make recommendations for solving the problem.

Scientific novelty and originality: development of an innovative economic model and determination of solutions for the movement of intellectual resources; formulation of principles of state policy in the field of intellectual migration; provision of methodological recommendations and innovative recommendations to Israeli ministries aimed at reducing the demand for academic mobility and flight of minds.

The results obtained that contribute to solving the discussed problem: the need to design and implement immediate solutions for future prediction and immediate reduction of the dimensions of the Israeli brain drain and its negative effects by designing and adopting a comprehensive economic-academic model, recommendations and immediate actions at the local and international level to prevent the outflow of Israeli professionals.

The theoretical significance and value of the thesis: are by obtaining comprehensive empirical and theoretical knowledge about the discussed issue, applicable solutions, and coping strategies.

The applicative value: analyzing a comprehensive national model which enables future forecasting of the discussed phenomenon and its effects especially on the Israeli academic system and the labor market, based on systematic data analysis. The theoretical foundations of the global problem of migration of intellectuals are also aimed to be used in the educational process, and in developing international educational programs and marketing strategies.

The scientific problem: the threat of the growing phenomenon of the Israeli brain drain, which led to the development of an innovative national model, which the author recommends implementing.

Implementation of scientific results: the results obtained are implemented by the involved authorities in the discussed phenomenon, and the recommendations are implemented by related bodies and Ministries in Israel.

ADNOTARE

AMOUNT-HABASHI MANAL HASSAN. Impactul „exodului de creiere” al studenților israelieni, care studiază în străinătate, asupra pieței muncii din Israel în comparație cu situația internațională”. Teza de doctor în științe economie. Chișinău, 2024

Structura tezei: introducere, trei capitole, concluzii generale și recomandări, bibliografia din 248 titluri, 49 anexe, 135 pagini de text de bază, 20 de figuri, și 22 tabele. Rezultatele tezei au fost expuse în 24 articole științifice.

Cuvinte cheie: Exodul creierelor, mobilitatea academică, învățământul superior, cererea academică, studiile academice, rezultatele cercetării și dezvoltării, piața muncii, ocuparea forței de muncă, modelul economic național.

Scopul lucrării: este de a prezenta și a analiza fenomenul exodului de creiere și al mobilității academice israeliene; de a sugera un model național cuprinzător, a da recomandări pentru rezolvarea problemei și minimizarea dimensiunilor sale.

Obiectivele lucrării: a oferi soluții la cauzele fenomenului „exodului de creiere”, a propune strategii de adaptare; a elabora un model național de pronosticare și de minimizare a amplorii „exodului de creiere”; a formula recomandări pentru soluționarea problemei.

Noutatea și originalitatea științifică: dezvoltarea unui model economic inovator și identificarea unor soluții privind circulația resurselor intelectuale; formularea unor principii de politică de stat în domeniul migrației intelectualilor; furnizarea de recomandări metodologice și recomandări inovatoare pentru ministerele israeliene, care au ca scop reducerea cererii de mobilitate academică și a exodului de creiere.

Rezultatele obținute care contribuie la soluționarea unei probleme ştiinţifice importante: identificarea unor soluții imediate pentru prevenirea și reducerea dimensiunilor „exodului de creiere” israeliene și a efectelor sale negative, prin proiectarea și adoptarea unui model economico-academic cuprinzător; lansarea unor recomandări și acțiuni imediate la nivel local și internațional, pentru a preveni exodul profesioniștilor israelieni.

Semnificația teoretică: obținerea de cunoștințe empirice și teoretice cuprinzătoare despre problema discutată, soluțiile aplicabile și strategiile de rezolvare.

Valoarea aplicativă a lucrării: dezvoltarea unui model național cuprinzător, care să permită prognozarea fenomenului discutat și a efectelor acestuia, în special asupra sistemului academic israelian și a pieței muncii, pe baza unei analize sistematice a datelor. Fundamentele teoretice ale problemei globale a migrației intelectualilor sunt menite să fie utilizate în procesul educațional și în dezvoltarea programelor educaționale internaționale și a strategiilor de marketing.

Problema științifică importantă soluționată în domeniul economiei: combaterea fenomenului în creștere al „exodului de creiere” israeliene a contribuit la dezvoltarea unui model național inovator.

Implementarea rezultatelor științifice: rezultatele obținute sunt implementate de către autoritățile responsabile de fenomenul „exodului de creiere”, iar recomandările au fost propuse organismelor și ministerelor aferente din Israel.

AMOUN-HABASHI Manal Hassan

THE INFLUENCES OF THE BRAIN DRAIN OF ISRAELI STUDENTS STUDYING ABROAD ON THE ISRAELI LABOR MARKET WITH COMPARISON TO THE INTERNATIONAL SITUATION

GLOBAL ECONOMY; INTERNATIONAL ECONOMIC RELATIONS

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