



The Israeli Satellite Account for Education and Training

Expert Group on National Accounts
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It's All in the Numbers!

Content

- ❖ Background
- ❖ Main objectives of SAET
- ❖ Definition and classification
 - education and training purposes
 - production and financing units
- ❖ Data sources and compilation methods
- ❖ Overview of the main results of SAET
 - education and training output
 - education and training expenditure
 - financing
 - cost structure
- ❖ Challenges and future work

Background

- ❑ The National Education Expenditure Account has been compiled in Israel over many years:
 - includes data since 1962
 - prepared according to the methodological approaches outlined in the SNA
 - and based on UOE data collection on formal education framework.
- ❑ This account
 - ❖ includes data on expenditure by levels of education according to ISCED 2011
 - ❖ provides detailed information by operating and financing sectors.

SAET Israel

- ❑ The new Israeli SAET was compiled as part of the work of the UNECE Task Force on the development the Compilation Guide on Satellite Account for Education and Training (UN,2020).
- ❑ In this pilot we created a new process in order to compile data on training, ultimately presenting a comprehensive Israeli satellite account for education and training.



Main objectives of SAET

- ❑ The main objectives of SAET:
 - provide more detailed data on the expenditures on education and training, and the financing of these expenditures.
 - measuring the asset of human capital using the cost-based approach according to the Guide on Measuring Human Capital (UN,2016).



Definition and classification (1)

- ❑ The SAET framework is built on the definitions and principles in 2008 SNA, but also takes into account existing international work in the field of education.
- ❑ The SAET covers the activities of resident units:
 - ✓ the education expenses for students studying abroad are considered as imports
 - ✓ the expenditures in the domestic economy of students who are members of non-resident households are treated as exports.

Definition and classification (2)

- ❑ The goal of the SAET is to compile the total expenditure on education and training consistent with the framework of the national accounts.
- ❑ The scope of education and training activities in the SAET covers public and private expenditure for:
 - formal education and vocational training
 - non-formal education and training in various fields
 - in-house training by employers
 - some associated goods and services directly related to the delivery of education and training
 - gross fixed capital formation in the education industry.

Education and training products by purposes (1)

- ❑ EP0 - Pre-primary education (ISCED 0)
 - ❖ includes only the education part in kindergartens and day care centers.
- ❑ EP1 - Primary education (ISCED 1)
 - ❖ primary education schools : state- secular, state- religious, ultra-orthodox and special education.
- ❑ EP2 - Secondary education (ISCED 2-4)
 - ❖ general secondary schools, vocational, nautical and agricultural schools, Jewish religious schools and yeshivas.
- ❑ EP3 - Higher education (ISCED 5-8)
 - ❖ universities and academic colleges
 - ❖ non-academic tertiary education institutions: technological colleges, regional colleges, kindergarten and school teachers training colleges etc.

Education and training products by purposes (2)

- ❑ EP4 - Cultural, sports and recreation education
 - ❖ instructional courses in various fields such as music, arts, and sports provided by market and non-market producers.
- ❑ EP5 - Other education and vocational training
 - ❖ vocational training for unemployed persons, for new immigrants to Israel and for persons with disabilities that are funded by general government sector
 - ❖ training courses for employees paid for by the employer
 - ❖ vocational training courses and driving lessons purchased by households.
- ❑ EP6 - In-house training
 - ❖ vocational training for employees, which is provided by the employing enterprise, both market and non-market.

Producers and financing units

- ❑ Production and financing units are classified according to the institutional sectors in the NA of Israel:
 - ❖ The general governmental sector:
 - ✓ Central government: Ministries and national institutions (including the Jewish Agency)
 - ✓ Local government: Municipalities, local and regional councils
 - ✓ Governmental non-profit institutions: Non-profit institutions (NPIs) that are financed primarily by the government and the Jewish Agency.
 - ❖ Households
 - ❖ NPISH
 - ❖ Corporations (non-financial and financial)
 - ❖ The rest of the world.

Data sources

❑ Central government:

- *administrative data of the Ministry of Finance on the expenditure of the state budget.*

❑ Local government:

- *survey based on a statistical sample of local authorities.*

❑ Governmental NPIs and NPISH:

- *survey based on a statistical representative sample of NPIs.*

❑ Corporations:

- *survey based on a statistical representative sample of non-financial corporations*
- *the financial corporation sector data is extracted from financial annual reports.*

❑ Households:

- *household expenditure survey offers data on household's purchases from the corporation sector,*
- *purchases of households from the rest of the sectors are compiled based on these sectors' data on sales to households.*

Estimating Training

□ Measuring the aggregate expenditure on training of employees in each sector.

These include:

❖ In-house training by employers

✓ courses

✓ internship

❖ outsourcing of training

✓ training courses purchased on the market

❖ financing individual's external training

❖ professional literature and etc.



Overview of the main results of SAET

- ❑ The pilot of the Israeli SAET was compiled on the basis of the collection, processing and analysis of the data on the education and training for the year 2015.
- ❑ The total expenditure on education and training:
 - ✓ amounted 104 billion new shekel in current prices
 - ✓ and was 8.9 per cent of Israel's gross domestic product (GDP).
- ❑ Framework of the SAET consist:
 - ❖ main tables based on monetary data available in the national accounts
 - ❖ supplementary tables with non-monetary information.

Main tables of SAET

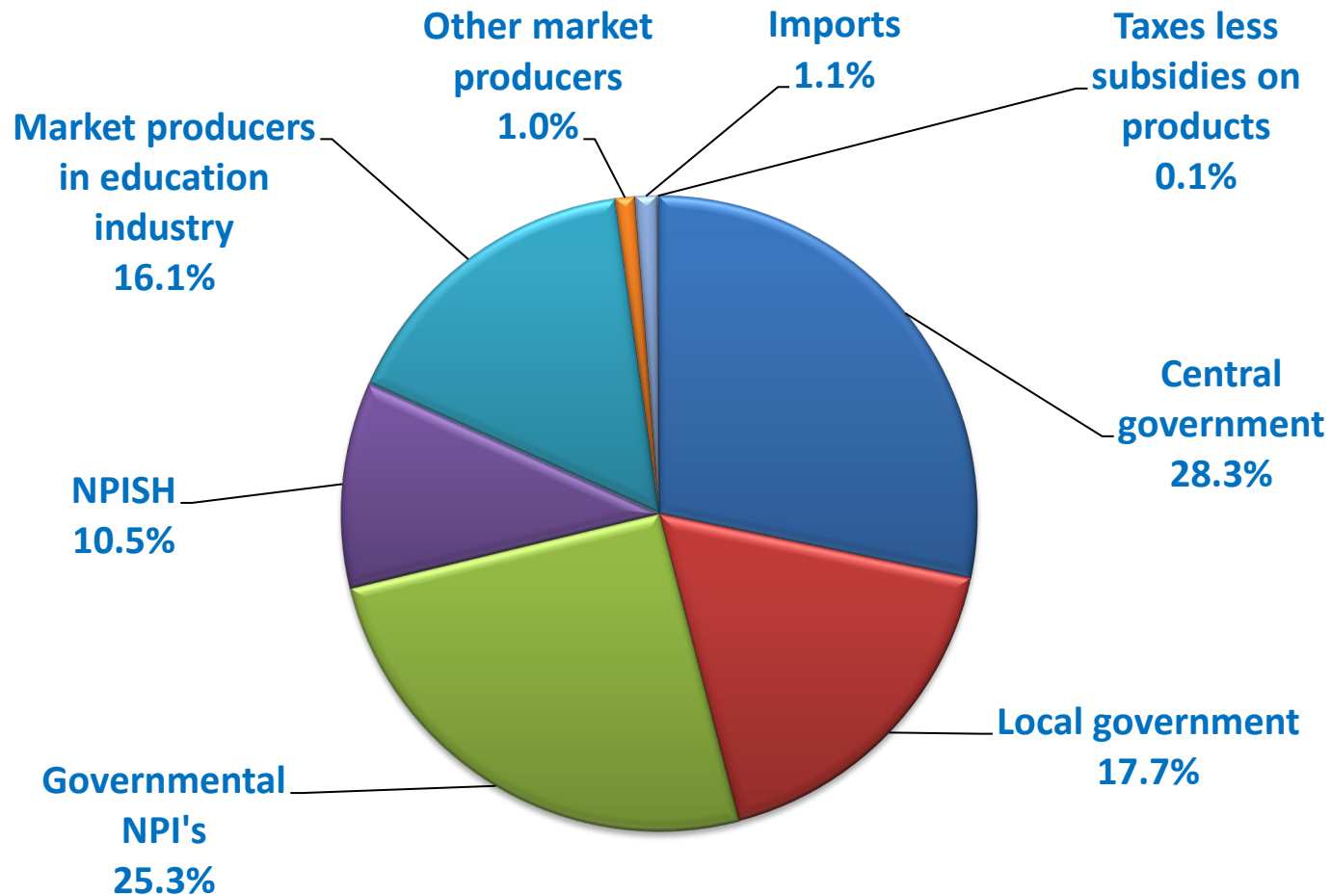
- ❑ The SAET provides a simplified version of the SUTs for the EPs (education and training products by purposes):
 - Education and training output, by provider and education and training purpose
 - Education and training expenditure, by consumer and education and training purpose
- ❑ Financing, by sector and education and training purpose
- ❑ Cost structure, by education and training purpose.

Education and training output

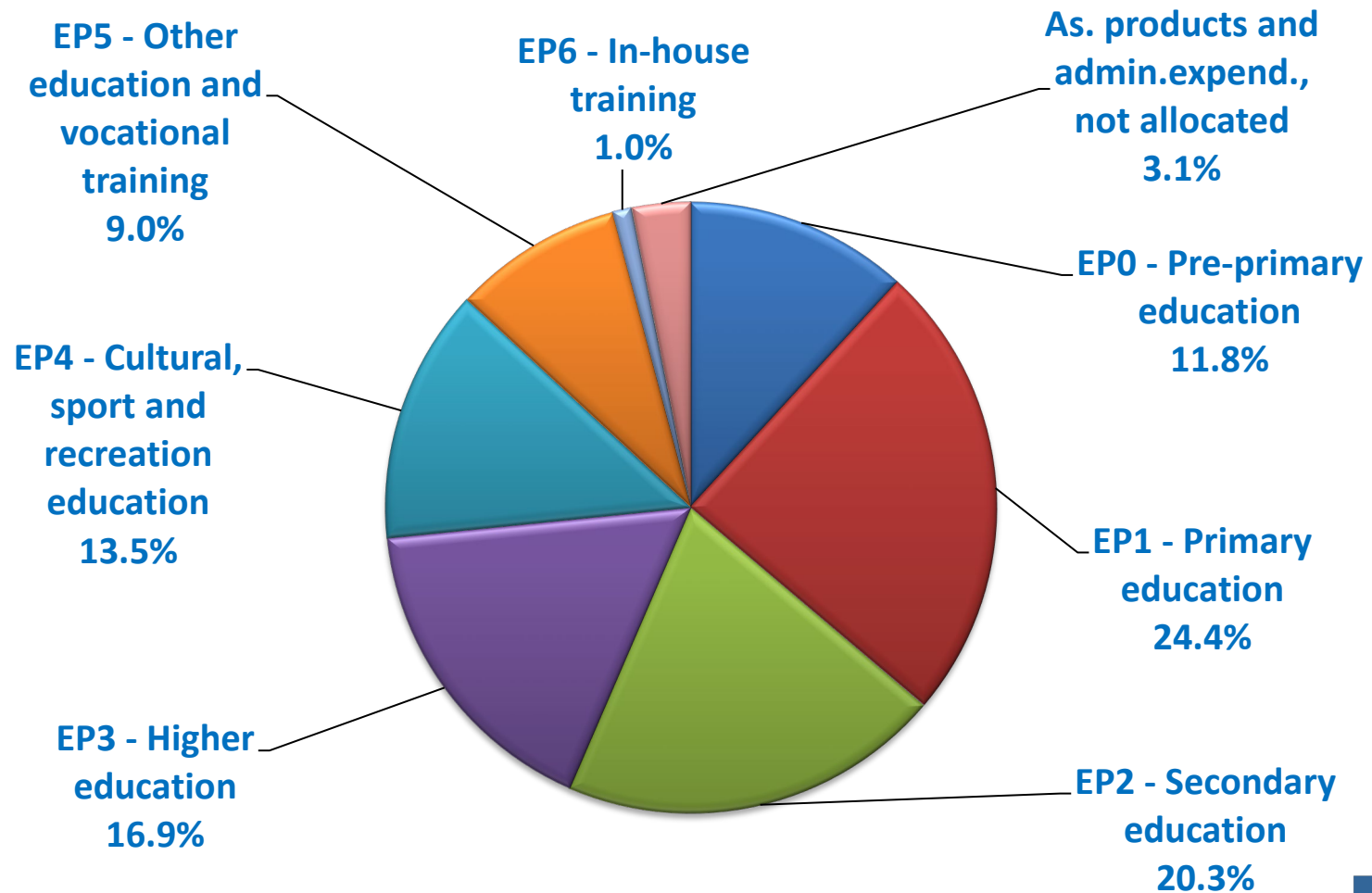
Current prices, 2015.
Israeli New Shekel millions.

		Supply								
		Central government	Local government	Governmental NPI's	NPISH	Market producers in education industry	Other market producers	Imports	Taxes less subsidies on products	Total
Education and training purpose	EP0 - Pre-primary education	3,876	4,244	877	2,033	1,258				12,288
	EP1 - Primary education	15,220	6,753	710	514	2,100				25,296
	EP2 - Secondary education	6,973	4,781	6,306	1,463	1,540				21,063
	EP3 - Higher education	184	48	14,042	1,989	70		1,149		17,483
	EP4 - Cultural, sport and recreation education	147	1,548	2,708	2,596	6,952			49	14,001
	EP5 - Other education and vocational training	890	23	1,484	2,069	4,787			43	9,296
	EP6 - In-house training	511	99	70	241		160			1,082
	Associated products and administrative expenditures, not allocated	1,507	832				839		35	3,214
Total output = Total current expenditure		29,309	18,329	26,197	10,904	16,707	999	1,149	127	103,722
Research and development (own account and production for sales)				5,877	495					6,373
Capital formation (Excl. R&D)							6,161			6,161
Total gross fixed capital formation				5,877	495		6,161			12,534

Education and training output by provider



Education and training output by purpose

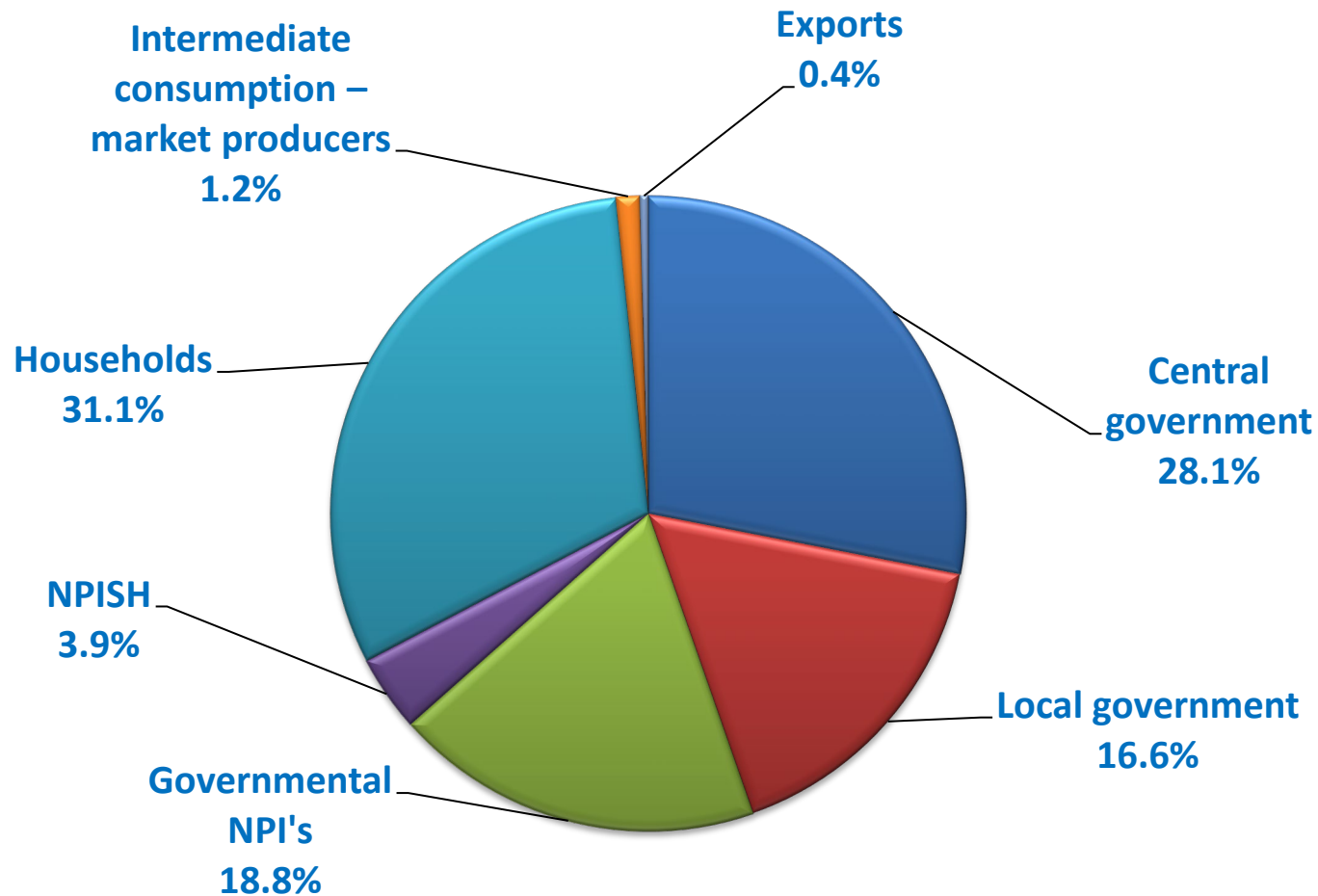


Education and training expenditure

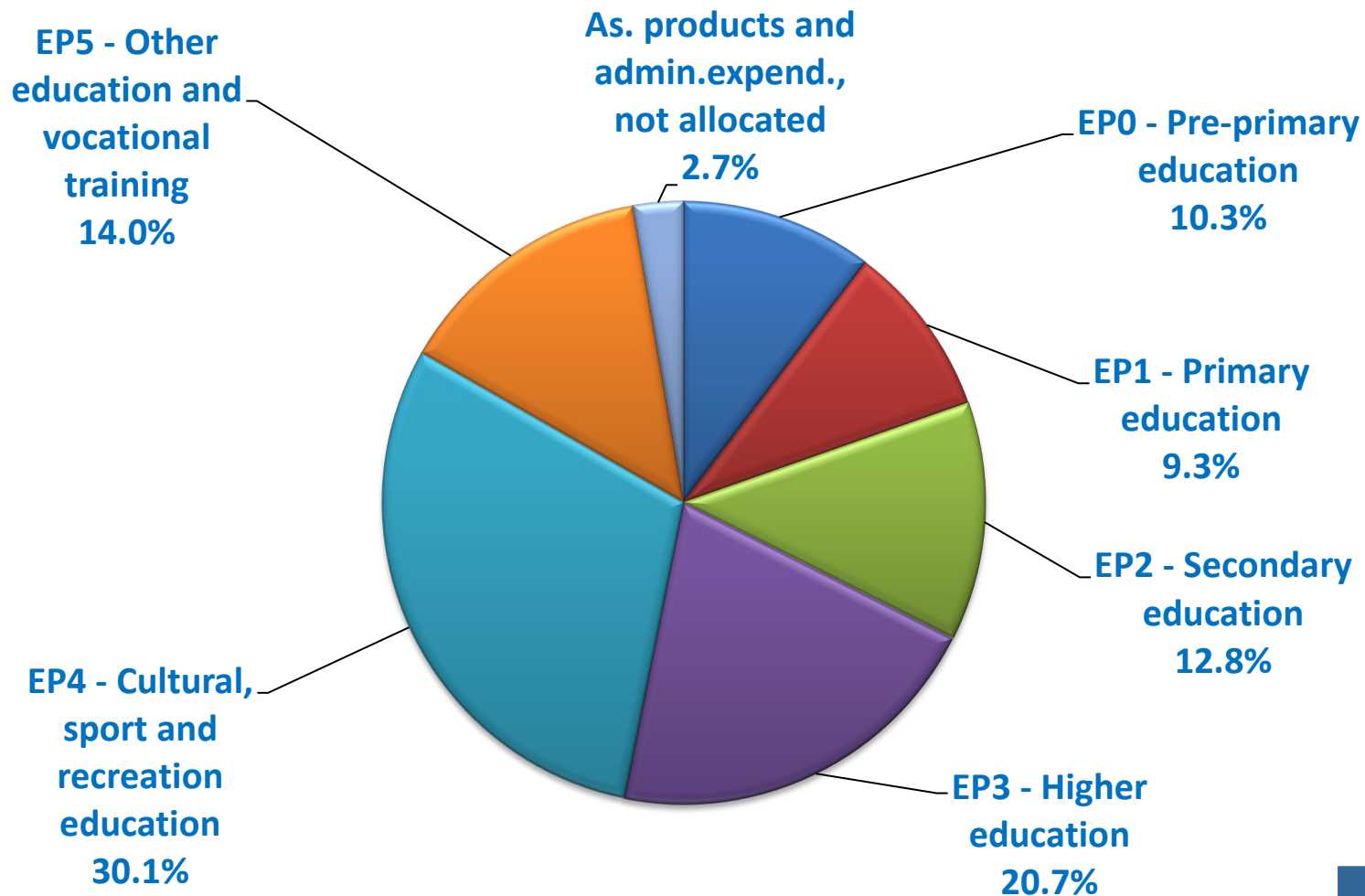
Current prices, 2015.
Israeli New Shekel millions.

		Use							Exports	Total
		Final consumption expenditures					Intermediate consumption – market producers			
		Central government	Local government	Governmental NPI's	NPISH	Households				
Education and training purpose	EP0 - Pre-primary education	3,876	3,777	748	554	3,333			12,288	
	EP1 - Primary education	15,157	6,440	502	197	3,001			25,296	
	EP2 - Secondary education	6,899	4,608	5,362	53	4,141			21,063	
	EP3 - Higher education	184	47	9,777	400	6,690		386	17,483	
	EP4 - Cultural, sport and recreation education	143	1,372	1,587	1,120	9,702	77		14,001	
	EP5 - Other education and vocational training	878	15	1,439	1,470	4,525	968		9,296	
	EP6 - In-house training	511	99	70	241		160		1,082	
	Associated products and administrative expenditures, not allocated	1,507	832			874			3,214	
Total output (intermediate and final consumption) = Total current expenditure		29,156	17,191	19,485	4,033	32,266	1,205	386	103,722	
Research and development				5,877	495				6,373	
Capital formation (Excl. R&D)		43	4,221	1,416	446	35			6,161	
Total gross fixed capital formation		43	4,221	7,293	941	35			12,534	

Education and training expenditure by purchaser



Households expenditure by education and training purpose



Financing education and training (1)

Current prices, 2015.
Israeli New Shekel millions.

		Education and training purposes								Total
		Formal education				Non-formal education			Associated products and administrative expenditures, not allocated	
		EP0 Pre-primary education	EP1 Primary education	EP2 Secondary education	EP3 Higher education	EP4 Cultural, sports and recreation	EP5 Other educ. and voc. train	EP6 In-house training		
Resources										
Central government	Final consumption expenditure of central government	3,876	15,157	6,899	184	143	878	511	1,507	29,156
	Plus - transfers/subsidies to other sectors	4,524	5,630	12,374	10,211	116	162			33,016
	Less - transfers/subsidies from other sectors	-1,255	-185	-658						-2,097
	Central government financing	7,145	20,602	18,616	10,395	259	1,040	511	1,507	60,075
Local government	Final consumption expenditure of local government	3,777	6,440	4,608	47	1,372	15	99	832	17,191
	Plus - transfers/subsidies to other sectors	1,517	374	854	18	572	113			3,448
	Less - transfers/subsidies from other sectors	-3,071	-3,461	-4,472		-21	-55			-11,080
	Local government financing	2,224	3,353	990	65	1,923	73	99	832	9,559

Financing education and training (2)

Current prices, 2015.
Israeli New Shekel millions.

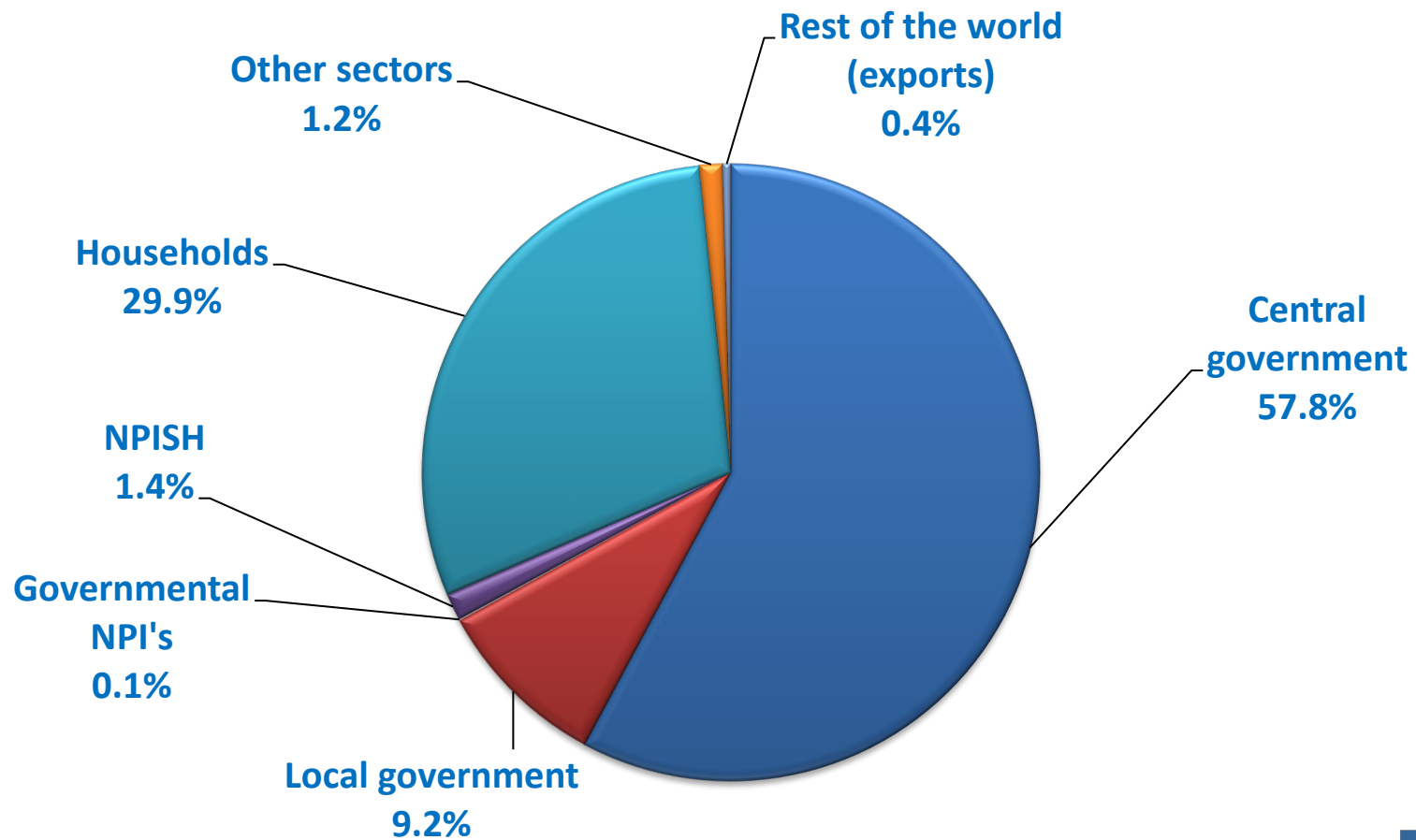
		Education and training purposes							As. prod. and admin. exp., not allocated	Total
		EPO	EP1	EP2	EP3	EP4	EP5	EP6		
Resources										
Governmental NPI's	Final consumption expenditure of governmental NPI's	748	502	5,362	9,777	1,587	1,439	70		19,485
	Plus - transfers/subsidies to other sectors	6	5	58	780					849
	Less - transfers/subsidies from other sectors	-820	-516	-6,151	-11,595	-471	-720			-20,273
	Governmental NPI's financing	-65	-9	-732	-1,038	1,116	719	70		61
NPISH	Final consumption expenditure of NPISH	554	197	53	400	1,120	1,470	241		4,033
	Plus - transfers/subsidies to other sectors	5	8	274	141		18			446
	Less - transfers/subsidies from other sectors	-556	-183	-1,256	-462	-187	-374			-3,017
	NPISH financing	3	22	-929	79	933	1,115	241		1,463

Financing education and training (3)

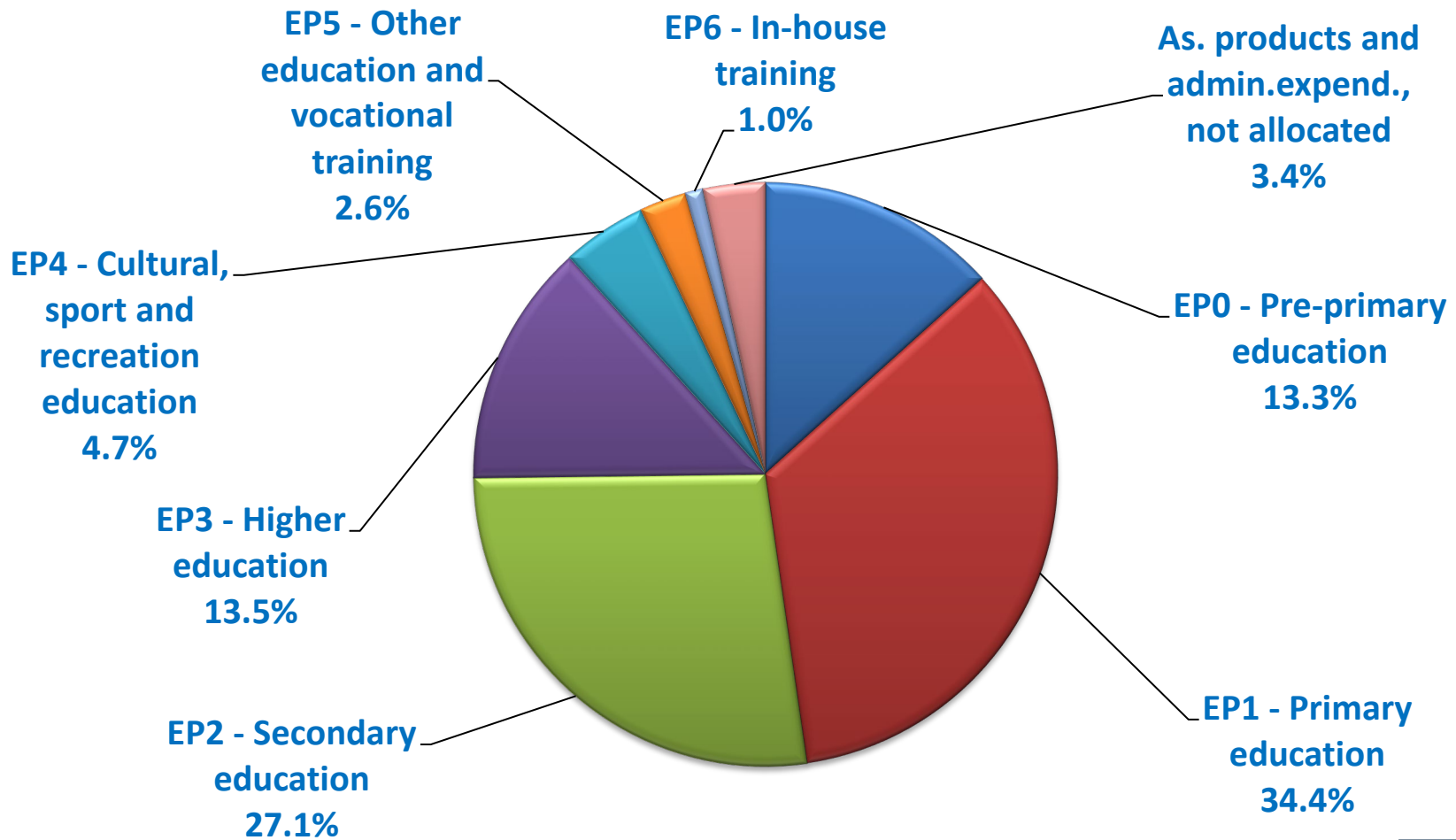
Current prices, 2015.
Israeli New Shekel millions.

		Education and training purposes							As. prod. and admin. exp., not allocated	Total
		EP0	EP1	EP2	EP3	EP4	EP5	EP6		
Resources										
Households	Final consumption expenditure of households	3,333	3,001	4,141	6,690	9,702	4,525		874	32,266
	Transfers/subsidies to/from other sectors, net	-352	-1,672	-1,023	907	-9	855			-1,293
	Households financing	2,982	1,329	3,119	7,597	9,692	5,381		874	30,973
Other sectors	Intermediate consumption					77	968	160		1,205
	Plus - transfers/subsidies to other sectors									
	Less - transfers/subsidies from other sectors									
	Other sector financing					77	968	160		1,205
Rest of the world (exports)					386					386
Total resources		12,288	25,296	21,063	17,483	14,001	9,296	1,082	3,214	103,722

Financing education and training by sector



General Government financing by education and training purpose

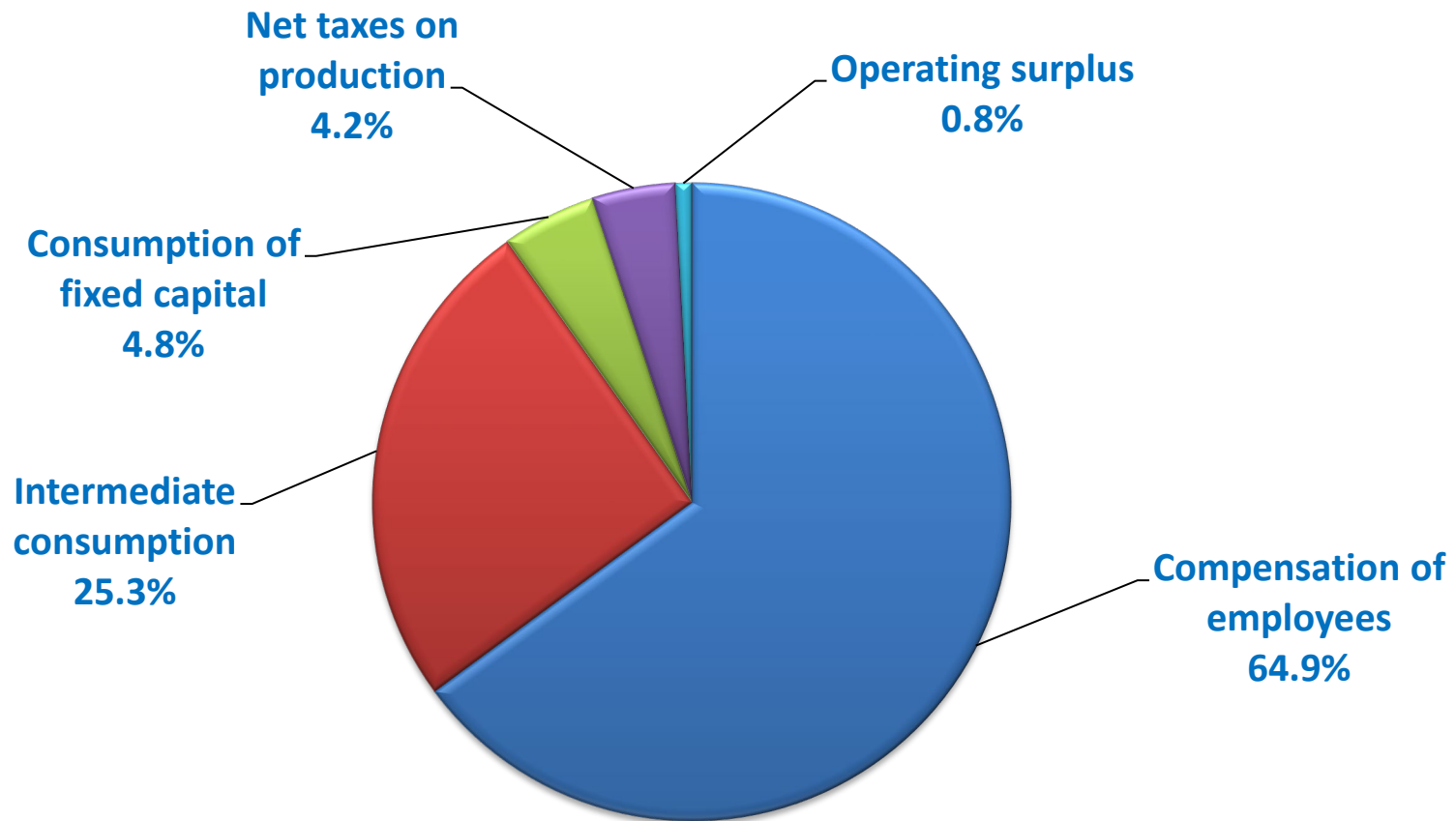


Cost structure on education and training

Current prices, 2015.
Israeli New Shekel millions.

		Education and training purposes								Total
		Formal education				Non-formal education			Associated goods and services, not allocated	
		EP0	EP1	EP2	EP3	EP4	EP5	EP6		
		Pre-primary education	Primary education	Secondary education	Higher education	Cultural, sports and recreation	Other education and vocational training	In-house training		
Uses										
All sectors	Compensation of employees	8,179	18,902	14,625	10,833	4,905	6,107	696	2,316	66,563
	Intermediate consumption	2,873	4,039	4,638	4,022	7,234	2,328	201	585	25,922
	Consumption of fixed capital	712	1,116	878	847	778	409	125	72	4,938
	Taxes on production and imports, less subsidies	523	1,239	921	632	453	346	45	152	4,312
	Operating surplus					630	105	15	89	838
Total current domestic expenditure		12,288	25,296	21,063	16,334	14,001	9,296	1,082	3,214	102,573
Rest of the world (imports)					1,149					1,149
Total current expenditure		12,288	25,296	21,063	17,483	14,001	9,296	1,082	3,214	103,722

Cost structure of current domestic expenditure on education and training



Conclusions (1)

□ *The challenges:*

- ❖ *For estimation of the expenditure on employees training in corporations and NPIs, we used the existing surveys for these sectors which were not initially designed to collect data on training. That affected the accuracy of the data for our purpose.*
- ❖ *The expenditure on training in the general government sector was calculated based on the expenditure in the training departments of the central and local government units as presented in the financial statements. This information was incomplete and affected the quality of the data.*

Conclusions (2)

- ❖ *The currently available information does not allow for a qualitative assessment of the expenditure on cultural, sports and recreation education, which should include solely the training portion of these activities. Therefore, expert assessments were used to calculate such expenditure.*
- ❖ *Currently we are unable to isolate the data related to expenditure on interns' supervision. In the future, we plan to search for additional sources of information and develop a method in order to estimate the expenditure on internships.*
- ❑ *Future plans:*
 - ❖ *Analysis and integration of new data sources to improve the quality of the Israeli satellite account for education and training.*



**THANK YOU FOR YOUR
ATTENTION**

Arkady Schneider
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