

How Much Does Turkey Spend on Education?

Development of National Education Accounts to Measure and Evaluate Education Expenditures

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1. Introduction

Following the 2001 crisis, the Turkish economy has rebounded strongly and has become one of the fastest growing economies in the world in recent years. Annual growth averaged 8 percent during 2002-2004 and a 5 percent growth rate for 2005 seems well within reach. Inflation has come down to 9.3 percent in 2004, dropping to single digits for the first time in over three decades, greatly facilitating the reduction in interest rates. Inflation continued to decelerate in 2005 and the year-end target of 8 percent remains within reach, although soaring oil prices may slow down disinflation. Rapidly rising labor productivity, amounting to 23 percent for the whole period 2002-2004, has underpinned strong growth. Competitiveness has improved and exporters have penetrated into new markets, while the composition of exports has changed towards more high tech products, such as automobile, electrical and electronic equipment and machinery. Key markets have been liberalized and regulatory capacity in the economy has been strengthened. Overall, commitment to sound economic policies since 2001 has placed the Turkish economy in a good position to embark on a sustained path of faster growth and has established a strong basis for using the process of European Union (EU) accession as an anchor for the continuation and deepening of reforms in the years ahead, thus fostering Turkey's growth potential and accelerating convergence to EU living standards.

However, despite strong growth for three consecutive years, high unemployment continues to persist, at an estimated 10.4 percent on average in the first half of 2005, only marginally down from 10.8 a year before. Slow employment generation has held back long-run potential growth in Turkey, as the experience of the last thirty years shows. While labor productivity and working age population in proportion to total population increased by 2.8 percent and 0.7 percent on an annual basis during 1980-2003, the employment ratio declined by 1.4 percent per year. Labor productivity growth slowed to around 1.5 percent in the 1990s, mainly due to recurrent crises, contributing to a further slowdown of potential growth. While drivers of labor productivity growth have varied over time depending on the policy regime, there is little doubt that stronger total factor productivity will be the key to sustained growth and accelerated convergence in the years ahead. There is certainly room for faster labor productivity growth to be fuelled by higher investment, in view of Turkey's investment ratio gap compared to other fast growing economies. Moreover, improving educational attainment will contribute to productivity growth, as Turkey has one of the lowest levels of schooling in the working age population among a group of fast-growing comparator countries.

Productivity improvements are driven by absorption of existing technologies, innovation, collaboration between firms and research centers, use of quality standards and the availability of a skilled labor force that can stimulate technology adoption and innovation. In the case of Turkey, however, weak educational attainment could become a bottleneck for widespread adoption of advanced technology and innovation. The typical worker in Turkey's labor force today has only about 7 years of schooling, whereas his or her counterpart in European and East Asian countries has completed approximately 10 and 8 years, respectively. This limitation not only undermines opportunities for Turkish workers, but the nation's competitiveness as a whole. The gap in learning achievement, and the knowledge component of that education, continues to widen as many of the more industrialized countries are putting more emphasis on elevating the quality of their work force through reforms and improvements of their education and training

systems. Turkish pupils do not acquire key skills for today's knowledge-driven economy (e.g., problem solving, stating relationships between events, making complex inferences, creativity and continuous learning), leaving them out of sync with the needs of the private sector. For instance, 55 percent of Turkey's 15-year-olds perform at the lowest level on the PISA assessment of mathematics-quantitative proficiency, whereas the average in OECD countries is less than 21 percent. Similar results are found in reading literacy. This is particularly worrisome considering that employers in Turkey face a shortage of mid-tier, technician level workers.

Labor market analysis indicates that there are serious problems in the transition from schooling to work as well. Even considering the fact that labor force participation rates in Turkey are low (49% for men and 25% for women), actual reported unemployment rates for recent school graduates are quite high (53% for 8th grade graduates in the 20-24 year age group, and 23% for upper secondary school graduates in the 25-29 year age group). Graduates who are just five years older experience substantially lower levels of unemployment. Although the reasons for this spike in unemployment rates is not understood, the data strongly suggest that an extremely high proportion of school leavers face years of unsuccessful job search before they can secure regular employment.

Recognizing the risks that the country faces with respect to an inadequately prepared workforce, the Government of Turkey has responded with an ambitious agenda of far-reaching, modernizing policy reforms across the entire education and training sector. These proposed reforms, some of which are stated in the 8th Five-Year Plan, and others which are included in the new Government's Emergency Action Plan, are aimed at, inter alia, increasing access and equity in education, extending and expanding secondary education, raising quality of education, modernizing secondary education, improving the effectiveness of postsecondary training; and improving the linkages between schooling and work.

Transforming these goals and objectives to viable policies and programs requires, at a minimum, a comprehensive analysis of costs and financing and a corresponding comparison of the financial and institutional viability of strategic alternatives for achieving these objectives. Such an assessment is essential for policymakers to adequately translate goals and objectives into a strategic, practicable, and financially sustainable set of policies and programs that could transform today's complex and dispersed assortment of education and training programs, activities, and institutions into an effective, equitable, and affordable system.

This study marks a first attempt to conduct a comprehensive assessment of public and private financing for education and training in the structure of an education sector accounts framework. Drawing on a wide variety of data sources, the study analyzes the flow of funds from all the various sources of funding, to the full range of intermediate and final users, including institutions and human resources. The analysis examines budget, off-budget, and non-budget agents involved directly and indirectly in financing of education and training. The flow of funds in the education sector is evaluated through four categories of entities and answers four key questions: (i) where does the money come from (e.g., Ministry of Finance, households, donors, etc.)? (ii) Who has programmatic responsibilities and manages services (e.g., the intermediaries who receive funds from the sources and use them to pay for services, such as the Ministry of National Education, Provinces, or private networks)? (iii) To whom does the money go (e.g., the providers or

services, such as public or private schools or training institutions)? (iv) What services were actually produced (classroom instruction, textbooks, school transportation, private tutoring, etc.)?

The rest of this report is organized as follows. Section 2 provides a brief overview of the education situation in Turkey. The framework of National Education Accounts is described in Section 3. Data sources and NEA matrices are presented in Section 4, followed by main findings in Section 5. The report ends in Section 5 with a discussion of implications of these findings and key policy issues. Detailed classification of data sources is placed in Annex 1, followed by summary tables of results in Annex 2 and full National Education Accounts matrices in Annex 3.

2. Background: Provision and Financing of Education

2.1 Basic Education Program

The current structure of the Turkish education system was established during the 1997-98 school year, when compulsory schooling was increased from 5 years to 8 years for children aged 6 to 14. After the eight-year compulsory Basic Education Law (Law No. 4306) was signed into law in August 1997, Turkey embarked on an unprecedented expansion of first through eighth grade schooling. Increasing competitiveness in a more globally integrated economy contributed to education becoming a high-priority activity for the government, and a high emphasis was placed on improving coverage of formal and extended education, eliminating regional disparities; increasing effectiveness of vocational education; enhancing private sector participation; and encouraging cram schools to become vocational-technical institutions to avoid the significant congestion in the higher education admission process. The *Basic Education Program*, launched in 1998, supported a broad range of actions, financed largely by Government revenues, but also by major private contributions and international loans and grants. Total annual expenditures for basic education are estimated to be in the order of US\$3 billion annually. These outlays include investment outlays for the construction of new schools and the renovation or expansion of existing ones, a massive provision of computers, educational equipment and materials, recurrent spending on the remuneration of teachers and other educational staff, and on new recruitment, and additional staff training to expand the provision and quality of schooling.

The results were almost immediate, and primary school enrolment rates rose from 89.8 percent in 1995-96 to 97.6 percent in 1999-2000. Secondary school enrolment rate increased from 55 percent to 59.4 percent during the same period. Girls' enrollments in rural areas made the swiftest gains. In sixth grade classes of rural schools located in several provinces in eastern Anatolia, the enrollment rate of girls increased by 162 percent in the first year of the Program. A substantial school and classroom construction effort dominated this period, and the number of classrooms increased from 210,905 to 280,257. This was accompanied by an increase in recruitment of new teachers, and over 70,000 new primary school teachers were recruited in the three years following 1997. By 2001-02, Turkey had 10,554 pre-primary schools, 34,993

primary schools, 6,065 secondary schools and 53 universities (Table 1).¹ There are few cases in the history of any national education system that can compare with the initial achievements of Turkey's Basic Education Program.

Table 1: Number of Schools, Students, and Teachers, 2001–02

Public Schools									
Schooling	Number of Schools			Number of Students			Number of Teachers		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Pre-Primary	10,554	7,361	3,193	256,392	216,625	39,767	14,520	12,579	1,941
Primary	34,993	9,906	25,087	10,310,844	7,500,373	2,810,471	375,511	256,272	119,239
Secondary	6,065	5,463	602	2,312,271	2,212,658	99,613	138,785	131,482	7,303
General	2,637	2,276	361	1,490,376	1,427,845	62,531	72,609	68,092	4,517
Vocational	3,428	3,187	241	821,895	784,813	37,082	66,176	63,390	2,786
University	53			1,156,915			63,029		
Private Schools									
Schooling	Number of Schools			Number of Students			Number of Teachers		
Pre-Primary	799			18,152			1,822		
Primary	642			171,623			14,811		
Secondary	487			73,136			8,229		
General	465			72,051			8,128		
Vocational	22			1,085			101		
University	23			55,022			3,721		

Note: For private schools, data are not available separately for urban and rural areas, although a majority of these schools are located in urban areas. The statistics for university level are for the 2000–01 school year.

As Table 1 above shows, the public sector is the predominant provider of education in Turkey. More than 97 percent of pre-primary, primary, basic and secondary school students are enrolled in publicly funded schools. Likewise, public universities, colleges and institutes account for more than 94 percent of higher education enrolments.

The Ministry Of National Education (MONE, Millî Eğitim Bakanlığı) and the Higher Education Council (HEC, Yükseköğretim Kurulu Başkanlığı) are the two entities responsible for policy oversight over the education sector in Turkey. MONE is the largest institution in the education system, and is responsible for planning, delivery and monitoring of education services. In this coordination role, the Minister of Education is assisted by the Higher Education Council, the National Education Council, the Supreme Advisory Board for Vocational and Technical Education, and the Apprenticeship and Vocational Education Board.

¹ Source: Turkey Poverty Assessment, World Bank, 2004.

2.2 Financing of Education Expenditures

The review of public expenditures in the education sector (PEIR) in Turkey carried out by the World Bank in 2002 highlighted the fragmentation in sources of finance as a key feature of the education sector. According to the PEIR, the sources of education finance include general budget appropriations given to MONE as well as various other central government agencies, various budgetary funds (Law 4306 for Basic Education, Law 4318, Law 3308) as well as non-budgetary funds (Social Aid and Solidarity Fund), revolving funds, aid from the community, and associations and foundations. The PEIR concludes that in 1999, MONE financing of Basic and Secondary education was derived from general budget appropriations (80 percent), earmarked funds under Law 4306 (about 12.7 percent), public and local governments (3.5 percent), earmarked funds under Law 3418 (1.5 percent) and revolving funds (1 percent). Financing of higher education (universities, vocational institutes etc.) is based on general budget appropriations (87 percent), own resources (tuition and charges, about 8 percent) and revolving funds (about 5 percent). The PEIR notes that Turkey does not have a consolidated format or presentation of public expenditures on education, and considers that to be a major handicap to effective management of the sector.

The main sources of financing for the education sector are as follows:²

General Budget

This is comprised of direct allocations to the MONE budget. Expenditures from this source are audited by the Court of Accounts and follow public accounting rules.

Special Law for Primary Education (Law 4306)

Introduced in 1997, this law earmarks revenues from a special excise tax on alcohol, soft drinks, cigarettes and other items to fund the additional expenditures due to school construction in Basic education, as well as related current expenses such as the busing program.³

Funds from Law 3418

This Law established earmarked revenues from taxes on luxury items to fund expenditures on health, education and sports.⁴ This permanent funding mechanism historically allocated 40 percent of its revenues to the Ministry of Health and 60 percent to the former Ministry of Education and Sports. In 1999, about 50 percent was assigned to the MONE and 10 percent to the General Directorate of Youth and Sports. These funds are spent mainly on building construction, renovation, and machinery and equipment, but in contrast to those funds from Law 4306, can be used for any education level.

Apprenticeship and Vocational Education Fund (Law 3308)

This Fund was established in the Law of Vocational Education to specifically benefit the Directorate of Apprenticeship and Vocational Education. The Fund is based on revenues from employers (1 percent of their Income Tax), and from the Turkish Labor Union of Handicrafts

² This section is drawn from PEIR, 2002.

³ The Department of Investment and Construction in the MONE is responsible for the use of these funds.

⁴ These items include automotive imports, cigars, alcohol, soft drinks and gasoline.

and other Commerce Chambers (20 percent of their Annual Training Budget).⁵ The major expenditure items associated with this Fund are machinery and equipment, workshops and supplementary salaries, and other incentive premiums. The Ministry of Finance collects the Fund, but transfers only about 20 percent to the Ministry of Education, spending the remaining 80 percent on General Budget items.

Local Governments

Law 222, that regulates local governments, establishes that Provinces must spend at least 20 percent of their budget in Education. These local administrations are entitled to make direct contracting for projects (school construction) informing the State Planning Office (SPO) in the case of Primary schools or requesting SPO approval in the case of Secondary schools.

Revolving Funds

In 1998 there were 1065 revolving funds related to the MONE and 183 associated with universities, compared to almost 600 related to the MoH. The MONE-related revolving funds generated about US\$ 20 million in net profits, compared to US\$ 50 million from those related to the MoH, and a total of US\$ 150 million in the public sector. Revolving funds are more important in the funding of Universities.

Associations, Foundations and Other funds

These private funding mechanisms are common in Basic Primary Schools and Secondary education, which collect monetary and in-kind contributions. These contributions are usually allocated to cover the reduced budget for non-personnel current expenditures (such as materials). In other cases, private foundations have transferred either resources or services to the MONE. For example, the Turkish Education Foundation (TEV, *Türk Eğitim Vakfı*) built schools and transferred them to MONE. Additionally, TEV has supported students through scholarships, provided training for teachers, and carried other activities mainly targeting Basic Education.

The PEIR concludes that consolidated public expenditure on all levels of education was 11.74 percent of the consolidated budget, equivalent to 3.10 percent of GNP in 1996 (Table 2). Over 1997-2000 the share of GNP allocated to education has gradually increased to about 4 percent of GNP, mainly on account of larger allocations to MONE under the Basic Education program.⁶ Taken together, about 72 percent of the allocation of public expenditure on education is directed to MONE programs, about 20 percent to higher education programs and the remaining to other institutions.

⁵ If firms also train their workers, they are entitled to have a refund equivalent to 50 percent of their training expenses.

⁶ An economic downturn in 1999 explains the sharp spike in educational expenditure in that year to 4.61 percent of GNP but this is clearly an anomaly due to the low growth of nominal GNP in that year.

Table 2: Public Expenditure on Education (billion TL)

	1996	1997	1998	1999	2000
Ministry of Education	313,798	733,686	1,556,964	2,577,398	3,611,756
Universities	117,183	258,637	466,569	785,409	967,376
Other Institutions	34,067	93,858	161,623	245,914	438,711
Total Education	465,049	1,086,181	2,185,156	3,608,721	5,017,843
Expenditure as share of Consolidated Budget					
Ministry of Education	7.92%	9.11%	9.97%	9.20%	7.73%
Universities	2.96%	3.21%	2.99%	2.80%	2.07%
Other Institutions	0.86%	1.17%	1.04%	0.88%	0.94%
Total Education	11.74%	13.49%	13.99%	12.88%	10.74%
Expenditure as Share of GNP					
Ministry of Education	2.10%	2.50%	2.91%	3.29%	2.90%
Universities	0.78%	0.88%	0.87%	1.00%	0.78%
Other Institutions	0.23%	0.32%	0.30%	0.31%	0.35%
Total Education	3.10%	3.70%	4.08%	4.61%	4.03%

Source: PEIR, 2002; Staff calculations based on MOF statistics. These figures include the contributions from the community and parent-teacher associations.

The PEIR finds that within the MONE budget, the earmarked funding under Law 4306 has increased total expenditure on Basic Education programs from 53 percent in 1996 to about 62 percent of MONE allocations from all sources in 2000. Although student enrolment at that level constitutes 77 percent of the total, the share of resources allocated is not commensurate. Secondary education programs receive about 24 percent of the MONE allocation, a share relatively higher as compared to the share of student enrolment in secondary education (7 percent). Central administration and extended education and other programs consume the remaining 14 percent of educational resources of MONE (Table 3).

Further analysis carried out under the PEIR reveals that increased expenditures on basic education after 1997 explain large shifts in MONE expenditures on personnel, other current expenditures, investments and transfers (including those expenditures funded by extra-budgetary sources). In 1997, the first year of the Basic Education Law, the share of investment expenditures in the MONE budget doubled. Other current expenditures increased as well, explained by the associated increase in equipment, materials and the cost of services (water, electricity and heating). Personnel expenditures, however, did not grow commensurately until recently, reflecting lags in teacher recruitment relative to the growth in enrolment. Further, while the investment budget is largely financed through earmarked resources under Law 4306, personnel allocations are based on pooled government revenues and have to compete for appropriations with other claims on resources, giving the Ministry of Finance some control over allocations for personnel expenditures.

Table 3: MONE Expenditures by Program (trillions TL)

	1996	1997	1998	1999	2000(p)
Total	320.4	707.2	1,604.7	2,340.7	3,415.6
	Composition %				
Central Administration	10.2	10.3	8.2	9.7	10.3
Basic Education ^a	52.6	52.0	42.8	45.4	47.3
Secondary Education ^b	28.3	27.2	21.6	22.7	23.6
Extended Education	3.6	2.9	2.1	2.3	2.4
Higher Education ^c	1.4	1.1	0.8	0.7	0.8
Law 4306 ^d	0.0	2.5	21.2	15.5	13.6
Law 3418	0.9	0.8	0.7	0.7	0.5
Other Programs ^e	3.0	3.4	2.7	3.0	1.5
Total	100.0	100.0	100.0	100.0	100.0

Source: MONE (2000) as reproduced in PEIR (2002). Notes: *: Includes Cross-program support (Destek Hizmet).
^a: Includes Preschool education. ^b: General and Vocational-Technical High Schools. ^c: These are expenditures on Higher Education made by the MONE, additional to that by Universities. ^d: Mainly school construction work under the Basic Education program. ^e: Other Private Works, Sports and Athletics and Transfers not allocated by Program.
 P: Projected.

Private Expenditures

Household expenditures on education are reflected in expenditures on school related materials (books and supplies), school fees (in case of private schools) or duties to school parent's associations (even in public schools). Besides these expenditures, a major item in educational expenditures is that related to extended education (non-formal) and that of the cram schools, known in Turkey by the name of *dershanes*. The latest data on household expenditures on education available at the time of the PEIR (2002) was based on household survey of 1994, which indicated that total household expenditure on education was about 21,228 billion TL in 1994. These figures are not comparable with public expenditures for later years, since much of private out-of-pocket expenditures are reflected in revolving funds after 1996 (Table 4).

Table 4: Household Expenditures on Education (Monthly average, million TL of 1994)

	Household Quintiles by Income					Total
	Poorest	2	3	4	Richest	
Total Expenditure	38,874	125,934	165,984	317,792	1,120,459	1,769,043
Incidence (%)	1	2	3	4	5	Quasi-Gini
Total Expenditure %	2.2	7.1	9.4	18.0	63.3	0.532
Pre-school & Basic	0.8	1.5	22.4	13.1	62.2	0.537
Secondary	0.0	0.1	0.5	1.0	98.4	0.791
Higher Education	0.2	16.5	9.9	22.0	51.4	0.431
Other Education	1.2	6.2	8.7	21.8	62.1	0.549
Educational Materials	7.5	13.5	18.4	25.8	34.9	0.269

Source: SIS (1995)

Information from the 1994 Household Survey suggests striking differences in private

education expenditures by income quintiles in Table 4. The richest quintile accounts for 63 percent of total household expenditures on education. The inequality in education expenditures is particularly marked in the case of secondary education, where the richest quintiles account for 98 percent of all expenditure, reflecting the lower representation of lower quintiles in secondary enrolment and their limited capacity to contribute in schools. The inequality in other education captures the expenditure on *dershanes* and other items, which can only be afforded by the richest quintiles of households.

2.3 Incidence of Public Spending on Education

The Education Chapter of the 2004 Poverty Analysis of Turkey calculates the incidence of public spending on education, and finds that expansion of compulsory schooling to 8 years had an extremely positive impact on the distribution of public education spending across poor and rich households. Whereas only 15.8 percent of public spending on basic education reached the poorest 20 percent of households in 1994, 21.7 percent of public spending on basic education reached the poorest 20 percent of households in 2001, largely because the enrolment rates of children coming from poor households increased substantially (Table 5). While there has been some pro-poor redistribution of public secondary education funding between 1994 and 2002, only 13 percent of public secondary school spending reached the poorest 20 percent of population in 2001 compared to 8.7 percent in 1994.⁷

Table 5: Incidence of Public Spending on Education in 1994 and 2001

	Household Income Quintiles				
	1 (poorest)	2	3	4	5 (richest)
1994: Turkey (before the expansion of compulsory schooling)					
Basic education (8 years)	15.8%	21.1%	22.2%	20.6%	20.3%
Secondary education	8.7%	16.2%	22.3%	25.4%	27.5%
Total public expenditures	13.5%	19.5%	22.2%	22.2%	22.7%
1992-94: Average Statistics for Lower-Middle-Income Countries*					
Primary	25.4	22.4	20.0	18.4	13.7
Secondary	14.0	17.4	21.3	23.3	24.0
Tertiary	4.5	10.0	14.4	25.5	45.5
2001: Turkey (after the expansion of compulsory schooling)					
Basic education (8 years)	21.7%	21.4%	21.0%	22.0%	13.9%
Secondary education	13.0%	14.6%	25.4%	22.8%	24.2%
Total public expenditures	19.2%	19.4%	22.3%	22.2%	16.9%

* The countries included are Ecuador, Guyana, Jamaica, Morocco, Peru, Romania, and South Africa, which are categorized as lower-middle-income countries by WDI 2003. None of these countries, when considered alone, provides an adequate reference point when compared with Turkey. As a group, however, they provide some insights into the general circumstances in lower-middle-income countries.

⁷ These estimates of incidence of public spending on education are obtained by assuming, inter alia, that the public schools attended by poor and by wealthy children receive the same amount of funding.

In order to put the outcome of the incidence analysis in context, the middle segment of Table 5 reports average statistics for other lower-middle-income countries. Such a cross-country comparison suggests that prior to the expansion of compulsory schooling Turkey was at an extreme when it comes to distribution of public resources in a way that benefited the wealthier households. After the implementation of 8-year compulsory schooling, the distribution of public funding became more in line with the experience of other countries at about the same level of economic development.

Table 6: Incidence of Household Expenditures on Education in 1994 and in 2001

	Household Income Quintiles				
	1 (poorest)	2	3	4	5 (richest)
1994	2.2%	7.1%	9.4%	18.0%	63.3%
2001	6.2%	14.1%	16.6%	23.5%	39.6%

Source: Poverty Analysis, 2004 (Education Background paper)

As regards the distribution of household expenditures on education, whereas only 2.2 percent of total household expenditures on education were accounted by poor households in 1994, the corresponding figure for 2001 is 6.2 percent, higher because more children from poor households started participating in basic education after the expansion of compulsory schooling (Table 6).

3. Towards a Framework for Measuring and Evaluating Flow of Funds in the Education Sector

The traditional way in which data on education spending in Turkey is collected, organized and presented follows the usual budgetary guidelines and procedures as applicable for other sectors of the economy. While necessary and perhaps even useful and informative in that sense, this data does not capture the nuances of spending in the education sector and does not facilitate prioritizing and informed policy making. For instance, the standard way in which this data is organized does not throw much light on utilization and effectiveness of education expenditures, nor does it provide any insights into the areas of need and attention. In order to provide a more complete view of total spending in education in a way that can be used by policy makers to make informed decisions, it is necessary, therefore, that a different methodology is designed and adopted that captures the uniqueness and specificity of the education sector. It is in this spirit that the use of National Education Accounts is suggested and developed to measure, record and evaluate the flow of funds in the education sector in Turkey.

3.1 What are National Education Accounts?

The National Education Accounts (NEA) can be described as a transparent method for collecting and analyzing data on actual allocations and expenditures of resources in the education sector and linking those allocations and expenditures system reforms. The NEA framework closely follows the National Health Account (NHA) framework, and like the NHA, it too maps the flow of funds from sources to intermediary or financing agents and finally to the providers of service. The National Education Accounts help detail expenditures by different players in the education sector and thus provide a more complete and transparent view of total spending, both public and private, on education.⁸

Like the NHA, NEA is a tool that facilitates assessment and evaluation of the performance of the education system. NEA does this in several ways, most importantly by providing information on the overall level of resources (public, private and external), how these resources flow through the education system and how they are used. NEA provides the data for evaluation of sources and uses of education funding (public, private and external) against a set of policy objectives, thereby providing evidence-based methods of determining if education funds are being spent in support of these objectives. The use of NEA involves official stakeholders in determining which aspect of the sources and uses is important, and provides the means to measure policy impact on a factual rather than an anecdotal basis. NEA uses standard classification of data, which contributes to benchmarking performance and sharing information more easily within country and between countries.

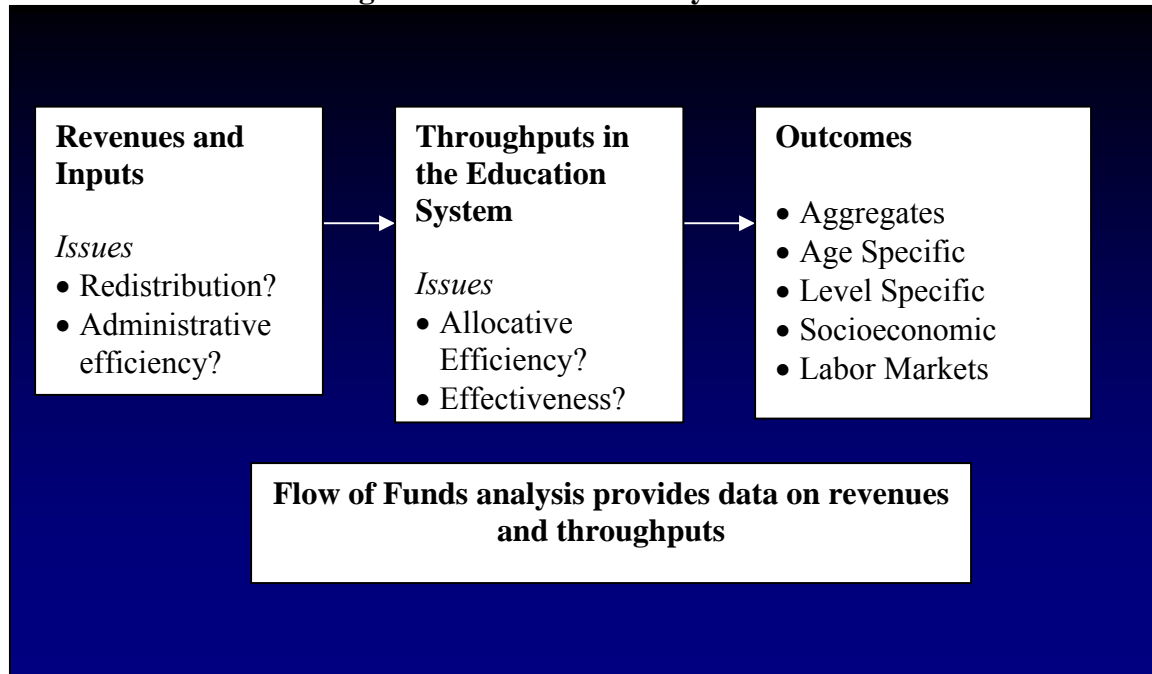
The main objective of the National Education Accounts is to create a standard format of accounting educational expenditures that establishes the platform for technical analysis of the performance of the education sector and permits comparisons of relevant indicators internationally. In keeping with this objective, the goal of the NEA is to provide a framework that helps policy-makers, financiers, and providers of education answer questions that help improve the performance of the education system and improve the efficiency of the sector. Furthermore, since the NEA uses a standardized format, the information that it provides allows meaningful international comparisons.

As a first step, NEA lays down clear, unambiguous definitions of the boundary conditions for an expenditure item to be classified as an educational expense. In doing so, NEA goes beyond the traditional classification of expenditures by institutions to a more functional classification of expenditure by type of expense. In the second step, NEA identifies the sources that finance education expenditures, the intermediaries that allocate the funds amongst different providers, and the providers of education, so as to avoid double-counting of funds. At the same time, NEA distinguishes between different providers of education and focuses on the mechanisms used to transfer funds to these providers. Finally, and most importantly, the NEA framework provides a technical basis for analyzing the financial implications that education sector reforms would have on service providers and financiers of education alike.

⁸ For details on National Health Accounts, see Berman, Peter (1997): “National Health Accounts in Developing Countries: Appropriate Methods and Recent Applications”, *Health Economics*, Volume 6: 11-30.

NEA provides an effective tool that can be used to review the outcomes of education policies and to suggest the impact of potential policies on performance of an education system (Figure 1).

Figure 1: The Education System Continuum



Source: Adapted from Nandakumar (1999): National Health Accounts presentation

NEA measures the flow of funds through four several categories of entities and answers at least the following four key questions:

- (i) **Sources of Financing:** Where does the money come from? (Central and Local Government revenues, household funds, international organizations etc).
- (ii) **Financing Agents:** Who are the financial intermediaries responsible for the allocation of funds amongst different providers and have the programmatic responsibilities to manage or organize services? (Intermediaries who receive funds from sources and use them to pay for services such as Ministry of National Education, Higher Education Board or private networks).
- (iii) **Providers** of services or activities: To whom does the money go? (Public or private providers such as primary schools, vocational schools, or universities etc.)
- (iv) **Inputs** or types of educational expenditures incurred: How was the money spent? (Personnel expenses, textbooks, capital investments etc.)

NEA can also be used to identify sub-categories for the flow of funds such as beneficiary groups defined according to socioeconomic status, location, age, or gender.

3.2 Defining the Education Boundary

The *education boundary* with respect to education expenditures in a nation may be defined as all expenditures on activities whose primary purpose is to improve and promote education of individuals belonging to that nation. Activities of education include those performed by institutions or individuals pursuing the goals of:

- Providing and administering all levels of public and private education system, from early childhood education to tertiary education, covering basic education schools, secondary general and vocational institutions, technical training colleges and universities, university-examination courses (*dershanes*), special education and other types of training institutions as well as training and apprenticeship provided by non-formal and informal sectors;
- Promoting literacy rates;
- Increasing enrollment, completion and promotion rates at basic and secondary school levels;
- Improving the quality and quantity (coverage) of formal and non-formal education;
- Increasing effectiveness of vocational education based on school and business cooperation;
- Enhancing efficiency through increased private sector participation;
- Encouraging international technical cooperation;
- Developing innovative means for channeling education streams at secondary levels to avoid the significant congestion in the higher education admission process;
- Providing goods and services for education purposes and related activities;
- Improving access to schools and institutions; and
- Promoting labor participation.

3.3 Understanding the Flow of Funds in the Turkish Education System

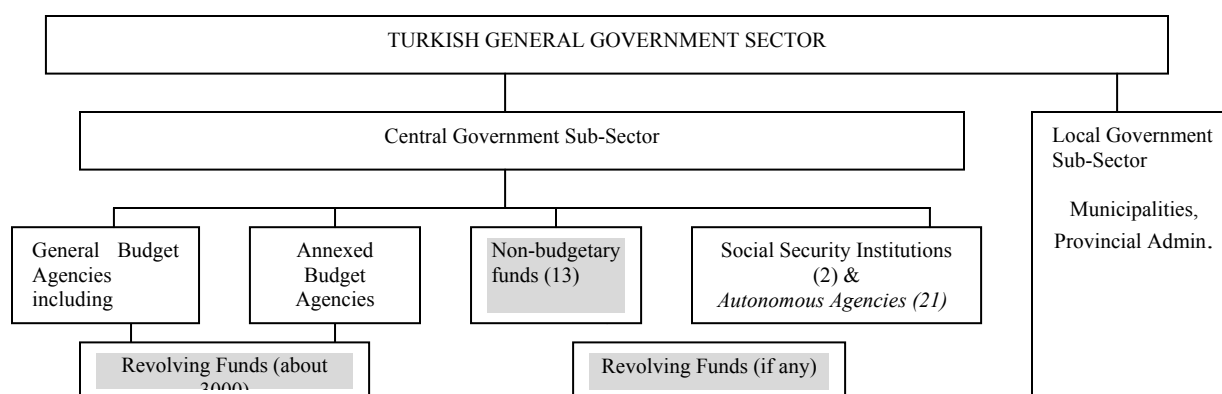
Before describing the flow of financing in the education system in Turkey, it is important to understand some of the fundamental aspects of the overall financial accounting and budgeting system in Turkey, which make the task of undertaking any analysis involving public expenditures very challenging.⁹ First, the “Consolidated Budget” of Turkey does not provide a comprehensive picture, and relying solely on this budget can often result in an incomplete representation of true expenditures.¹⁰ Second, there exist a large variety of “funds” and “special accounts”, which contribute to fragmentation in information and complicate analysis of public expenditure. The PEIR 2002 recorded as many as 62 budgetary funds and 13 non-budgetary funds, used to finance both capital and current expenditures, whose activities are not fully

⁹ The analysis involving public expenditures is restricted to the general government sector and excludes the monetary public sector (the Central bank and other public depository institutions) and the state enterprise sector, except insofar as the net financial transactions between the general government and these excluded public sub-sectors (tax receipts from and subsidies and transfers to) are concerned.

¹⁰ The term Consolidated Budget refers to the specific usage it has in Turkey, i.e. it refers to the aggregate of items in the General Budget and the Annexed Budget, which is submitted for Parliamentary review and approval.

reflected in the consolidated budget. Third, there are over 3,000 revolving funds and a large number of foundations, which are seen as an extension of off-budget activities. Fourth, the use of state owned banks to support policy objectives of the government through the provision of subsidized credit or the use of state economic enterprises (SEEs) to purchase agricultural output at above market prices has been commonplace in Turkey. The PEIR 2002 regards them “as effectively quasi-fiscal operations, which have tended to understate the true extent and composition of government operations in the economy.” Fifth, a significant proportion of the consolidated budget is reported as “transfers”, which reflects the transfer from one agency of government to another rather than transfers to non-public entities. The PEIR 2002 notes that “this method of reporting on the economic classification of expenditure does more to conceal than illuminate the true economic nature of expenditure.”

Figure 2: The General Government Sector



Source: *The World Bank, PEIR, 2002*

In general, the central government sub-sector in Turkey is described by the ministries, the legislative and the judicial organizations (which fall under the “general” budget classification) as well as 10 “general directorates”, the Higher Education Council and 53 public universities (included under an “annexed budget” classification), two social security institutions (SSK and BagKur) and about 21 autonomous agencies supported by transfers from the central government budget (Figure 2). “Budgetary funds” are included in the general budget whereas “Non-Budgetary funds” are not. Consolidating the 81 provincial, 2,710 municipal and 35,000 village level government units with the central government derives the general government sector.¹¹

A special mention needs to be made here of revolving funds. In practice, the revolving funds function as off-budget sources of supplementary revenue for central government agencies, not only in the health and educational institutions but also in the ministries of forestry affairs and agricultural and rural affairs, which have a large number of such funds. As far as the reporting of such resources, given that user charges and fees are often the basis for revolving fund receipts, the PEIR included revolving fund revenues and expenditure in the estimation of central

¹¹ This description is taken from the PEIR 2002 report.

government revenue and expenditure as “own revenues” of the parent agency.¹² For the purposes of NEA, however, the revolving funds are treated as mechanisms through which resources flow from the household to the provider. Revolving funds are not seen as financing agents either, since it is the household that makes payments that are used by the receiving institutions towards current expenditures. In other words, revolving funds do not have any place in the NEA matrices.

Flow of financing in the education sector

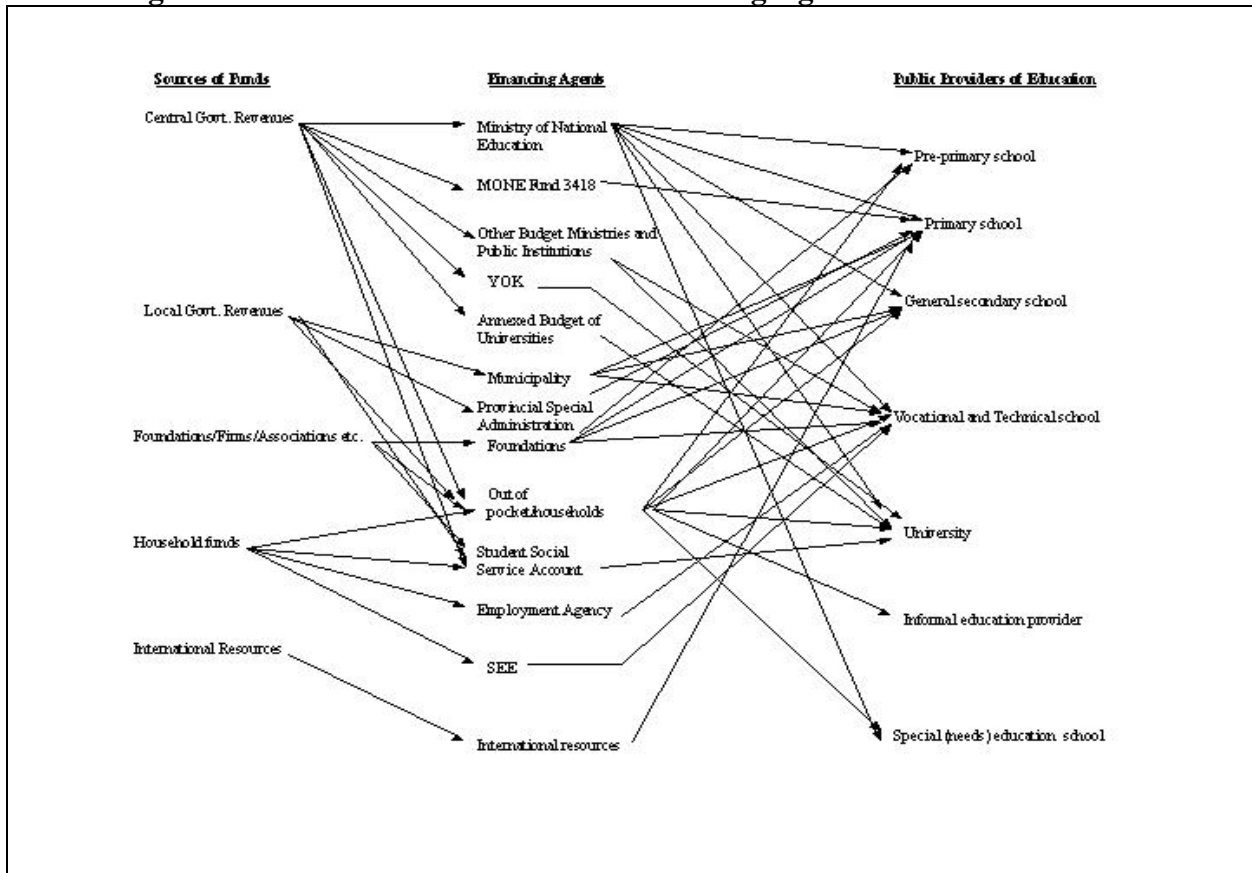
The flow of funds between sources, financing agents, and public and private providers of education in Turkey is not very complex, even though most financing agents have multiple revenue sources and providers at most levels are financed by multiple agents. However, tracking these flows of funds is not straightforward, and it is here that the step-wise framework of NEA is especially useful. Figures 3 and 4 show the flow of funds from sources to financing agents and further to public and private providers of education.

As can be seen from Figure 3, central government revenues provide funds to Ministry of National Education, which as a financing agent is responsible for financing education services up to, and including, secondary education. The central government also collects resources that are transferred to MONE Fund 3418, which are collected from the public as earmarked taxes for improving primary education in the country. The MONE Fund 3418 is also managed by MONE. The central government budget also allocates money to Ministries other than MONE for spending on education.

While MONE accounts for the largest share of education expenditures, the Directorate General of Credit and Dormitory (DGCD) is responsible for providing scholarships and financial need assistance to students at the university level. Almost half of the expenditure captured under “Other Ministries and Public Institutions” is spent by DGCD. The Higher Education Board (YOK) oversees higher education, and is the responsible authority for allocating resources to different public universities. However, actual money transfers from the treasury to public universities are made through the annexed budget. Municipalities and Provincial Special Administration (PSA) use local government revenues for expenditure on education, which include in-kind transfers to schools.

¹² In many countries, such revenues are included in the budget as “own revenues” (or “appropriation in aid”) and allocations from the central budget are indicated as “net appropriations”. The sum of net appropriations and own revenues is the gross resource allocated to the agency and is reported as such to Parliament.

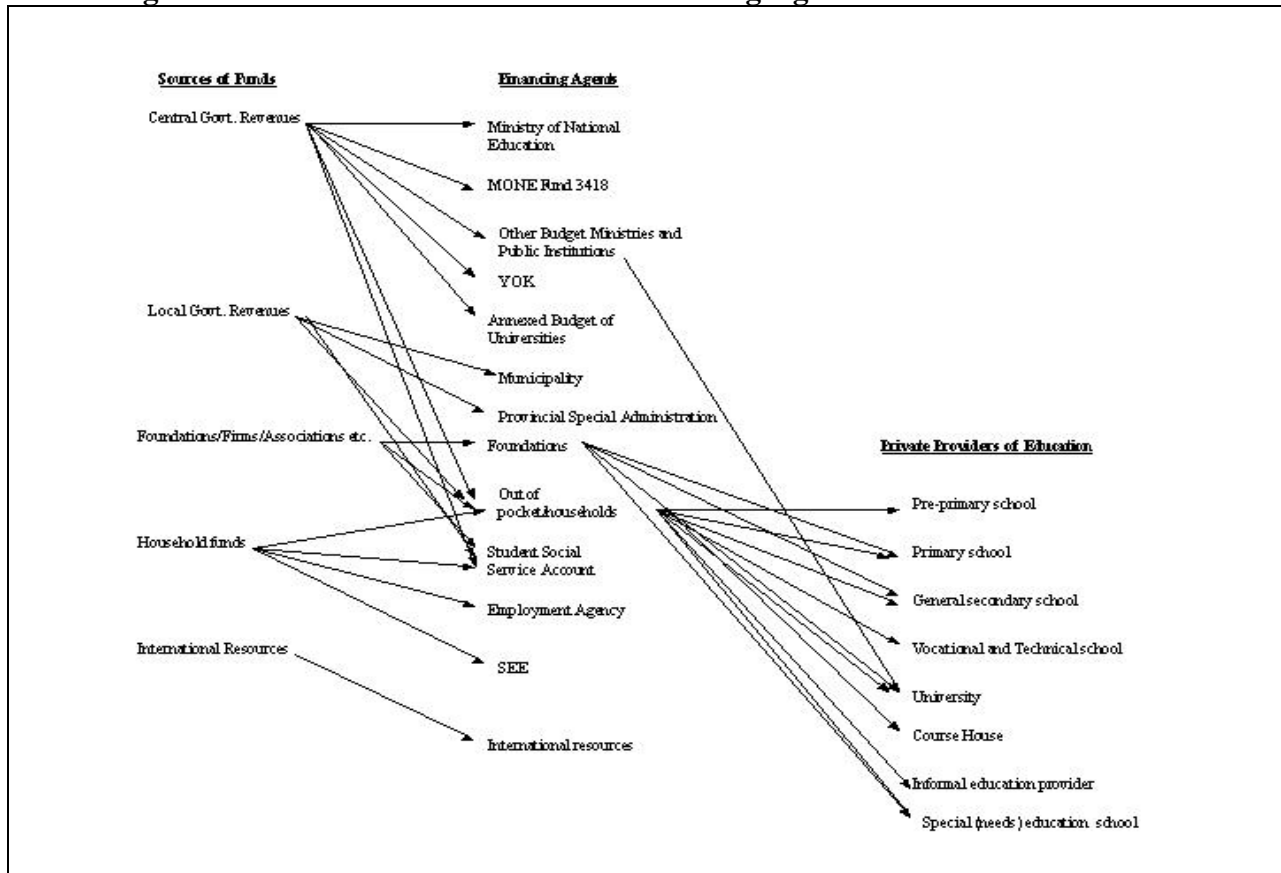
Figure 3: Flow of Funds – Sources to Financing Agents to Public Providers



Foundations/firms etc. either spend their funds at their own discretion, especially when financing expenditures at privately owned schools and universities (to Student Social Service Account), or transfer money to households as scholarships, financial aid and in-kind goods.

Households finance a significant share of education expenditures (Figure 4). They either spend it directly, through out-of-pocket payments, or entrust the money to other financing agents, such as Student Social Service Account (SSSA), employment agencies, and SEE to spend on their behalf. The SSSA collects money from students and other sources and provides student services related to education at the university level. A separate category has been included for funding from international resources, on the assumption that money is allocated directly to schools and universities.

Figure 4: Flow of Funds – Sources to Financing Agents to Private Providers



As stated earlier, providers at all levels of education, whether public or private, are financed by multiple financing agents. The linkages shown in Figures 3 and 4 provide the basis for the NEA matrices, data for which are derived from school, university and institutional surveys, along with ‘Final Accounts’ of Ministries and other public institutions.

4. National Education Accounts in Turkey

4.1 Data Sources

A number of surveys and administrative sources of data have been used to build the National Education Accounts for Turkey. In the fall of 2003, the State Institute of Statistics in Turkey (DIE) conducted institutional surveys that aimed at collecting detailed educational expenditures and revenues of these institutions. The surveys were sent to: (a) nationally representative sample of public and private schools providing pre-primary, primary, secondary general, vocational or special education; (b) all public and private universities providing 2 year, 4 year, 5 year, masters and doctorate programs; (c) nationally representative sample of private crèches; (d) Ministry of National Education; (e) Higher Education Board Council of Universities (YOK); and (e) all other ministries and public agencies such as the Ministry of Finance, Ministry of Health, Ministry of Labor, etc. that have any investments in education.

All surveys, other than the school survey and the crèche survey, collected information from the complete list of such educational institutions in Turkey, and therefore the data collected represents total spending on education in Turkey by each of these institutions. The school and crèche surveys were conducted on a sample, and appropriate population weights are used to estimate total spending by schools and crèches in Turkey. The State Institute of Statistics (SIS) designed and implemented all surveys and also calculated the weights for the school and crèche surveys.

A separate nationally representative household education expenditure survey was also conducted by SIS, which captures total household spending on education. The survey was designed to give detailed information on household educational expenses, including expenditures on private course houses and non-formal education. The survey also collected information on educational items received by the household in-kind, and credit and financial assistance (scholarships etc) given to the household members.

The household survey, which collected information from 29,764 households, obtained education spending for the academic year September 2002 to June 2003. To make the expenditures from the household survey consistent with institutional data, which collected data for the calendar year 2002, rather than the 10-month academic year, household expenditures are first projected for the entire 12-month period from September 2002 to August 2003, and data for the months of 2003 is then deflated to represent expenditures from January 2002 to August 2002. Similarly, the data from the school survey also obtained education spending over the academic year and it too had to be appropriately deflated to represent spending over the calendar year 2002. The NEA tables, therefore, represent spending on education in Turkey over the calendar year January 2002 to December 2002.

Apart from the survey data, NEA also uses information from the publicly available 'Final Accounts' of the Ministry of National Education, 'Final Accounts' of Universities and Higher Education Board (YOK), 'Final Accounts' of other Ministries and public agencies, and 2002

Budget data (audited actual expenditures) obtained from Ministry of Finance (MOF) records.

The different sources of data permit triangulation and cross-verification of expenditure and receipt data recorded by the spending and receiving institutions. Thus, public revenues reported by schools were crosschecked with MONE allocations, which are presented in MONE records as actual expenditures and transfers to schools. Likewise, several other cross flows in the education system were verified and triangulated. In instances where discrepancies were discovered, precedence was given to ‘Final Accounts’ of public institutions, including MONE and YOK, to ascertain the central government’s expenditures on education, and to data from the household survey to ascertain private expenditures on education. A detailed explanation of the sources of data for each cell of the NEA matrices is placed in the Annex.

4.2 NEA Matrices

Four basic NEA matrices are prepared at this stage of the exercise. These are: Sources to Financing Agents, Financing Agents to providers, Providers to Inputs and Financing Agents to Inputs. Tables 7 to 10 provide the classification for Sources, Financing Agents, Providers and Inputs, and describe and define each expenditure item as used in these matrices.

Table 7: Classification of Sources

Code	Descriptor	Definition
1.	Public funds	This category covers all public funds and divided into further categories
1.1	Central government revenue	Captures all funds generated as general revenue of central government
1.2	Local government revenue	Captures all funds generated by the municipal governments and Provincial Special Administration
2.	Private funds	Covers all private funds generated from different sources
2.1	Foundations, Associations and Firms etc.	This category covers the private capital market, which includes spending by firms, and foundations on private educational establishments.
2.2	Household funds	Captures household payments for educational purposes. It includes spending on tuition fee, books, school clothes, transportation expenses (provided by school/university), rent/ dormitory expenses, and other related educational expenses
3.	International Resources	These are funds that come from outside the country as grants, or loans.
4.	Other sources	Captures all sources of revenue that cannot be classified into any other previously defined Source. It includes those sources of revenues that schools and universities cannot classify.

Table 8: Classification of Financing Agents

Code	Descriptor	Definition
1	General Government	Covers institutional units of central or local government
1.1	Central Government	Covers all institutional units in the central government, Institutions with general, annexed and autonomous budgets and funds under public supervision are included
1.1.1	Institutions with General Budget	Covers all institutional units in the central government with annexed and autonomous budgets
1.1.1.1	Ministry of National Education (MONE)	Ministry whose main responsibility is to provide educational services to the population
1.1.1.1.1	Ministry of National Education Account	Ministry whose main responsibility is to provide educational services to the population
1.1.1.1.2	Fund (3418)	Fund created by MONE from earmarked taxes to be spent within a specific agenda
1.1.1.2	Other Budget Ministries and Agencies	Includes educational programs of ministries other than MONE
1.1.2	Institutions with Annexed Budget	These institutions both get allocations from the general budget and also generate their own resources
1.1.2.1	Higher Education Board (YOK)	This is an institution with an annexed budget that plans and coordinates the provisioning of higher education services
1.1.2.2	Annexed Budget of Universities	Universities receive resources from central government revenues
1.2	Local Government	Local Government are institutional units whose fiscal, legislative and executive authority extend over the smallest geographic areas
1.2.1	Municipalities	A local government unit that provides services based on geographical boundaries
1.2.2	Provincial Special Administration	A local government unit that provides services to the provincial population by public and private sources
2	Private Sector	All institutions that are outside the government sector
2.1	Foundation/ Firms/Corporations	Includes corporations, firms and foundations that are involved in production of market goods and services including private educational services
2.2	Households/Out of Pocket	Payments made directly by household for educational and related services. This includes payment to informal providers of education
3.	Others	Institutions that are not classified typically under public or private sector
3.1	Student Social Service Account	Agency within universities that receives revenues both from public and private sources, which are used to provide student services in universities
3.2	Employment Agency	
3.3	State Economic Enterprises	
3.4	International Resources	Money received from international organizations and other donors from outside the country

Table 9: Classification of Education Providers

Code	Descriptor/Definition
1.1	Public pre-primary schools
1.2	Private pre-primary schools
2.1	Public primary schools
2.2	Private primary schools
2.3	Private course houses for primary schools (<i>dershanes</i>)
3.1	Public general high school
3.2	Private general high school
3.3	Private course houses for general schools
4.1	Public vocational technical high school
4.2	Private vocational technical high school
5.1	Public universities
5.2	Private university
5.3	Private course houses for higher schools
6.1	Public informal schools
6.2	Private informal schools
7	Private course houses for graduates of general education preparing for university
8.1	Public special (needs) education schools
8.2	Private special (needs) education schools
8.3	Private course houses for special (needs) education schools
9	Not known by kind

Table 10: Classification of Inputs or “Resource Costs”

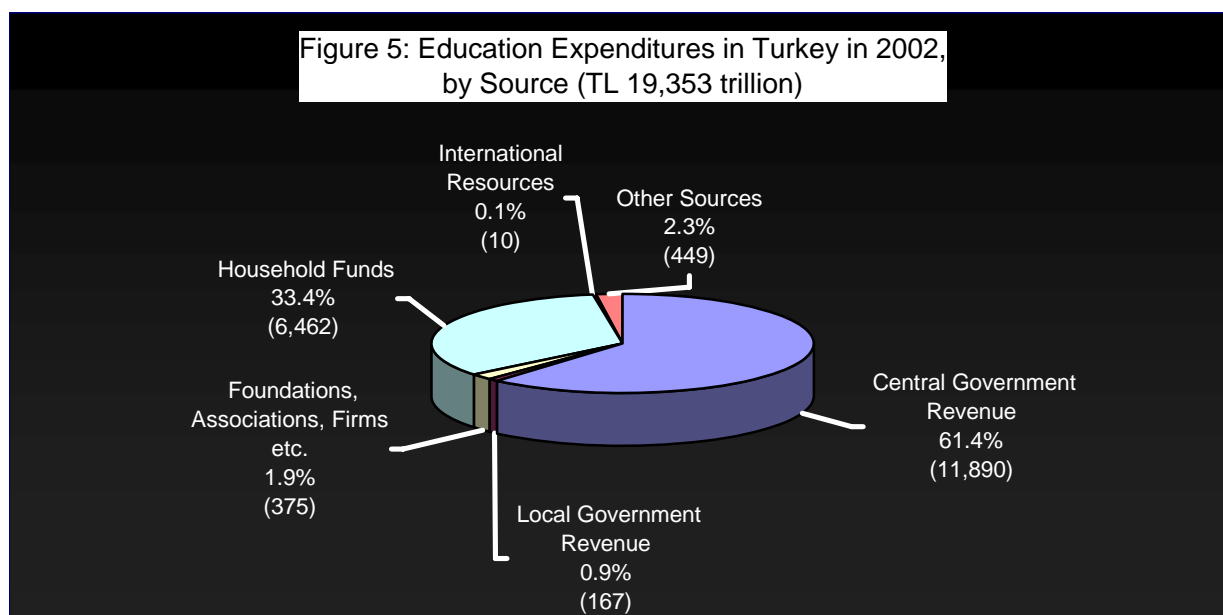
Code	Descriptor/Definition
1	Current Expenses
1.1	Personnel Expense
1.1.1	Salaries (of active teachers)
1.1.2	Salaries (of personnel’s other than teachers)
1.1.3	Additional course fees of teachers
1.1.4	Health Expenses of academicians and other personnel and their dependents
1.1.5	Tax return amount of academicians and other personnel
1.1.6	Amount deposited or spent for pension payments of educational personnel
1.1.7	Fee per tuition
1.1.8	Personnel Expense (Not Distributed)
1.1.9	Income Total derived from Secondary Training by Active Academician
1.2	Travel diem for academicians and other person in Turkey
1.3	Travel diem for academician and other personnel abroad
1.4	Expenses for computers, software, hardware, version updating
1.5	Expenses for Laboratories
1.6	Cleaning Expense
1.7	Sport Activities and Equipment
1.8	Expenses for Service Procurement
1.9	Expenses for Consumption good and supplies
1.1	Expenses for Fixtures
1.11	Cultural Expense (theatre, cinema, exhibition, tournament, competitions, etc.)
1.12	Fuel, Water and Electricity Expense
1.13	Rental Expense
1.14	Dormitory and boarding expenditure

Code	Descriptor/Definition
1.15	Communication Expenses (Phone, Fax, Internet)
1.16	Clothing (Shirts, uniforms, Shoes, Pants etc)
1.17	Stationary Expense
1.18	Books and course materials
1.19	Transportation expense
1.2	Current Expenses (No Distribution)
2	Capital/Investment Expenses
2.1	Purchase of Machinery, Large Equipment and Vehicle
2.2	Construction, Major Repairs
2.3	Other Investments
2.4	Capital/Investment Expenses (No Distribution)
3	3. Transfer Expenses
3.1	Allocation to international organizations
3.2	Amount transferred to domestic property
3.3	Payment to associations, unions
3.4	Scholarships
3.4.1	Domestic scholarship for foreigners
3.4.2	Foreign scholarship for domestic students
3.4.3	Total (No Distribution)
3.5	Other Transfer Expenses
3.6	Transfer Expenses (No Distribution)
4	Expense from transfer/payment recorded as allocation of International and Foreign Resources
5	Education Expenses for Research and Development
6	Total (No Distribution)

5. Main Findings

5.1 Flow of Funds, from Sources to Financing Agents

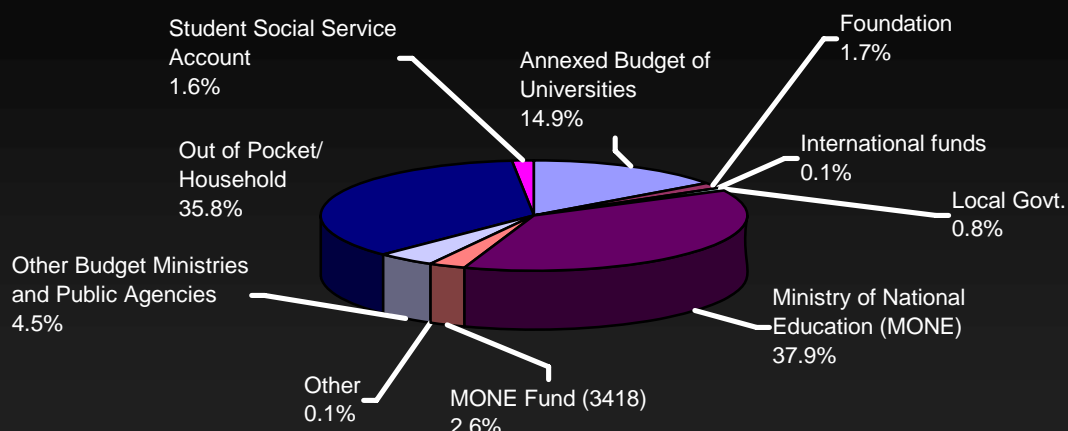
Turkey spent a total of 19,353 trillion TL (US\$12,735 million at the mid-year exchange rate) on education in 2002, equivalent to 6.97 percent of GDP.¹³ Of this, about 62.3 percent was financed from public sources and 35.3 percent by private sources. International resources accounted for 0.1 percent of total education expenditures, while 2.3 percent of expenditures could not be unequivocally accounted as public or private. In other words, public expenditures on education equaled 4.34 percent of GDP, with private and other expenditures on education accounting for 2.63 percent of GDP (Figure 5).



The Ministry of National Education (including spending through Fund 3418, which is collected from earmarked taxes by the central government) accounted for 40.5 percent of total spending on education. Universities accounted for 16.5 percent of total spending, while households accounted for 35.8 percent. Other budget ministries and public agencies were financing agents for 4.5 percent of the total expenditure on education (Figure 6).

¹³ The mid-year 2002 exchange rate was US\$1=1,519,668 TL; GDP in 2002 was 277,449 trillion TL.

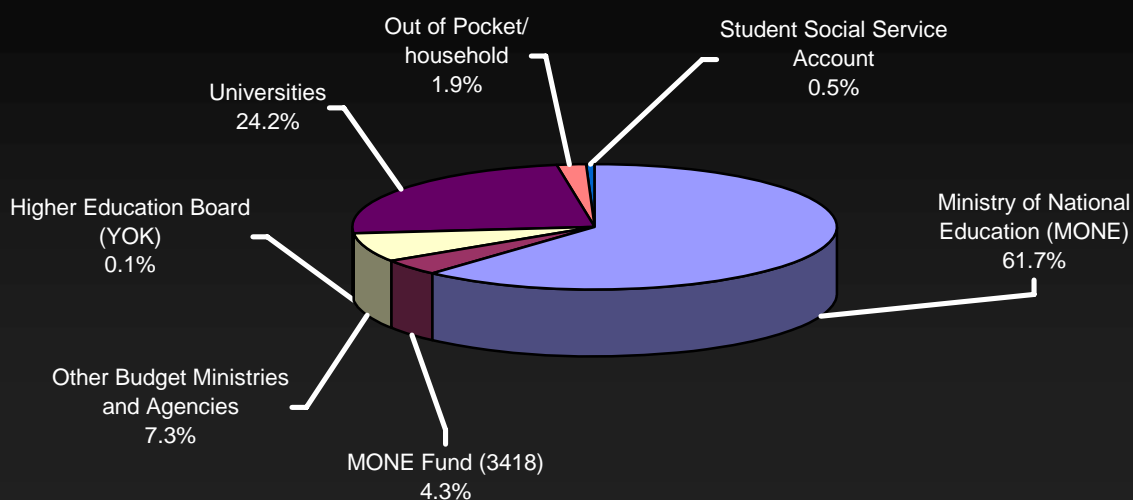
Figure 6: Education expenditures in Turkey in 2002, by Financing Agent (TL 19, 353 Trillion)



Public spending on education

Almost 66 percent of public spending on education went to the Ministry of National Education (MONE), which primarily finances education up to the secondary school level. Another 7 percent was allocated to other budget ministries and agencies. Universities, including the Higher Education Council, received almost 25 percent of public spending on education. Direct scholarships and other expenditures accounted for the remaining 2 percent of public expenditures (Figure 7).

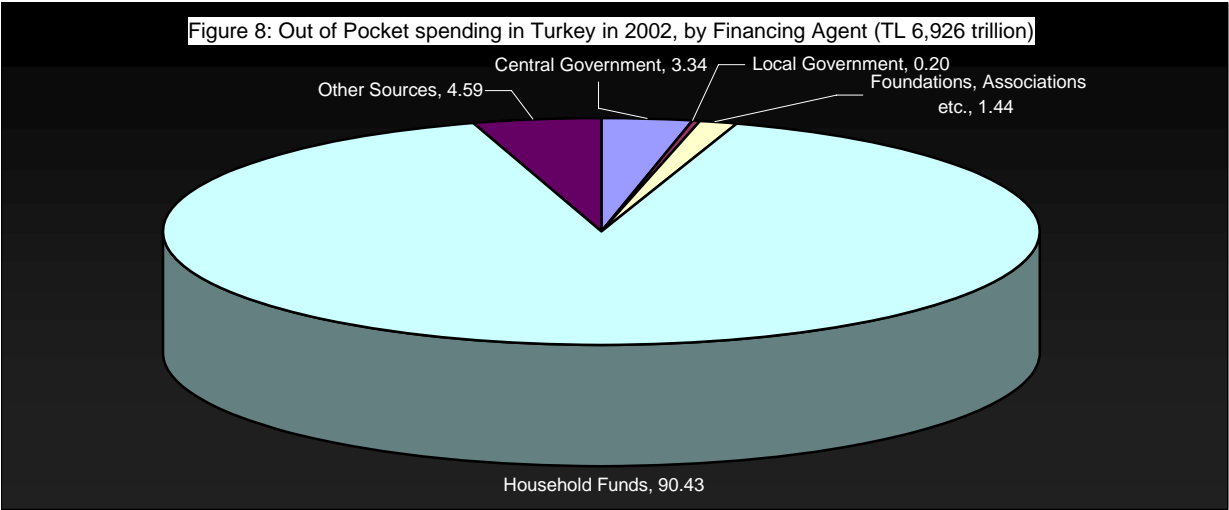
Figure 7: Central government spending in Turkey in 2002, by Financing Agent (TL 19,353 trillion)



Estimates of public expenditures on education as computed using NEA are much higher than estimates derived using the PEIR methodology, which concluded that public expenditures constituted 3.93 percent of GDP in 2002. Estimates of private expenditures using the NEA methodology are significantly higher than was previously thought.

Private spending on education

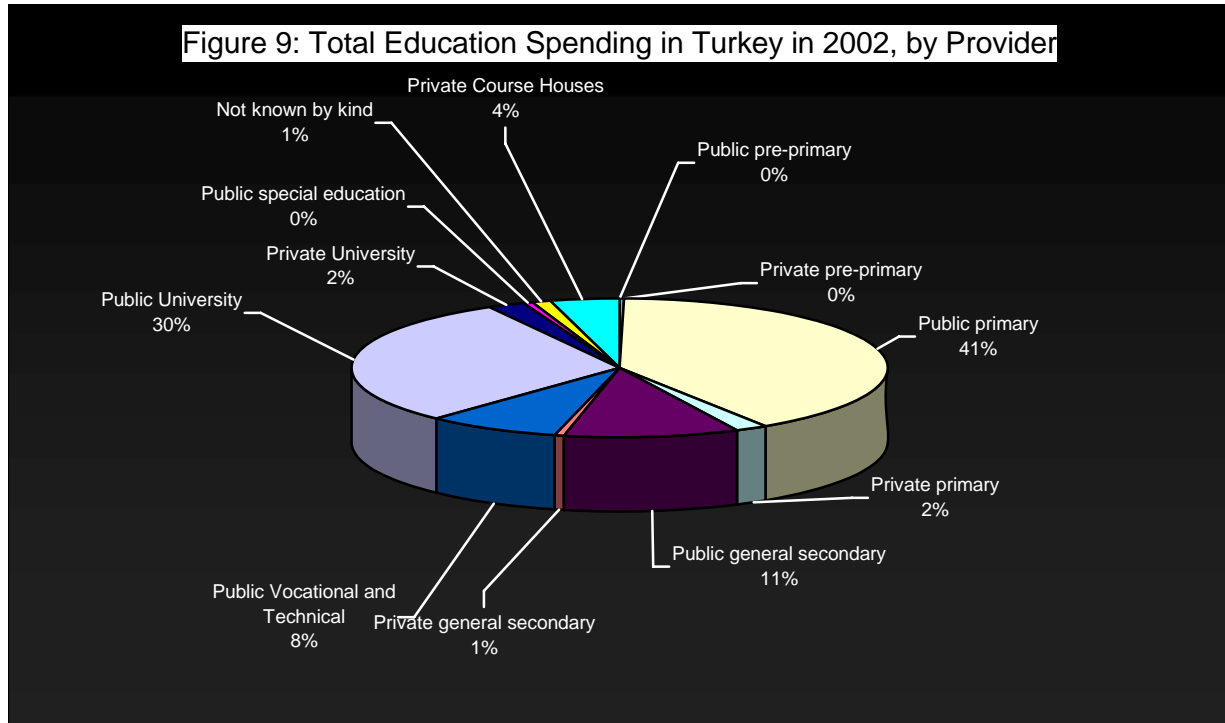
Households spent 6,926 trillion TL as financing agents, of which 90.4 percent came from household’s own funds, 3.5 percent came from central government revenues in the form of scholarships, 1.4 percent came from private foundations, and 0.2 percent from municipalities in the form of scholarships. The remaining amount came from “other” sources that could not be identified by type (Figure 8).



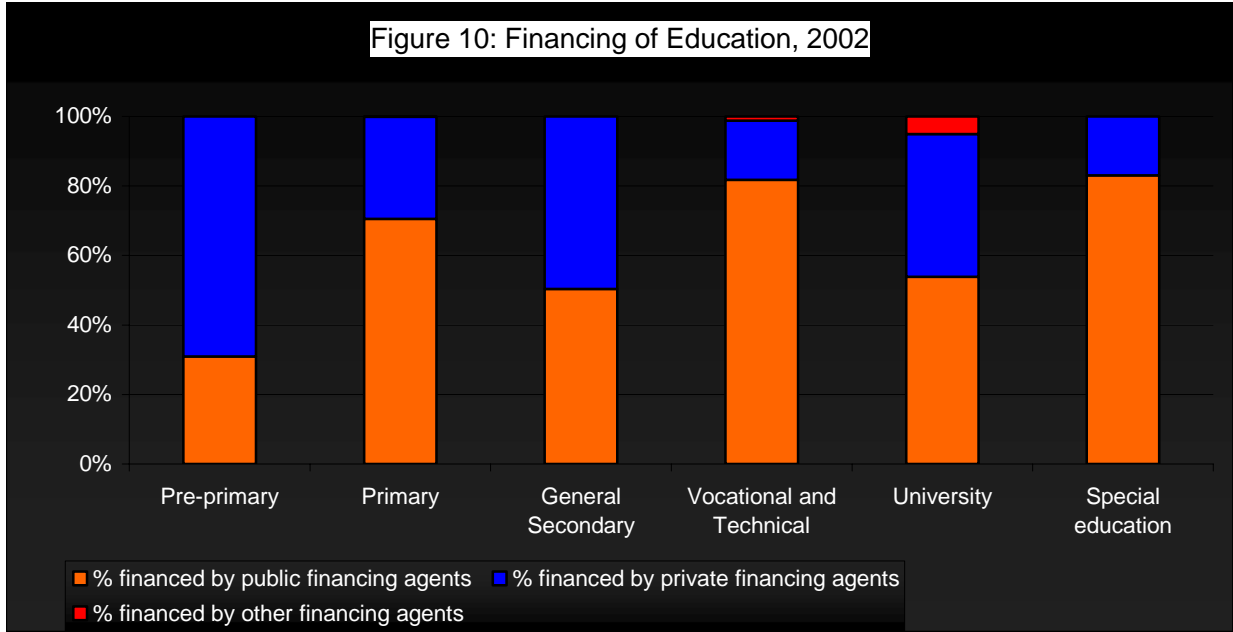
5.2 Flow of Funds, from Financing Agents to Providers

Of the total spending on education, 89.5 percent, or 17,320 trillion TL, went to public schools and universities (including public providers of informal education), and the balance 10.5 percent, or 2,033 trillion TL went to private schools and (foundation) universities. The largest share of education spending went to primary education schools, which received 40.3 percent of the total spending on education. Of the amount spent on primary schools, 95 percent went to public primary schools, and the rest went to private primary schools. General secondary schools and vocational/technical schools accounted for approximately 10 percent and 8 percent of spending on education, respectively. Public universities accounted for 30 percent of the total spending, while foundation universities and private course houses providing higher education received only 2.3 percent of total education spending.

Private course houses, or *dershanes*, at various levels of education (from primary to university level) accounted for a sizeable 813 trillion TL, equivalent to 4.2 percent of total spending on education. This includes *dershanes* providing education to students preparing for university exams, as well as private tuitions to students enrolled in primary or secondary education.

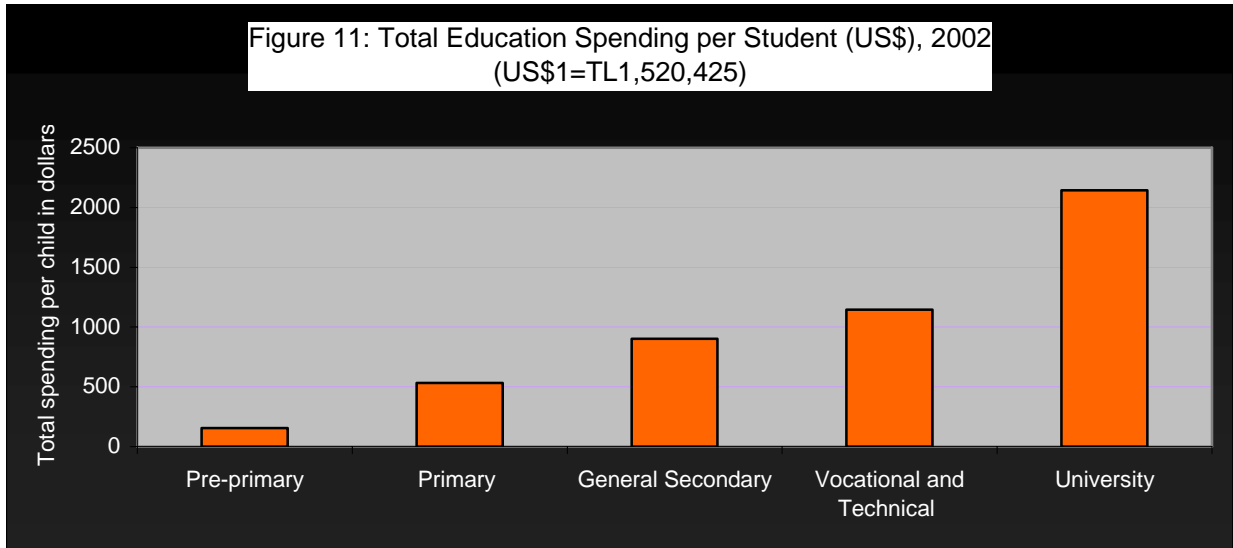


Public financing agents contributed to almost all of the spending at vocational/technical schools and special needs schools (more than 90 percent of the spending at each level), but accounted for only three-fourths of spending at public primary schools. Private financing agents contributed to about one-fourth the spending at public primary schools, but a much greater share of spending at both pre-primary and general secondary public schools (45.2 percent of total spending at pre-primary public schools and 46.2 percent at general secondary public schools). Vocational/technical schools are largely funded by public sources, with private sources financing only one-sixth of the total spending at this level. Private financing agents accounted for 36 percent of spending at public universities (2,121 trillion TL) and all of the spending at private universities (447 trillion TL) (Figures 9 and 10).



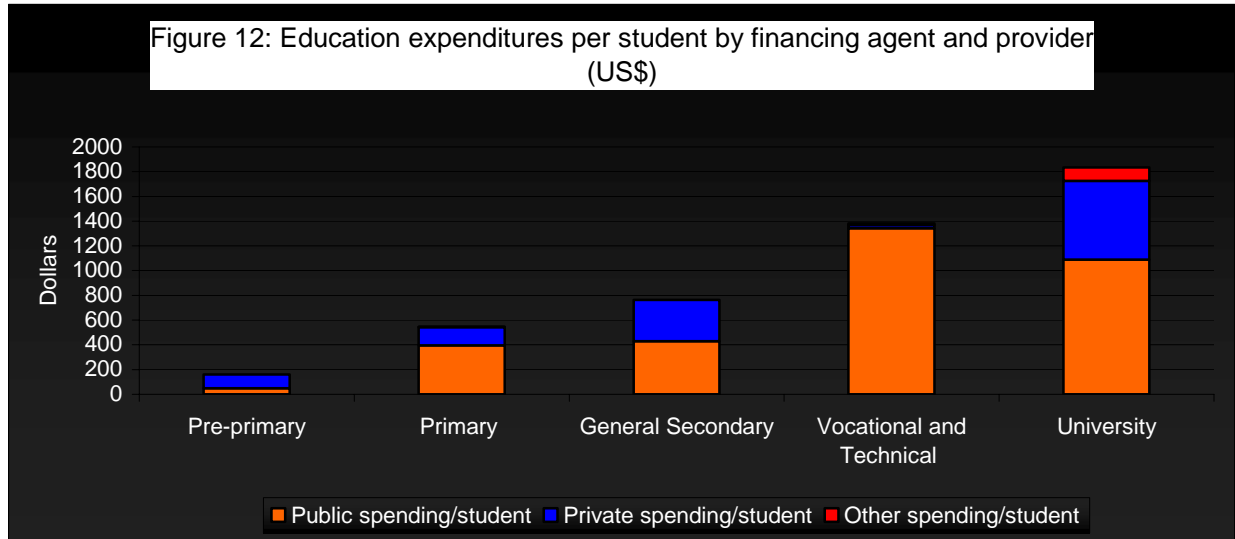
Per-student expenditure

Education expenditures per student vary by the level of education. The average annual expenditure per student at primary school was 810 million TL (US\$ 533), while it was four times higher at 3,260 million TL (US\$ 2,145) for a University student.¹⁴ The average expenditure on students attending general secondary school and vocational and technical schools was US\$ 902 and US\$ 1144, respectively (Figure 11).

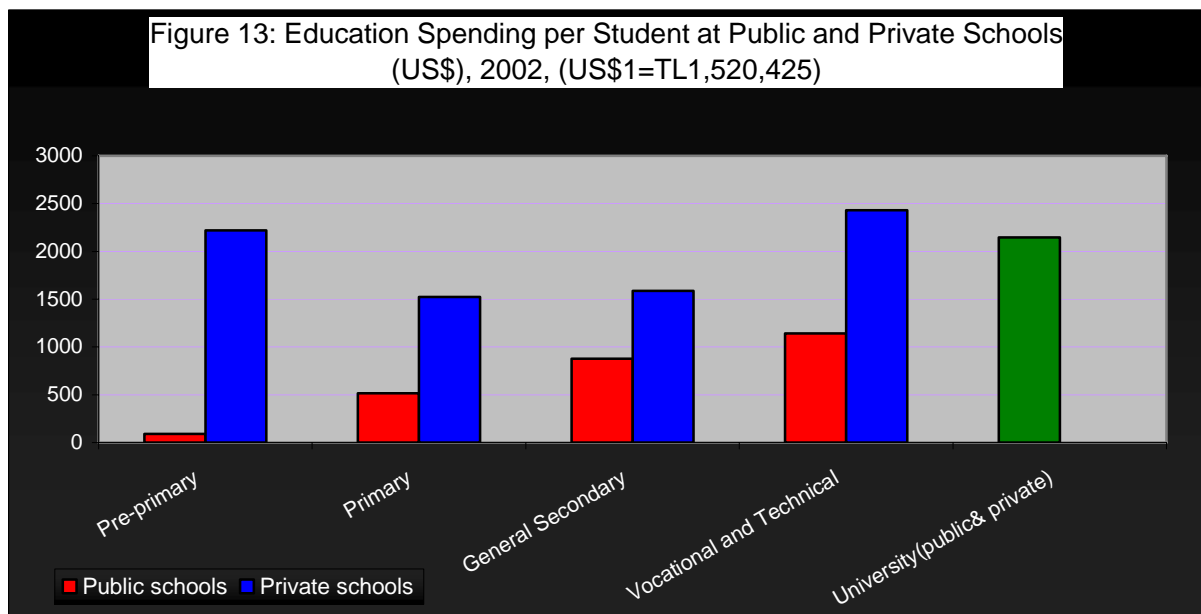


¹⁴ The enrolment numbers are taken from the SIS published News Bulletin, Issue 13, on “Spending on education in 2002”, published online on Oct 2004.

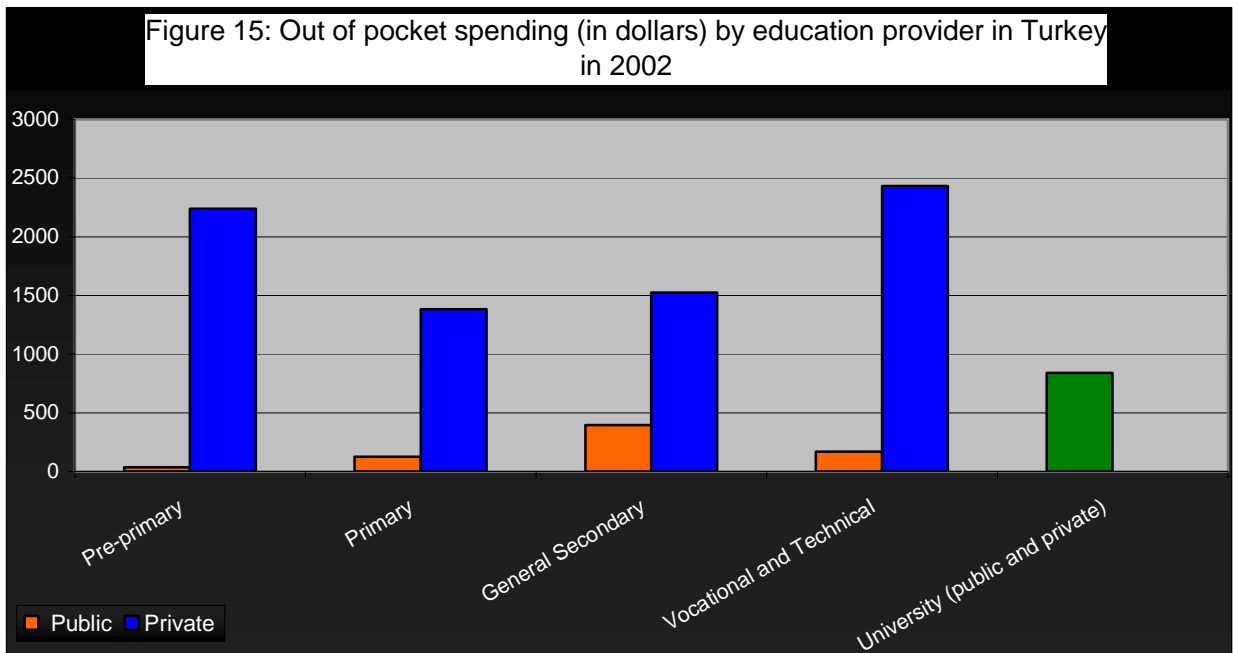
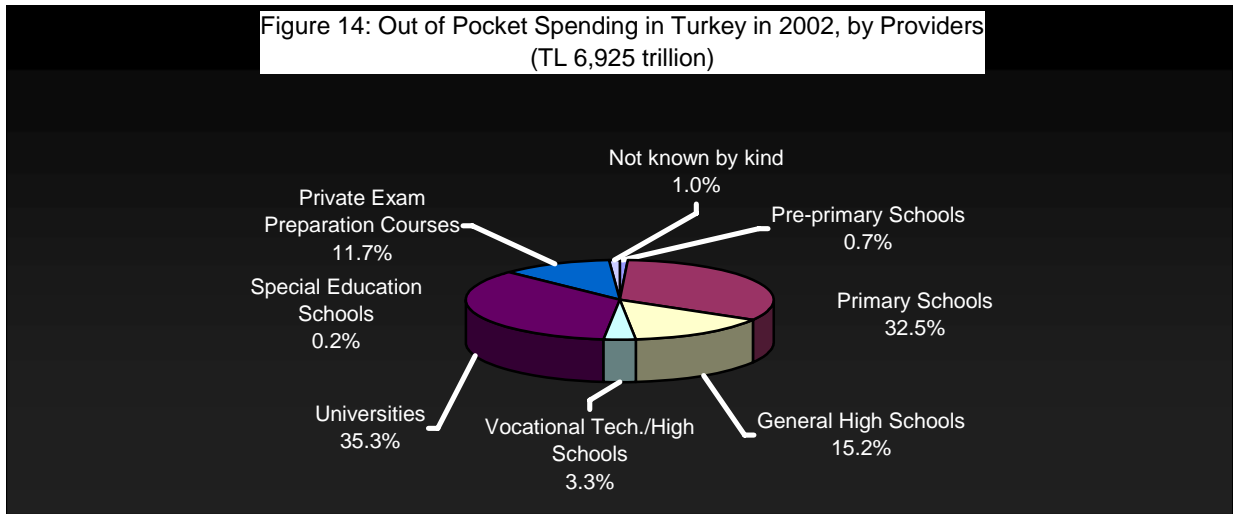
Public spending on education per student in Turkey is regressive, with the government spending only US\$ 395 at the primary level and US\$ 1,088 at the university level (Figure 12). Surprisingly, it spends the highest amount per student US\$ 1,343 at vocational and technical schools.



The differences in educational expenditures at public and private schools are striking. The per-student spending at public primary schools (US\$ 516) is almost one-third of the per-student spending at private primary schools (US\$ 1,524). Similarly, the per-student expenditure at public general secondary schools (US\$ 876) is almost half the spending at private schools (US\$ 1,587) offering the same education (Figure 13).

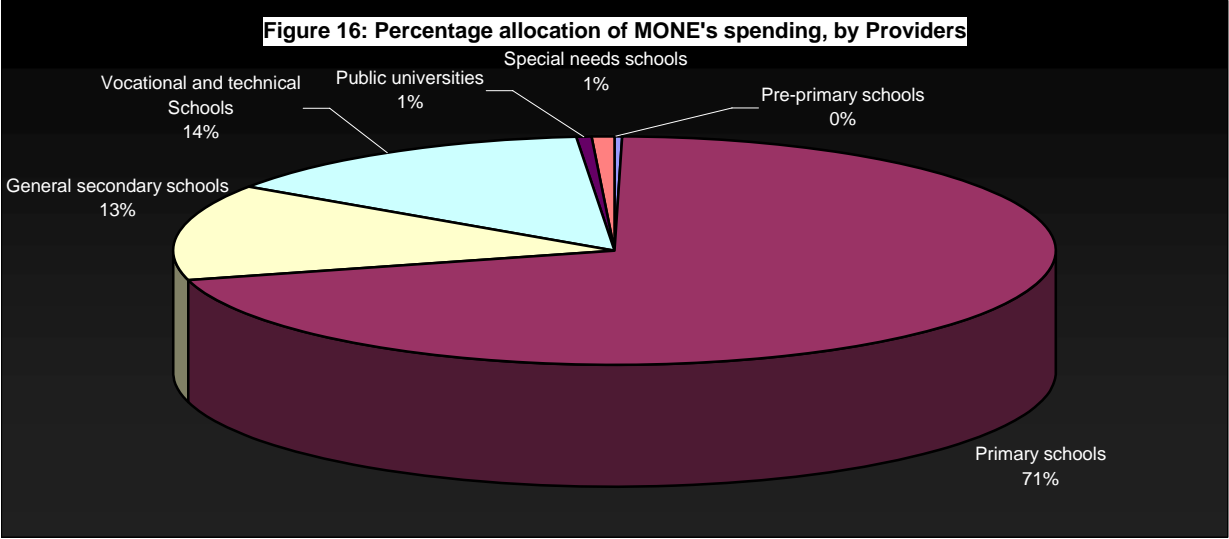


More than one out of every four lira spent from out-of-pocket went to public primary schools; and almost one out of every three lira spent on education went to public universities (Figures 14 and 15). Public general secondary schools received 13 percent of the money spent from out-of-pocket. Overall, public schools received three-fourths of the money from out-of pocket, while private schools received about 25 percent of the money. *Dershaness* received more than 10% of the total out-of-pocket spending on education.



Of the 7,842 trillion TL that was spent by MONE in 2002, 5,528 trillion TL (70.5 percent) went

to primary schools (Figure 16). Vocational/technical schools and general secondary schools each received around 14 percent of MONE funds. A small amount of MONE funds also went to higher education (42 trillion TL).

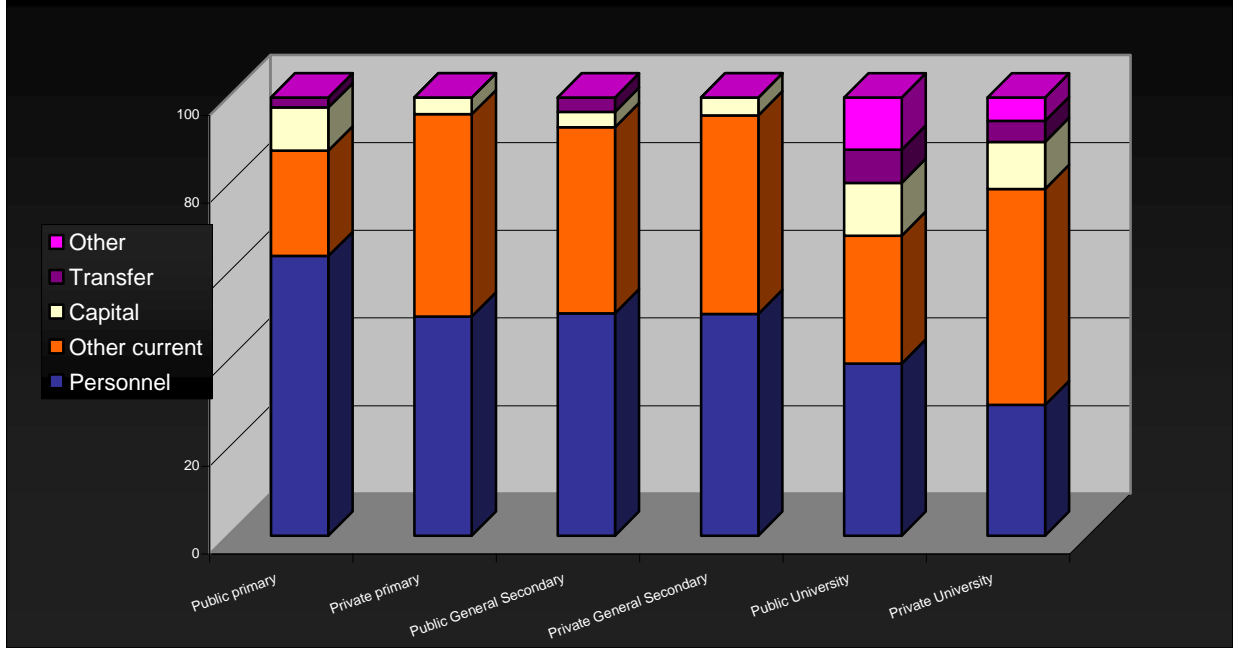


5.3 Flow of Funds, from Provider to Inputs

The flow of funds from providers to inputs highlights the allocation of expenditures by different providers to types of inputs, such as personnel, supplies etc. Figure 17 shows spending by providers across broad categories of expenditures, including personnel, other current, capital, transfers and other expenditures, by type of provider of education.

Public schools, regardless of the level of education provided, spent a higher share of their expenditure on personnel expenses relative to private schools providing the same level of education. The only exception being general secondary high schools where public and private schools both spent half their total spending on personnel expenditures. At the same time, public schools also allocated a larger share of their expenditures on investment spending relative to corresponding private schools. Again, the only exception is general secondary level of education where both public and private schools spent an equal proportion of their money (4 percent) on capital items. Public universities spent a higher share of their total expenditures on personnel expenses (40 percent) compared to foundation universities that spent only 30 percent on personnel expenses. Though, both providers had similar shares of investment expenses, at about 12 percent. Salaries and other personnel expenses accounted for 64 percent of total expenditures at public primary schools, but only for 39 percent of the total expenditures at university level.

Figure 17: Distribution of Spending on Educational Inputs in Turkey in 2002, (TL 19,353 trillion)



Investment spending amounted to 781 trillion TL, or 10 percent of total spending, at public primary schools; 107 trillion TL, or 7 percent of spending at public vocational and technical schools; and only 4 percent of spending at public general secondary schools (82 trillion TL). About 54 percent of MONE's total investment spending (949 trillion TL) came through MONE Fund 3418, which – as reported earlier – was financed through earmarked taxes.

6. Concluding Remarks

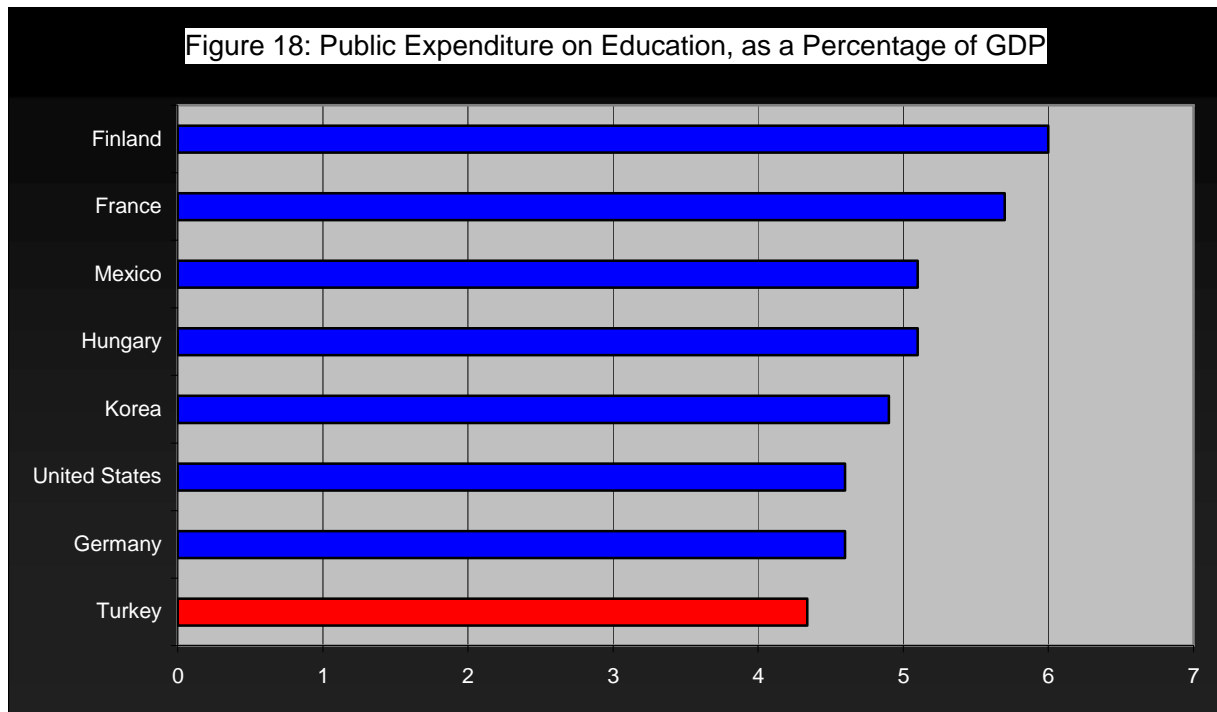
Following the standard National Health Accounts methodology, this analysis of flow of funds in the education sector has produced four basic matrices:

- Flow of funds from sources of financing to categories of financing agents intermediating further flows of funding;
- Flow of funds from financing agents to categories of providers of educational services;
- Flow of funds from educational service providers and users to level of education providers (basic, secondary, tertiary);
- Flow of funds from educational service providers and users to type of expenditure or categories of inputs (e.g., staff salaries, supplies, books, capital spending, utilities, etc.).

In sum, the main findings from this analysis of flow of funds are:

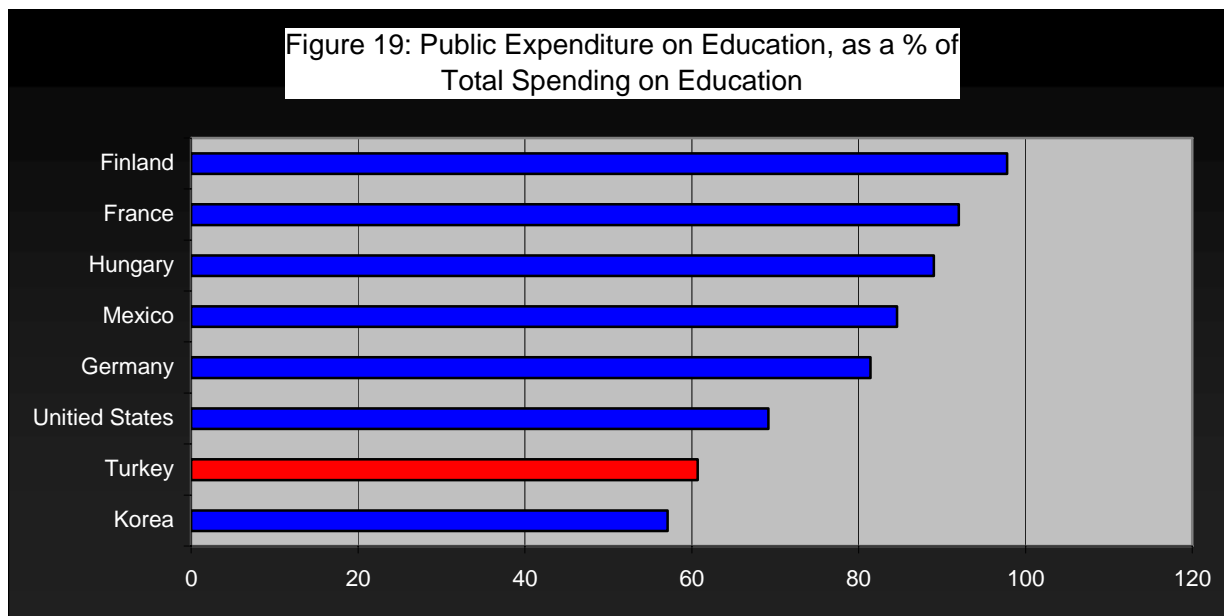
- Turkey spends 7% of GDP on education, higher than most OECD countries
- Private sources account for 36% of total spending on education, much higher than most OECD countries
- Most of private (out-of-pocket) spending takes place in public schools
 - more than one-fourth of it is in public primary schools
 - about one-third of it is in public universities
- More than 90% of total (public and private) spending on education takes place in public schools and universities. Of the total spending on education, 89.5 percent, or 17,320 trillion TL, went to public schools and universities (including public providers of informal education), while the rest 10.5 percent, or 2,033 trillion TL went to private schools and (foundation) universities.
- Of the total education spending:
 - 43% takes place at primary schools,
 - 33% at universities,
 - 11% at general secondary schools, and
 - 8% at vocational and technical schools
- Less than 1% of education spending is on pre-primary and special needs schools. The largest share of education spending went to primary education schools, which received 40.3 percent of the total spending on education. Of the amount spent on primary schools, 95 percent went to public primary schools, and the rest went to private primary schools. General secondary schools and vocational/technical schools accounted for approximately 10 percent and 8 percent of spending on education, respectively. Public universities accounted for 30 percent of the total spending, while foundation universities and *dershanes* (private course houses) providing higher education received only 2.3 percent of total education spending.
- *Dershanes* are entirely financed by private expenditures, and 10% of private (out-of-pocket) spending is on *Dershanes*. The *Dershanes*, at various levels of education (from primary to university level), accounted for a sizeable 813 trillion TL, equivalent to 4.2 percent of total spending on education. This includes *dershanes* providing education to students preparing for university exams, and private tuitions to students enrolled in primary or secondary education.

- Most of private (out-of-pocket) spending is on public schools. More than one out of every four lira spent from out-of-pocket went to public primary schools; and almost one out of every three lira spent on education went to public universities. Public general secondary schools received 13 percent of the money spent from out-of-pocket. Overall, public schools received three-fourths of the money from out-of-pocket, while private schools received about 25 percent of the money. *Dershane*s received the remaining 10% of the total out-of-pocket spending on education.
- Public schools, regardless of the level of education provided, spent a higher share of their expenditure on personnel expenses relative to private schools providing the same level of education. While public primary schools spent 64% of their money on personnel salaries, private primary schools only spent half their budget on personnel expenses. This difference is even greater at vocational and technical schools where public schools spent 80% of their budget on salaries, as against the 59% reported by private schools. The only exception was secondary high schools where public and private schools both spent half their total spending on personnel expenditures.



Estimates of public expenditures on education as computed using the National Education Accounts methodology are much higher than estimates reported in earlier studies which concluded that public expenditures constituted 3.93 percent of GDP in 2002 (PEIR, 2002). Estimates of private expenditures using the NEA methodology are also significantly higher than was previously thought. In fact, total education spending in Turkey in 2002 was higher than most other OECD countries at 6.97 percent of GDP, not much lower than the United States, which spends 7.3 percent of its GDP on education. In comparison, total education spending as a percentage of GDP is much lower in countries such as Spain (4.9% of GDP), Germany (5.3%

of GDP), and UK (5.5% of GDP). However, public spending on education (as a percentage of GDP) in Turkey ranks much lower than in other OECD countries, with countries such as Germany, United States, France and Finland having higher shares of public spending on education as a percentage of GDP (Figures 18 and 19).



Unlike most other OECD countries, private expenditures on education are much higher in Turkey as a share of total education expenditures, financing almost 36 percent. Amongst the countries noted, only Korea had a similarly high share of private financing of education expenditures. In comparison, private sources of funding account for about 18 percent of total spending in United States, 13 percent in the UK, 6.8 percent in Germany and 6.2 percent in France.

Converting expenditures to purchasing power parity (PPP) US dollar amounts shows that per-student spending in Turkey of about PPP US\$ 2,000 is amongst the lowest compared to other OECD countries. UK, with per student expenditures of PPP US\$ 5,972 spends almost three times as much as Turkey, while United States (per student expenditure PPP US\$ 10,871) spends more than 5 times as much as Turkey. The average expenditure per student in Turkey is lower than most other OECD countries across all levels of education, with the disparity in spending widening at lower levels of education. While UK spends 3.5 times more than Turkey at the primary school level, it spends 2.5 times at the secondary education level, and only 2 times more than Turkey at the university level (Table 11).

Table 11: Average education expenditure per student (2001) in PPP US\$, by provider

	Pre-primary education	Primary education	All secondary education	All tertiary education	Primary to tertiary education
United States ²	8522	7560	8779	22234	10871
France	4323	4777	8107	8837	7124
Finland	3640	4708	6537	10981	6751
Germany	4956	4237	6620	10504	6696
United Kingdom	7595	4415	5933	10753	5972
Spain	3608	4168	5442	7455	5385
Czech Republic	2449	1871	3448	5555	3169
Malaysia ¹	611	1562	2600	11303	2679
Poland ¹	2220	2322	m	3579	2573
Slovak Republic	1740	1252	1874	5285	2031
Turkey ⁴	377	1293	2399	5206	1999
Mexico	1410	1357	1915	4341	1793
Brazil ^{1,3}	1044	832	864	m	m
India	57	405	650	2522	m

Note: 1. Public institutions only 2. Public and independent private institutions only 3. Year of reference 20004. Year of reference 2002. PPP for Turkey (WDI Indicators) = 626,355 TL per PPP \$

As the above analysis shows, the National Education Accounts are a powerful policy tool for tracking flow of funds from sources to all end-uses. Besides the matrices generated in this round, this methodology can also be used to disaggregate the flow of funds into other sub-categories of interest, such as beneficiary groups defined according to (i) socioeconomic status, location, age and gender; (ii) specific focus areas of education, such as literacy, and (iii) specific types of inputs such as teacher training, textbooks, uniforms, transportation. By integrating sources and uses of financing into the overall budgetary process, NEA also makes it possible to evaluate the coherence between capital and recurrent budgets. By improving the comprehensiveness of data available for education policymaking, NEA facilitates more evidence-based policymaking in the education and training sector. The estimation of expenditures and financing flows serves as an indicator of the “financial health” of the education and training system, and is therefore a strategic planning tool. Finally, the data generated through the NEA provide a means for comparisons with other countries, and – by relating to outcomes within the country – will enable an analysis of the sustainability of the levels of expenditure or the need for greater expenditure in certain areas.

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