

Project 4&5: Using the Diary Survey and EXPN Files



Project 4

If you need to include complete estimates for education expenditures in your totals, you would use the diary **EXPD file** to fill in the blanks at the summarized level (using created number of children variable from the **MEMD files** for this example)

In this project you will:

- ▶ Learn how to navigate the Diary EXPD file
- ▶ Learn how to connect the FMLD, MEMD EXPD files
- ▶ Learn how to “integrate” data

Project 4 Steps

1. Concatenate 4 quarterly FMLD files to obtain a collection year of data
2. Repeat for the MEMD files
3. Generate the number of children per household by creating the Children count variable
4. Using the EXPD files, create summary Diary education expenditures at the household level using the education UCC that is sourced from the Diary survey (660000 - School supplies, etc. – unspecified)
5. Multiply estimates by 52 to obtain estimated annual totals from the weekly estimates
6. Calculate means based on number of children from Diary
7. Standard Error: Calculate standard error for each of the groups
8. Add Diary means for each group to the Interview means



Project 4 Results

CUs with 0 children

Education Expenditure Type	Education Expenditure Mean	Education Expenditure Standard Error	Education Expenditure Percent Reporting
TUITION	\$ 648.28	\$ 54.65	3.65%
TEST	\$ 5.76	\$ 1.35	0.34%
BOOKS	\$ 7.49	\$ 1.11	0.77%
OTHER	\$ 14.08	\$ 2.75	0.97%
SUPPLIES	\$ 46.22	\$ 3.52	5.23%
TOTAL	\$ 721.83		



Project 4 Results

CUs with 1 child

Education Expenditure Type	Education Expenditure Mean	Education Expenditure Standard Error	Education Expenditure Percent Reporting
TUITION	\$1,441.54	\$ 172.06	8.01%
TEST	\$ 26.11	\$ 5.94	1.15%
BOOKS	\$ 12.94	\$ 3.21	1.46%
OTHER	\$ 42.96	\$ 9.28	2.84%
SUPPLIES	\$ 76.71	\$ 12.22	6.60%
TOTAL	\$ 1,600.26		



Project 4 Results

CUs with 2 children

Education Expenditure Type	Education Expenditure Mean	Education Expenditure Standard Error	Education Expenditure Percent Reporting
TUITION	\$1,930.77	\$ 206.77	11.24%
TEST	\$ 69.02	\$ 12.97	2.02%
BOOKS	\$ 16.17	\$ 3.05	2.14%
OTHER	\$ 52.73	\$ 7.99	4.51%
SUPPLIES	\$ 126.42	\$ 20.49	8.91%
TOTAL	\$ 1,600.26		

Project 4 Results

CUs with 3 children

Education Expenditure Type	Education Expenditure Mean	Education Expenditure Standard Error	Education Expenditure Percent Reporting
TUITION	\$1,520.30	\$ 239.22	10.80%
TEST	\$ 39.37	\$ 15.08	1.46%
BOOKS	\$ 25.02	\$ 6.19	2.72%
OTHER	\$ 52.77	\$ 11.26	4.48%
SUPPLIES	\$ 172.65	\$ 48.40	12.02%
TOTAL	\$ 1,810.11		

Project 4 Results

CUs with 4 or more children

Education Expenditure Type	Education Expenditure Mean	Education Expenditure Standard Error	Education Expenditure Percent Reporting
TUITION	\$1,546.53	\$ 334.20	12.35%
TEST	\$ 46.21	\$ 28.10	1.24%
BOOKS	\$ 35.23	\$ 18.73	2.47%
OTHER	\$ 77.92	\$ 24.14	5.56%
SUPPLIES	\$ 38.27	\$ 10.99	6.45%
TOTAL	\$ 1,744.16		



Project 5

What if you want to know what kind of school or facility the expense was made toward and whether the expense was for someone inside or outside the CU? We can use the **EDA file** to get that information.

In this project you will:

- Learn more about the structure of one of the EXPN files
- See an example of non-expenditure information associated with an expenditure category

Using EXPN files

- In contrast to other Interview data files, EXPN files contain data from all 5 quarters of interviews in each file.
- Five variables are common to all EXPN files: QYEAR, NEWID, SEQNO, ALCNO and REC_ORIG.

Using EXPN files

- QYEAR represents the quarter and year of the interview from which the record was derived.
- The format for QYEAR is:
 - ▶ 20211 2020, 1st quarter
 - ▶ 20212 2020, 2nd quarter
 - ▶ 20213 2020, 3rd quarter
 - ▶ 20214 2020, 4th quarter
 - ▶ 20221 2021, 1st quarter



Project 5 Steps

1. Read in EDA files and subset for education expenses reported for interviews conducted in 2021
2. Remove records with QYEAR = 2021
3. Calculate one-way frequency count based on the school or facility the expense was made toward (EDSCHL_A)
4. Calculate two-way frequency count based on the school or facility the expense was made toward and if the expense was made for someone inside or outside the CU (EDUCGFTC)
5. Calculate two-way frequency count based on the type of expense (EDUC_AY) and the school or facility the expense was made toward



Project 5 Results

Count of expenditures by school type

School	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Not specified	2395	51.93%	2395	51.93%
College or university	1388	30.10%	3783	82.03%
Elementary through high school	606	13.14%	4389	95.16%
Child day care center	19	0.41%	4408	95.58%
Nursery school or preschool	23	0.50%	4431	96.08%
Vocational or technical school	66	1.43%	4497	97.51%
Other school	115	2.49%	4612	100.00%

Project 5 Results

Count of expenditures by school type and recipient tenure

School	Person inside the CU		Person outside the CU	
	Count	Frequency	Count	Frequency
Not specified	2235	48.4605	160	3.4692
College or university	1122	24.3278	266	5.7676
Elementary through high school	573	12.4241	33	0.7155
Child day care center	14	0.3036	5	0.1084
Nursery school or preschool	23	0.4987	0	0.000
Vocational or technical school	64	1.3877	2	0.0434
Other school	105	2.2767	10	0.2168



Project 5 Results

Count of expenditures by expense category and school type

Expenditure Type	Elementary through high school	Other school	College or university	Child day care center	Nursery school or preschool	Vocational or technical school	Not specified
Books	110	22	344	4	4	13	.
Tuition	244	53	684	10	14	40	.
Combined expense	31	4	99	1	.	1	40
Recreational lessons	8	4	14	.	.	.	987
Nursery sch/day care	.	1	8	.	.	.	456
Test prep./tutoring	3	.	8	.	1	.	119
Housing	2	.	31	.	.	.	77
Food or board	4	.	37	.	.	.	69
Private school bus	.	.	1	.	.	.	14
Other expenses	204	31	164	4	4	12	633