



A Model Proposal for Higher Education Financing, Management, Distribution and Audit in Turkey by Evaluating the Practices in OECD Countries

Haydar Ates¹ 

Submitted: December 8, 2019; Accepted: December 28, 2019; Published Online: December 31, 2019

Abstract

In this study; it is aimed to examine and evaluate the Higher Education Financing, Management Distribution and Audit in Turkey in comparison with OECD countries and to develop suggestions applicable for Turkey, based on the effective use of allocated financial resources for Higher Education Management, Financing, Distribution and Audit. Despite the increase in the number of higher education institutions in Turkey, it is evaluated that management, distribution and audit systems of allocable resources are not on advanced OECD countries' level. Therefore, in the study; in order to use the allocated resources effectively and efficiently, to train the manpower required for country and global competition; some of the systems applied in developed countries (England, Netherland, S. Korea, Poland, and Chile) within the scope of management, distribution and audit, which are among the sub-dimensions of higher education financing, are examined by using comparative education method. This research is “descriptive” and reaching the result is tried by evaluating the information obtained through "literature review” and “content analysis". In the analysis of the data obtained in the research; firstly, the data were grouped according to the “themes" that were formed about the questions to be answered in "sub-problems". In the management of finance, with the introduction of paid higher education services, it is suggested to give full financial autonomy to the administrations of higher education institutions and to establish an autonomous structure that can realize this, to distribute resources to higher education institutions in “blocks" and to establish an autonomous higher education financial audit system.

Keywords: Higher Education Management, Higher Education Financing, OECD

Introduction

According to the theory of public economy, public services consist of 4 groups: Full Public, Semi-Public, Private and Virtuous Services. Semi-public services are services that can be produced by the state or other public legal entities, divisible and marketable, and therefore priced when necessary (Soyler, 2009). Higher education is in the semi-public services group due to its direct personal and indirect social benefits.

Higher education is the level of education with the highest individual return and important for professional development in developed and developing countries (Albrecht and Ziderman, 1992). Further dissemination of higher education and increasing participation rates have become political goals. In recent years, higher education systems in Europe, rapid increase in student enrollment, a relative decline in public finances as well as a shortage of private funding has led to increase in the importance of innovation and research in the global and knowledge-based economy. Higher education institutions are undergoing a major transformation which is affected by national and international developments such as wider competition (Eurydice, 2010).

¹ University of Turkish Aeronautical Association, [ORCID 0000-0003-1961-8954], hates@thk.edu.tr

Kavak (2010) argues that Turkey is experiencing deficiencies in human capital. Population with higher education in Turkey is 10%. The EU 2020 target is 40% and the US target is 60%. Turkey's objectives are to be integrated into the EU and in 2023 being among the world's top 10 economies. Therefore, even if resources cannot accompany growth, pressure on growth will continue. This shows that financing of higher education should be one of the priority problems to be solved in the field of education.

An efficient financing system is to achieve the justice, efficiency and the mobilization of additional resources objectives to a large extent (Ekinci, 1999). In contrast, in many countries including Turkey, it is found the higher education financing system is generally centralized, insensitive to the market and uncompetitive, services are tax-financed and offered almost free of charge for everyone, and have ineffective and unfair structure (Aslan, 2011).

Methods for Higher Education Financing, management, distribution and audit are closely related to the higher education management system. The financing system supports and / or is shaped by the management structure (Lieberman, 1993). There is a close interaction and a strong bond between these two systems. When the historical process of higher education is examined, it is possible to collect management practices in two models. These are Anglo-Saxon and Continental European models (Ada and Baysal, 2009)

Anglo-Saxon Model: In this model, the impact of the central government on higher education institutions is rather limited or indirect. Higher education institutions are managed by intermediate institutions. The organizations in charge of management are at the state and institutional level. Higher education institutions are managed by the board of directors consisting of individuals from outside the institution (Brenneman et al., 2010).

Continental European Model: Higher education institutions are generally linked to the Ministry of Education. In some countries, vocational higher education institutions are linked to ministries other than the Ministry of Education (Guruz, 2001). In this model; the state, which covers a large part of the financial resources of higher education, also provide the higher education service itself (Akalın, 1997).

Approaches to the financing of higher education are classified as public financing, private financing and mixed financing by considering the source of financing. The main features of these approaches are summarized in Table 1.

Table 1: Reasons and Limitations of Educational Financing Approaches (Tural, 2002)

Financing Approaches	Reasons	Limitations
Public Financing: Financing with resources from taxes	<ul style="list-style-type: none"> - Raises equality of opportunity and possibility - Considers external benefits - Forms the basis for making good decisions by acquiring knowledge about education and labor market - Facilitates appropriate education planning for the scale economy 	<ul style="list-style-type: none"> -Public resources may shrink - Does not provide the opportunity to question and evaluate the system -Individual preferences may not be taken into account
Private financing: Providing resources directly from beneficiaries of education by paying tuition fees	<ul style="list-style-type: none"> - Paying the price increases efficiency in use - Provides the opportunity to question the education process -Individual preferences are taken into account 	<ul style="list-style-type: none"> -Inequalities in benefiting from education increase -The individual benefits come to the fore in education, externalities are neglected
Mixed financing: Multi-faceted financing of education (public, students and families, employers, volunteers, etc.)	<ul style="list-style-type: none"> -Increases the level of interest of all parties to education benefiting from education -Contraction in one source may be compensated by another source - Contributes to both efficiency and equality 	<ul style="list-style-type: none"> - It is difficult to determine which level will contribute to the costs at which level -The cost of establishing and managing such a system is high

Different methods have been developed to plan the financing of higher education. There are four main methods used to plan the financing of higher education institutions in the world. These are Bargaining and Agreement, Budget Preparation according to Inputs, Budget Preparation according to Output and Budget Preparation according to the preferences of students' methods (Guruz, 2001).

Both national and international studies indicate that in many countries, whether developed or developing, there are difficulties in the spread of higher education, equal access and financing. Higher education in Turkey has grown rapidly in recent years and in terms of service delivery the numbers of both state universities and foundation universities have been significantly increased. This rapid growth has brought about many debates on financial management, distribution and audit of higher education (Ates, 2013). This research aims to evaluate the issue of financing of higher education in Turkey with OECD country comparison.

Research Questions

The basic question of this research is: In comparison with OECD countries in Turkey's higher education funding systems, for Turkey; how can a financial management, distribution and audit model that can ensure financial autonomy and equality of opportunity and justice be?

Sub Research Questions

- a. What is the status of Turkey and OECD countries in terms of Management of higher education financing?
- b. What is the status of Turkey and OECD countries in terms of distribution of higher education financing?
- c. What is the status of Turkey and OECD countries in terms of Audit of higher education financing?
- d. What kind of arrangement can be done in Turkey in the financing of higher education (management, distribution and control)?

Review of Related Literature

In this part, on the basis of the sub-problems identified in introduction; the higher education financing system of the countries studied have been examined management, distribution and audit respectively.

Management of higher education financing in England

The main responsibility for the management of higher education financing belongs to the Ministry of Education. With this, coordination of public resources allocated to higher education is provided from a single center. While the responsibility for education belongs to the Ministry of Education, vocational education is the responsibility of the Ministry of Labor. The Minister of Labor has the authority to decide on objectives and priorities in vocational training. In this way, responsibilities were distributed for the development of manpower in the quality and quantity appropriate to the development plans and a structure was established to reduce the problems related to employment. Universities are public education institutions. However, this status did not constitute an obstacle to the autonomy of higher education institutions; academic and financial autonomy was ensured.

Responsibilities in higher education has been distributed among central government, local administrations, other voluntary organizations, educational boards and teachers. In this way, decisions can be made easily and initiative is used in lower levels (CEDEFOP, 2005).

Higher education requires tuition fee. Graduates are obliged to contribute to financing in return for their career opportunities through higher education. Thus, a continuous and healthy resource is created for the financing of higher education without putting a big burden on the public.

The duties of the Higher Education Financing Boards (HEFB), which operate on a local basis, are to organize the expenditures of education, research and museums, galleries, collections and libraries which were previously administered by local authorities. Higher Education Financing Boards also support institutions in protecting their immovable properties and buying new materials. With this system; local units, which are both audit and financing resource, have been established for localization of education and determining, procurement and maintenance of requirements (UNESCO, 2006).

In England, Higher Education Funding Council for England (HEFCE) funds are distributed for education, Research&Development (R&D) and private financing support. By means of this fund created for the research, the support and motivation of the R&D studies of higher education institutions and the operation of an expert institution for this purpose have been ensured (HEFCE, 2019).

Formulas are used for financial support to higher education institutions. These aids enable the conduct of teaching, research and related activities. The aids are in the form of block grants and institutions may spend them as they wish for the stated purposes. Thus; the distribution of financing is based on the principle of fairness and financial autonomy.

Teaching and R&D funds are completely separate. In the calculations, the educational and research capacities of the institutions are taken into consideration. The system encourages institutions also in developing R&D capacity beyond R&D activities.

The financing system is based on giving similar rates to institutions in similar activities. The aids transferred by the state to the Higher Education Financing Boards in "blocks" are distributed to the higher education institutions by the boards. Institutions receiving aid may spend as they wish; however, they are open to parliamentary and HEFCE audit. This system in addition to being in compliance with the financial autonomy principle is also based on conducting audits when necessary.

HEFCE R&D funds are mostly distributed among nationally and internationally recognized higher education institutions. This principle provides incentives for the quality of the research to be guided in a way to bring innovation or problem solving. Priority is applied for R&D in resource allocation. This ensures that higher education institutions attach importance to R&D and are more productive (GSE, 2006).

While the Quality Evaluation Department of the Higher Education Financing Council controls the quality of higher education, the Audit Board of the Education Financing Council assumes the responsibility of evaluating the quality of education. Thus, since this board performs "output" based auditing, it also provides the necessary infrastructure and knowledge for full transition to "performance based auditing and financing". For the control and audit of finance, the resources are managed from a single source by establishing a special institution, resources are allocated to the institutions according to the standards set, and the expenditure is audited by the same institution. However, the autonomy of higher education institutions is not intervened and resources are spent by the institutions according to their own planning. In this way, "financial autonomy" is provided to higher education institutions (Barr, 2008).

Provided that the regulations of the Higher Education Financing Council are fulfilled, Institutions determine the methods of education and evaluation themselves. "Court" which is the highest authority of the university, includes university staff and elected external members. The most important authority in a university is the "President". He/she carries out the issues related to the general policy of the university determined by "Court". The "University Council" is under the "Court" and is generally composed of members of educational staff, department heads, members of non-educational staff and union representatives. By this structure; at a lower level, external stakeholders were also included in the system, and a structure was created to ensure transparency and continuous external audit in all levels of management (Barr, 2005).

State is obliged to provide equal financing to public and private schools, subject to the same programs and regulations in terms of education and management, local administrations are also responsible for providing education service as public service.

Management of higher education financing in Netherlands

General responsibility for management and audit of financing belongs to the Ministry of Education. The Ministry gives public and private schools their budgets according to the same criteria. With this application, the financing unit can also control whether the resources are used appropriately by carrying out management and audit (ICHEFA, 2019).

Usage of the appropriations allocated by the Ministry to higher education institutions in “blocks” is the responsibility of the administration of the higher education institution. Institution managements may freely decide on which areas they will invest in or the budget they will allocate to their units. This shows that the higher education institution has financial autonomy and enables them to make careful planning in using financial resources effectively and efficiently. Ministry limits the financing to be provided by number of students and thus may have an impact on the number of students to be admitted. Institutions may admit more students than the number determined by the ministry, provided that they remain within the budget limits given. In this way, the government allocates resources to realize the number of manpower appropriate to the development plan (Canton and Jong, 2005).

Higher education institutions make use of the resources given in "blocks" for education, R&D and related activities as financial support, receive appropriations for researches and can receive financing from foreign markets. Thereby, a separate resource for research may be obtained, which encourages research and does not adversely affect the resource allocated for teaching.

In addition; “block aids” are also provided to be used for education activities, building-facility construction, maintenance and repairs and idle personnel. Institutions cannot ask for more than the resources transferred by the state. Performance and quality are taken into account when determining aids. In this way, organizations are encouraged to meet the desired performance and quality criteria in order to receive additional financial support.

Research aids are allocated through the Research Organization and on a project basis, and R&D quality and studies on public issues are important factors in the allocation. In addition to encouraging research, this practice primarily encourages research that will respond to public needs. The allocation of funds to individual researchers within the framework of competitive conditions draws attention as an encouraging practice for scientists to research. Higher education institutions; in case of necessity, may apply to the resources in the market on their own responsibility, and if there is a deficit, they can close them from the “block aids” to be made in the following year. Thereby, they gain an important opportunity to meet additional financing requirements (EC, 2011).

The Financial and Economic Units of the universities have the authority to use the allocated “block” appropriations in different fields within the university. This provides financial autonomy to university administrations.

The appropriation in rate of the created value of the extent, to which school-industry cooperation has been achieved, is allocated to the relevant university. The appropriations of successful universities are higher than the others. This is a practice that creates a competitive environment in order to increase the produced value.

Universities are linked to the Ministry of Education, Culture and Science. At each university, the "Audit Board" of which members are appointed by the minister; have the authority to appoint and dismiss The Executive Committee and deans, and the authority to approve the budget is given to the “Executive Committee”. Thus, a system was established for both academic activities and financial management.

In higher education institutions, the Board of Directors is the high level responsible body. The Board consisting of managers, teaching staff, students and other employees, participation of all levels in the decisions taken, collecting all opinions, leads to transparency and a structure that ensures internal audit.

In the Netherlands, financing of the education is provided by the central government. Thus, the state fulfills its duty to provide the needs of education, which is a public service, with the understanding of social state and providing equality of opportunity (NMA, 2019).

Expenditures are audited by independent audit units. However, this audit is in technical nature and controls the appropriateness of expenditure to the legislation, not where the resource is spent and does not interfere with financial autonomy (Johnstone, 2006). The main task of the Ministry's Educational Inspection Board is to evaluate the education system and outcomes. Since the academic success of the institution and the success of R&D and projects affect the financing source allocated to higher education institutions; the reports sent by the board to the ministry and parliament also affect the size of the resource to be allocated. Institutions that want to have more financial resources have to ensure the improvement of quality by giving importance to the success of R&D and projects as well as their academic success.

Management of higher education financing in South Korea

Responsibility for the management of higher education financing; from the national to the local level, has been divided into three levels as the Ministry of Education and Human Resources Development, Education Offices in municipalities / districts and Regional Education Offices in rural areas, and a system has been established parallel to the country's management structure (KMOE, 2006).

In order to increase effectiveness and efficiency in the work of the Ministry and to train manpower in the quality and quantity required by the development plans; Ministry of Finance and Economy, Ministry of Science and Technology and Ministry of Labor; work together on crating policies on human resources development, manpower development, vocational and technical education and training (OECD, 2006).

In order to increase the quality of higher education, R&D was given importance, to that end Education and Research Information Service, Program and Evaluation Institute and Vocational Education and Training Research Institute were established in autonomous structure.

When the size of sources of higher education financing in South Korea is examined; it is found that the main financial resources of higher education are the appropriations and scholarships provided by the central government and the tuition and fees received from students and parents. Approximately 74% of the budget of the Ministry of Education is transferred to regional education management units. Transferring these resources to lower units in "block" is an important financial autonomy provided to regional managers and local education units.

For each local education unit, having a resource distribution system in the form of unit cost per school or classroom also allows local administrations to choose the most appropriate distribution system for planning rather than introducing centralized standards. While the central government transfers the collected tax revenues to support education to local education authorities based on the population in that region, the demand for scholarships and consideration of tax revenues of the local administrations' provides justice to a great extent in the distribution of financing.

To promote private higher education institutions, by taking into consideration the education expenditures of private schools the government supports by contributing to tax exemptions, tax deductions in purchases, teachers' fees and other operating costs in case of insufficient resources of the institution and increases the number of these institutions. The Korea Private Schools Support Fund, established for the development of private schools and renewal of their facilities, is regarded as a system that ensures proper, effective and efficient use of resources.

Educational institution based education budget system; gives initiative to the management of the institution in the expenditure of the provided resources, instead of planning a certain amount of financial resources for each activity, taking spending in line with the requirements as base, is regarded as a system that gives financial autonomy to the management towards optimum utilization of the resource through the realization of priority projects.

In addition to giving initiative to local education units, the system also gives responsibility for the audit of resources. Taxpayers are confident that the resources collected as educational tax will return to the educational institution where they are located and may be more careful in spending. This also contributes to the formation of a self-regulation system.

Management of higher education financing in Poland

There are two types of higher education institutions in Poland, public and private. After the regime change, the opening of private universities with the application of market economy increased the interest in higher education and increased participation. All higher education institutions previously linked to different ministries were linked to a single ministry. Thus, it is envisaged to facilitate the planning and coordination in higher education system management. All higher education institutions have academic and financial autonomy. The heads of higher education institutions are fully authorized for autonomy (OECD, 2010).

Higher education is publicly funded and local administrations can contribute under the name of donations. In this way, resources are tried to be diversified. Financing for higher education is allocated on the basis of the number of students and the number of teaching staff. These criteria are considered to contribute to justice in resource allocation (OECD, 2019).

R&D financing is done with competitive based supports, there is no systematic financing source. This issue is considered as a deficiency in the development of research ability. The Scientific Research Committee, which is a public institution, is the competent body for the financing of researches. The Committee makes all decisions on research financing, including investments. It is considered that a central structure selected from the personnel with appropriate qualifications contributes significantly to the scientific development. Before deciding on research funding; the committee receives experts' opinions in the field. The Committee has significant powers in the distribution of R&D budgets and takes into consideration the state policy in its distribution. Another important criterion in the distribution of research funds is the academic publications of higher education institutions in the last five years. In this way, institutions are encouraged for academic publication (Eurydice, 2018). Considering the breakthrough of Poland in higher education, it is evaluated that the aforementioned committee plays an active role in determining the higher education policy and allocating resources in accordance with the policy with its following duties; to inform the government about the scientific policies of the country, to submit to the government budget planning in scientific and technological fields, to provide funds for higher education institutions and research centers, to audit institutions and to sign international agreements in scientific and technological fields.

Scientific Research Committee is also responsible for the audit of resources allocated to higher education institutions in addition to the distribution of financing.

Management of higher education financing in Chile

Chilean Ministry of Education is the main coordinator and regulator of higher education through the "Higher Education Unit" within its body. Thus, the management of higher education system is centralized.

"The Council of Higher Education" which is an autonomous institution; carries out recognizing, granting autonomy, authorization, monitoring activities functions for all private and public higher education institutions. Thus, these tasks are carried out by a single expert institution (OECD&World Bank, 2009).

"National Commission on Science and Technology"; deliver consultancy to the government in the fields of science and technology, provides the link between research and development, coordinates national and regional policies and programs.

"Higher Education Credit System Management Commission" carries out checking student loans, the eligibility of applications, obtaining loans from banks and selling credit debts. Thus, effective and efficient use of public resources allocated to higher education students is ensured.

"Higher Education Consultancy Council" contributes to the development of policies on higher education by the government, structuring the public support oriented education system according to the conditions of the market economy and supporting with private sector resources, facilitates preservation of differences, achieving unity in targets and taking into consideration of the social welfare (Brunner, 2007).

Expert institutes provide expertise level or technical training in a specific field, do not provide academic degrees and do not offer bachelor level education programs. These institutes provide 4 years of training, are all private and provide their own financing. Thus, the financial and administrative burden of the universities is alleviated and sectors are training the manpower they need with their own resources. Technical training centers provide 2-2.5 years of training only on technical issues and are all private institutions. Thus, the technical personnel required by the industry can be trained without putting a financial burden on the state and without creating any administrative or financial responsibility for the universities.

"The Council of Higher Education" decides the degree of autonomy of universities. Institutions which are evaluated by this council after the establishment are granted autonomy for a minimum period of 6 years and a maximum period of 11 years as long as their conditions are appropriate. At the end of the period, the institutions evaluated are either given full autonomy or closed. Thus, the issue of reaching and maintaining the standards required for autonomy is continuously evaluated and institutions are encouraged to develop themselves (OECD&World Bank, 2009).

Higher education financing sources are transferred and managed by different institutions and methods. Direct Public Appropriations are the main sources of financing for public universities. The Criteria for the allocation of resources are; the number of students, the courses, and the number of academic staff who have completed masters and doctoral degrees, the status of researches and publications. With this system, by determining criteria for resource allocation, besides a fair distribution, at the same time; creating large-scale and comprehensive research institutions are also encouraged.

Indirect Public Appropriations are transferred to the universities with 27,500 students who have the highest scores. These students are divided into groups of 5,500 each, and the student in the top group receives 12 times more scholarship than the student in the bottom group. With this method; it is aimed to create and reward an environment that will increase the quality and academic success among the best students (OECD&World Bank, 2009).

Direct funds are usually provided to institutions with higher levels of education, with students from lower-income families. Thus, in addition to equality of opportunity, successful low-income students are encouraged. Using criteria for the allocation of indirectly transferred resources aims to further improve undergraduate, graduate, technical education, research and corporate management and improve quality.

The general policy in the financing of the higher education system is to maintain the current state of the major financing sources and to increase the funds that promote competition and the resources that finance mainly projects. This practice is considered to increase the competition for development.

Higher education institutions also receive indirect public support through tax reductions. In this context; 50% tax reduction is applied in furniture, equipment purchase, infrastructure renewal, and academic development and research projects (Brunner, 2007).

Through Funds Promoting Competition; diversification and development of resources may be achieved by encouraging inter-project competitions, improving undergraduate and graduate education and training, providing quality assurance, providing resources to strengthen the infrastructure, equipment and management of institutions (OECD&World Bank, 2009).

The Council of Higher Education is responsible for the audit of higher education financing as well as management and distribution. Thereby, an expert institution was established for the audit of higher education financing.

Management of higher education financing in Turkey

In Turkey, Financing of higher education, which is accepted as a public service, is provided by the state and foundations. Higher education system consists of universities, high technology institutes and other higher education institutions. The fact that vocational and technical education institutions and colleges are also connected to universities brings significant burden on management, teaching staff and

financial aspects, and it is difficult to spend the same value of effort on both scientific studies and vocational and technical education (Dogramaci, 2007).

In public higher education institutions, public financing is provided by the central budget. University budgets are used according to the principles of public budget and are subject to audit. Therefore, there is no significant difference between the budget system of any public institution and the system in higher education institutions. It is not possible to talk about financial autonomy in public universities, since they are subject to the central government budget principles.

The Performance Based Budget System Based on the Strategic Plan established by the last legal regulation; higher education institutions are to form their vision and missions in line with their development plans, programs and identified basic principles, determine their measurable goals with their strategic objectives, prepare their strategic plans in order to measure their performance and monitor and evaluate the process; prepare budget according to this plan (YOK, 2007).

Higher education system "funding system", which is widely used in higher education financing systems in developed countries and taking into account the characteristics that are different from other public institutions' systems, has not yet been evaluated in Turkey (Cetin, 2001).

Financial audit is divided into two as internal audit by auditors appointed by the top managers of higher education institutions and external audit by the Court of Accounts. Regarding the financing of higher education there is no special and autonomous audit system formed by experts.

Research Method

This research is “descriptive” and reaching the result is tried by evaluating the information obtained through "literature review” and “content analysis”.

The population of the study is composed of OECD countries. England, Netherlands, Poland, South Korea and Chile were taken as sampling. The basic idea in country selection; having similar economic norms, having similar structure of higher education systems and using a mixed financing system, high rate of development of this level of education compared to other OECD countries, the importance given by S. Korea to higher education in economic development and the recent progress made by Poland in higher education. Chile has attracted attention with significant changes in the financing of higher education and has begun to provide significant feedback in the implementation of the new financing system.

The data of the study consists of factual data. Data is obtained from international literature prepared by OECD, UNESCO IIEP and EU and national reports.

In the analysis of the data obtained in the research; firstly, the data were grouped according to the “themes” that were formed about the questions to be answered in "sub-problems". Theme-based data groups are; “Management of Higher Education Financing”, "Distribution of Higher Education Financing”, "Audit of Higher Education Financing”.

In this study; “theme-based data groups” are prepared based on sub-problems as follows.

Table 2: Sub-problems and Corresponding Theme-Based Data Groups

Sub Research Questions	Theme Based Data Groups
What is the status of Turkey in comparison with OECD countries in terms of management of higher education financing?	Data on the Management of Higher Education Financing
What is the status of Turkey in comparison with OECD countries in terms of distribution of higher education financing?	Data on the Distribution of Higher Education Financing
What is the status of Turkey in comparison with OECD countries in terms of audit of higher education financing?	Data on the Audit of Higher Education Financing

While analyzing the data; in determining the relationship and interaction of data with each other, dimensions were determined based on the characteristics of the data with respect to the main idea in the "Framework of Analysis of Comparative Education".

Discussion

Regarding the evaluation of Turkey's and OECD countries' higher education financing management, distribution and audit systems the following issues are evaluated:

Higher education is paid in other countries except Poland. In Poland, which is undergoing a regime change, this may seem normal during the transition period. The daytime education in state universities in Turkey is tuition free. In the first stage, the availability of a service for free may seem attractive and accurate. But; the provision of a service with a high individual return, such as higher education, and the free access of individuals at all income levels may actually lead to inequality and injustice. With the taxes collected from all people, providing free services to a certain segment of the society may not seem to be the right approach. Another aspect is the psychological approach of the person. People may not give enough importance to the service that they can access free of charge. Paying a certain price increases the interest and desire to reach that service. In addition, some students may wish to pursue more than one program since higher education is free of charge anyway. This may lead to the need for additional teaching staff and physical investment and the increasing number of students per instructor due to the increasing number of classes may reduce the quality of education.

It was determined in the examined countries that the main source of financing was public. However, England has brought that the student is to pay back to the system in proportion to the income level. In this way; the individual, who does not have financial resource problems while studying, contributes to the continuity of the higher education financing system by paying back after finding a job and reaching a certain income level. In Turkey, while a group of people are paying significant amount of money for education at foundation universities, the fact that public universities are tuition free is considered a contradiction (Eurydice, 2018).

In South Korea, most of the financing is provided by students and parents. The basic idea here is that the financing of an education which provides high individual return should also be provided largely by beneficiaries of the education. In Turkey the main source of financing are the public sources, foundation universities are the exception for this. Despite the fact that education is tuition free in state universities, the necessary financing for non-educational needs (accommodation, meal, transportation, etc.) are largely covered by students and parents.

The main management responsibility of higher education financing in countries is usually in central governments. To this end, ministries of education and / or special councils / boards carry out this task. Although the main responsibility lies with central governments, this is a general responsibility and consists of the provision of resources as a "block". The authority is generally transferred to local units and to the administration of higher education institutions. The management of the main source of financing is centralized in Turkey and is run by the government. The transfer of authority to the lower levels is extremely limited.

In England, Netherlands and Poland, specialized councils / boards have been established for the distribution of higher education financing. In South Korea, the government transfers the resources to local education units and local administrations in block and these units distribute them. Turkey and Chile are the countries carrying out distribution of resources centralized.

Another factor making up the difference between Turkey and examined countries is the base of allocation. Financing is transferred to higher education institutions in all countries in "block", except Turkey. Certain rules are applied in determining the source. England applies certain formulas to ensure fair distribution of resources among institutions. Netherlands, South Korea, Poland and Chile use specific criteria. In Turkey, the source is distributed between the government and institutions usually with a system of bargaining. Although the Performance Based Budget System based on the Strategic Plan is tried to be implemented, it is observed that the institution which can get the central authority to accept its

project can receive more resources. In Turkey, it is difficult to say that the distribution of resources includes healthy criteria and fair.

In the distribution of resources within higher education institutions, important differences were found between Turkey and the countries examined. In the countries examined, the managements have the initiative and thus financial autonomy in the distribution of the resources transferred from the central budget in "block". The institution managements decide where and how much resource is to be spent. In Turkey; the entire authority belongs to the central government, including where and how much resources are to be spent. The approval of the central government is required for transferring the resource to another project even if the budget allocated to a purpose but using is not possible because of transferring restrictions of left resource. This over-centralized distribution system leads to significant bureaucratic procedures, failure to complete projects on time, remaining idle of resources etc. problems as well as preventing rapid decision-making.

For audit of allocated financing for higher education, all countries, except Turkey, have established audit institutions specialized in this field. These institutions are either institution that distributes the resource or independent auditors. In Turkey, as in the financial audit of other public institutions, audit is carried out by the Court of Accounts, there is no special unit for audit of higher education financing

In the research, the following main results were reached. These results considering sub-problems are summarized under management, distribution and audit of higher education financing system.

The main sources of financing in the examined countries are central governments. To this end, ministries of education and / or special councils / boards carry out this task. Although the main responsibility lies with central governments, this is a general responsibility and transferring in "block" is based on the higher education institutions and / or local units in accordance with the specified criteria. University administrations have full financial autonomy as well as academic autonomy. In the state higher education institutions in Turkey complete management of the financing source belongs to the central government this central control can go down to the details of financing items. Foundation universities have autonomy in this regard.

Considering the characteristics of the higher education system that are different from other public institutions systems "fund system" and "block" budget allocation system, which are widely used in higher education financing systems in developed countries, either direct education appropriations or appropriations allocated from the central budget for the purposes of research etc., has not yet been evaluated in the higher education financing system in Turkey.

From the perspective of determination of student fees, possession of real estate and other equipment, creation of resources through borrowing, being able to spend resources freely for their purposes, determination of wages of staff which are determined as financial autonomy criteria of higher education institutions by the OECD, It is found that higher education institutions in the countries examined have a great deal of initiative on these issues, it is considered that higher education institutions in Turkey do not have full autonomy in this issue of state.

Another important issue in the study is the management of R&D resources. In the countries examined, the R&D resource is generally transferred to the higher education institution in "block and the authority and responsibility of using this resource is left to the management of the institution (Eurydice, 2018). Besides; professional institutions and organizations that provide financing for R&D have been established and support is provided for both institutional and personal researches. The financing of research at the state universities in Turkey is largely undertaken by state (TUBITAK, SPO, KOSGEB, etc.) and centrally managed. The resources allocated from the university circulating capital for R&D purposes are quite insufficient.

In some countries, the control of Vocational and Technical Education and funding for this education are also noteworthy. Ministries other than the Ministry of Education take responsibility in vocational and technical education, and the management of this education is given to institutions such as the Ministry of Labor and the Ministry of Economy as well as financing of this education. In this way; in addition to raising the quality and quantity of manpower in line with the country's development plans,

which requires a significant amount of resources, it is found that there are exemplary practices in order to ensure efficient and effective use of the financing allocated for this purpose. In Turkey, considering the data regarding that the trained manpower does not comply with the quality and quantity required by the development plans, there are still significant problems in vocational and technical education, this system needs to be evaluated for both general management and the management of financing.

While financing system in the examined countries implements the basic expectations from this system which are fairness, efficiency and mobilization of additional resources, financing management system in Turkey is considered to have failed meeting these three basic criteria.

In aforementioned countries specialized councils / boards have been established for the distribution of higher education financing. In some countries, the resources are transferred to local education units and local administrations in block and these units distribute them. Resource distribution and control are carried out centrally in Turkey.

Elements that constitute the main difference between the examined countries and Turkey are essentially base of financing distribution and the degree of financial autonomy of institutions. Besides distributing the financing to higher education institutions in all countries in "block" except Turkey, certain criteria (formulas, number of students in the institution, scholarship requests, number of competent teaching staff, academic publications, population status in resources transferred to local units, etc.) are applied in determining the resource to be distributed, thus, equality between institutions is tried to be provided. In Turkey although the Performance Based Budget System based on the Strategic Plan is tried to be implemented, it is observed that the institution which can get the central authority to accept its project can receive more resources.

In the distribution of resources within higher education institutions, important differences were found between Turkey and the countries examined. In the countries examined, the managements have the full initiative to distribute the resources transferred in "block" within the organization. The authority is centralized in Turkey. This over-centralized distribution system, leads to significant bureaucratic procedures, failure to complete projects on time, remaining idle of resources etc. problems as well as preventing rapid decision-making.

Distribution of the money allocated from the general budget to higher education institutions in Turkey through multistage bureaucracy channels and intermittently, may also lead to inefficient use of resources.

For audit of allocated financing for higher education, all examined countries, except Turkey, have established audit institutions specialized in this field. These institutions are either within institutions that distribute the resource or independent auditors. The points that draw attention here are; the audit is not in the form of an intervention in the financial autonomy of the higher education institution, it is limited to the controlling that expenditure is done in accordance with the legislation, the local administrations that the resources are transferred in "block" are also responsible for the audit, and in some systems indirect financial audit based on the outcomes of higher education rather than direct financial control.

Financial audit of the state higher education institutions in Turkey; as in the financial audit of other public institutions, is carried out by the Court of Accounts, there is no special unit for audit of higher education financing. It does not seem realistic to mention that the audit system may evaluate whether higher education financing resources are used to improve the quality of higher education and its outcomes. In the foundation higher education institutions, audits are carried out by the systems established within them with convenience provided by financial autonomy.

Conclusions and Proposals

By evaluating the results obtained in the research; a higher education financing model is proposed for Turkey; which is covering solution proposals for the subjects aimed to be examined in problems and sub-problems and besides obtaining maximum efficiency from the teaching staff based on the reasons below reasons; applicable, ensuring equality of opportunity and fairness, and specified in the "results" section; development of manpower in a qualitative and quantitative manner that complies with the

development plan and the criteria of the global economy, improvement of R&D capacity and efficiency of higher education institutions, more effective and efficient use of financial resources, ensuring financial autonomy for higher education institutions, providing financing of higher education mainly from the higher earning section by means of this level of education and reducing the burden of public finance, establishment of an audit and evaluation system in accordance with the characteristics of the system for higher education financing, establishing a system that can provide maximum efficiency from vocational higher education, effectively utilizing capacity in higher education institutions; the main principles are specified below.

Table-3: The Proposed Higher Education Financing Model for Turkey

The Proposed Higher Education Financing Model	
Financing Subsystem	Proposal
Financing management	<p>Continuing to use the “Mixed Financing” method in the financing of higher education, but instead of using a system based on public resources, using a structure that increases the weight of private finance in accordance with a program to be prepared</p> <p>Granting the “Financial Autonomy, of which main principles are specified in distribution, audit, remuneration and expenditure parts, to the administrations of universities and high technology institutes</p> <p>For the management of resources allocated to higher education, within Council of Higher Education, establishing a fully authorized and semi-autonomous “Higher Education Finance Board” in financing management, evaluating, approving and sending the budget proposals to the central government and distributing the allocated resources to higher education institutions</p> <p>Taking the management of vocational high schools as well as management of financing from Council of Higher Education and universities, carrying out a study for delegation of all responsibility for management, organization and operation to the Ministry of Labor and / or the Ministry of Science, Industry and Technology.</p>
Distribution of public financing	<p>Establishment of “Higher Education Finance Fund”; within the body of the Council of Higher Education "Within Budget" with status "Subject to Court of Accounts Audit" except personnel fees, allocation of resources to be transferred from the central budget to higher education institutions to “Higher Education Finance Fund” in “Block” the allocation of the budget transferred from the central budget to the fund by the Council of Higher Education "Higher Education Finance Board" in "Block"</p> <p>Taking performance as base in the distribution of financing in “Block” determination of the “Performance Criteria” and the principles of the system for this purpose</p> <p>Establishment of “Higher Education Research Fund" within the body of Council of Higher Education for R&D studies in higher education institutions, transferring of resources to be allocated for research from the central budget to this fund in “Block”, allocation of research appropriations to higher education institutions in “Block" based on the criteria to be determined</p>

Financing Audit	<p>Establishment of a "Higher Education Finance Audit Board" with an autonomous status and structuring the Board in such a way to carry out the evaluation of strategic plans and programs and to carry out financial audits; and while performing the audit of the resources allocated from the central budget, this Board should perform only technical audits on the other revenues (circulating capital etc.) of higher education institutions.</p> <p>The Court of Accounts should audit funds allocated to higher education institutions from the central budget only at the level of technical audit.</p> <p>Establishing "Performance Based Audit System", determining the performance criteria is a need for audit.</p>
-----------------	--

The details of the financing model proposal summarized in the table above are as follows.

For the reasons of Higher Education's being a public service, Turkey's socio-economic conditions, and at the same time both individual and social returns and externalities, in the financing of higher education; the "Mixed Method", which gives more weight to private financing during the process, should continue to be used. However, instead of the heavily public method in the current practice; with the participation of all stakeholders related to the higher education system, in accordance with a program to be prepared at strategic level it is considered appropriate to adopt a structure that increases the weight of private finance. In the establishment of this structure should be based on the establishment of a system that will ensure equality of opportunity and fairness so as not to restrict the right of individuals to access to higher education.

"Financial Autonomy" of which main principles are specified in the distribution and audit sections should be granted to the administrations of universities and high technology institutes. In this context; especially criteria for being fully authorized in terms of determining student fees, possession of real estate and other equipment, creating funds by borrowing, being able to spend resources in accordance with their purposes which are defined by the OECD as criteria for financial autonomy of higher education institutions; by carrying out a comprehensive study on the subject. The original national system should be established for the dimensions of financial autonomy. New financing management system should realize the basic expectations from this system which are fairness, efficiency and mobilization of additional resources.

In the management of resources allocated to higher education, to exercise the powers of the central government, within Council of Higher Education, establishing a fully authorized and semi-autonomous "Higher Education Finance Board" in financing management, evaluating, approving and sending the budget proposals to the central government and distributing the allocated resources to higher education institutions should be considered, a study should be carried out regarding the duties, powers, responsibilities and functioning and the degree of autonomy of the board.

Taking the management of vocational high schools and within this context management of financing from Council of Higher Education and universities, delegation of all responsibility for management, organization and operation to the Ministry of Labor and / or the Ministry of Science, Industry and Technology, in this way under the management of the relevant ministries; and with sector representatives, organized industrial zones administrations and professional organizations, a study should be carried out to tackle together the development of manpower in the quality and quantity appropriate to the development plans.

Being under the responsibility of the "Higher Education Finance Board" to be established within Council of Higher Education; A study should be carried out for the establishment of "Higher Education Finance Fund" "Within Budget" with status "Subject to Court of Accounts Audit", except personnel fees, allocation of resources to be transferred from the central budget to higher education institutions and to "Higher Education Finance Fund" in "Block" the allocation of the budget transferred to the fund by the Council of Higher Education in "Block" in the study on the establishment of this fund, experience should be utilized from the Defense Industry Support Fund, etc. fund systems which have been operating in the

public financial management system for a long time and using a large amount of financial resources and the countries using the funding system in higher education financing.

A study should be carried out for transferring the resources planned for the state higher education institutions through the Higher Education Finance Board to higher education institutions, taking performance as base in the distribution of financing and determination of the "Performance Criteria" and the principles of the system for this purpose, as performance criteria; the number of students, the number of teaching staff, the status of academic publications, R&D capacity and studies, projects, place among the world universities, scholarship requests, physical settlement of the university and indoor and outdoor areas should be used, determination of these criteria and their proportional weights in resource allocation and leaving the distribution of resources within the institution in accordance with the principles determined by the law entirely to the planning of the competent bodies of the higher education institution

Considering that the resources allocated to R&D in the OECD countries reach up to 40%, a significant portion of the resources allocated for this purpose should be transferred to higher education institutions and the R&D capacity and activities of the institutions should be taken as the basis for the transfer of resources. A study should be carried out for establishment of "Higher Education Research Fund" within the body of Council of Higher Education for R&D studies in higher education institutions, transferring of resources to be allocated for R&D from the central budget to this fund in "Block", allocation of research appropriations to higher education institutions in "Block" based on the criteria to be determined. In this study; in order to use research resources more effectively and efficiently and to establish specialized higher education boards on specific subjects, the "Research Universities" which are currently in practice in developed countries should be examined and it should be evaluated to assign the competent universities in this subject as research universities.

For the audit of resources allocated to higher education institutions; an autonomous "Higher Education Finance Audit Board" should be established, in which expert personnel are assigned. While performing the audit of the resources allocated from the central budget, for the Board performing only technical audit on the other revenues (circulating capital etc.) of higher education institutions and therefore not interfering with the financial autonomy of institution administrations, and being able to benefit from independent audit institutions for technical audit should be taken into consideration.

For the funds to be established; their being "Within Budget" and subject to the "Audit of the Court of Accounts" in accordance with Article 160 of the Constitution, carrying out this audit only at the level of technical audit and therefore not to interfere with the financial autonomy of the administrations of higher education institutions should be taken into consideration "Performance Based Audit System" should be established, in addition to the existing knowledge, the experience of developed countries should be utilized to determine the performance criteria for audit, in this context, the system should be developed in a way to perform indirect financing audit based on the outputs of higher education institution.

Acknowledgements

This study was produced from the author's doctoral thesis.

No funding to declare.

Conflict of Interest

Author has no conflict of interest to report.

References

- Akalin, G. (1997). University Fees. Pricing of Higher Education in Turkey. *Amme Idaresi Dergisi*, 30.
- Arslan, H. (2011). Parting of the Ways of Higher Education Financing in Turkey: Active, Fair, and Brave Steps.
- Ada, S., Baysal, D. (2009). A View to Various Countries in Terms of Educational Structures and Management.
- Albrecht, D. ve Ziderman, A. (1992). Funding Mechanisms of Higher Education, Financing for Stability, Efficiency and Development. World Bank.
- Ates, H. (2013). Comparison of Turkey's Higher Education Funding With OECD Countries And Funding Model Proposal For Turkey, Doctoral Thesis
- Barr, N. ve Crawford, I. (2005). *Financing Higher Education: Answer From the UK*. London: Routledge.
- Barr, N. (2008). Financing Higher Education: Lessons From Economic Theory and Reform in England.
- Brenneman, M. W., Callan, P., Ewell, P., Finney, J., Jones, D. ve Zis, J. (2010). Good Policy, Good Practice II: Improving Outcomes and Productivity in Higher Education. A Guide For Policymakers.
- Brunner, J. (2007). Chile's Higher Education System: A Comparative Political Economy Focus.
- Canton, E., Jong, F. (2005). Demand for Higher Education in The Netherlands, 1950-1999. *Economics of Education Review*.
- CEDEFOP (2005). Vocational Education and Training in the United Kingdom.
- Cetin, Ş. (2001). Funding of Vocational and Technical Education (France, Finland, Denmark, and Turkey).
- Dogramaci, I. (2007). Higher Education Management in Turkey and the World.
- EC (2011). Modernization of Higher Education in Europe. Eurydice.
- Ekinci, C. E. (1999). *Evaluation of Hacettepe and Erciyes Universities' Students' Views on Finance of Higher Education on the Basis of Students' Socio-Economic Characteristics*. Doctoral Thesis. Hacettepe University.
- Eurydice (2010). Structure of Education and Training Systems in Europe, 2009/10 Education Year.
- Eurydice (2018). Key Data on Education in Europe.
- GSE (2006). A Brief Description of the UK Higher Education System, International Comparative Higher Education Finance and Accessibility. Access: 24.12.2019.
<http://www.gse.buffalo.edu/org/IntHigherEdFinance/>,
- Guruz, K. (2001). Higher Education in the World and Turkey (*History and Today's Management Systems*) Ankara: ÖSYM.
- HEFCE. Access: 24.12.2019. <http://www.hefce.ac.uk/whatwedo/invest/institns/annallocs/>
- ICHEFA. A Brief Description of the Dutch Higher Education System. Access: 24.12.2019.
<http://www.gse.buffalo.edu/org/inthigheredfinan> by
- Johnstone, D. B. (2006). Financing Higher Education: Cost Sharing in International Perspective.
- Kavak, Y. (2010). Population and Management Towards 2050: Overview of the Education System. Issue No. *TÜSIAD-T/2010/11/506*.
- KMOE (Korean Ministry of Education). Access: 24.12.2019.
http://english.moe.go.kr/web/1666/site/contents/en/en_0194.jsp
- Lieberman, M. (1993). *Public Education: An Autopsy*, Cambridge, Harvard University Press.
- NMA. The Education System in the Netherlands. Access: 24.12.2019.
<http://www.minocw.nl/english/publications/>
- OECD (2006). Country Background Report for Korea.
- OECD & World Bank (2009). Tertiary Education in Chile.
- OECD (2010). The Impact of the 1999 Education Reform in Poland.
- OECD (2019). *Education At a Glance*.
- Soyler, I. (2009). Yuksekogretim Finansı: Yeni Beklentiler ve Hedefler Isiginda Normatif Bir Yaklasim.
- Tural, N. K. (2002). *Funding of Education*. Ankara: Ani Publication.

Ates (2019). *Education Reform Journal*, 2019, 4(2), 54-70

UNESCO (2006), Education Systems, United Kingdom, Access: 24.12.2019.
<http://www.unesco.org/iau/online-databases/>

YOK (2007). Higher Education Strategy of Turkey.