

Labor force participation by imputed family income quintile

Madison informal notes

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Why did we switch from using fixed thresholds to define income categories to now using quintiles? The following tables show the percent of each year's sample that falls into each fixed income category:

Actual Family Income	year			Predicted Family Income	year		
	2020	2021	2022		2020	2021	2022
– 24,999	14	15	14	– 24,999	11	12	12
25,000 – 49,999	18	18	17	25,000 – 49,999	21	22	21
50,000 – 99,999	29	29	28	50,000 – 99,999	30	29	29
100,000 – 149,999	17	17	17	100,000 – 149,999	18	17	17
150,000 –	22	22	24	150,000 –	19	19	21

Notice that the fixed thresholds don't cut the sample into equal proportions and that the proportional split changes slightly from year to year. The imputation model also allocates fewer people to the lowest income category than the actual ASEC data shows.

The two tables below show the lower threshold values for each quintile.

Actual				Predicted			
	year				year		
	2020	2021	2022		2020	2021	2022
Quintile				Quintile			
1	1	1	1	1	6,036	6,848	4,889
2	32,760	32,764	32,760	2	32,835	32,835	32,835
3	54,871	54,878	54,869	3	54,635	54,636	54,640
4	84,786	84,780	84,795	4	84,306	84,306	84,306
5	130,499	130,488	130,500	5	129,237	129,230	129,232

1 Verifying model w/ ASEC

Now, I re-run the computations of labor force participation by income group, using quintiles instead of the fixed categories.

1.1 No exclusions

Table 1: LFPRs by actual family income quintile

Income group (\$)	Year		
	2020	2021	2022
Lowest	40.4	38.4	38.0
Second	55.9	56.4	55.8
Middle	63.5	64.0	64.4
Fourth	71.4	70.5	70.5
Highest	75.9	76.4	76.3
Overall (ASEC, 16+)	62.7	62.0	62.5
Overall (Official NSA)	62.6	61.5	62.5

Notes: Sample is all participants 16+ from the March Supplements.

Table 2: LFPRs by predicted family income quintile

Income group (\$)	Year		
	2020	2021	2022
Lowest	44.4	43.5	43.1
Second	57.0	56.8	57.3
Middle	61.6	61.3	61.5
Fourth	69.3	69.3	69.2
Highest	76.8	77.0	77.0
Overall (ASEC, 16+)	62.8	62.1	62.5
Overall (Official NSA)	62.6	61.5	62.5

Notes: Sample is all participants 16+ from the March Supplements. Income groups are defined using the predicted values of ftotval for the same observations that appear in the ASEC.

1.2 Exclude 2-person retiree households

Table 3: LFPRs by actual family income quintile, ASEC (% as of March)

Income quintile (\$)	Year		
	2020	2021	2022
Lowest	44.4	42.4	41.9
Second	63.6	64.1	63.7
Middle	69.9	70.6	71.1
Fourth	76.0	75.3	75.6
Highest	78.9	79.0	79.4
Overall	67.6	66.9	67.4

Notes: Sample is all participants 16+ from the March Supplements, excluding individuals from 2-person households wherein both people are retired.

Table 4: LFPRs by predicted family income quintile, ASEC (% as of March)

Income group (\$)	Year		
	2020	2021	2022
Lowest	47.5	46.9	46.3
Second	64.7	64.1	65.1
Middle	69.3	69.2	69.3
Fourth	75.0	75.2	75.2
Highest	78.4	78.3	78.6
Overall	67.8	67.1	67.6

Notes: Sample is all participants 16+ from the March Supplements. Income groups are defined using the predicted values of f_{total} for the same observations that appear in the ASEC.

Why is the gap between the LFPRs for the bottom actual and predicted rates bigger when we use quintiles than when we use fixed income thresholds?

Having applied the imputation model to the Basic monthly data, Table 5 shows the same computations as above, only on the people who appear in the March Basic data.

Table 5: LFPRs by predicted family income quintile, Basic March

Income group (\$)	Year		
	2020	2021	2022
Lowest	52.5	50.8	50.9
Second	63.1	61.4	62.3
Middle	66.5	65.6	66.0
Fourth	73.5	73.2	73.0
Highest	78.5	77.6	77.5
Overall	66.8	65.6	66.1

Notes: Sample is all participants 16+ from the March Basic, excluding individuals from 2-person households wherein both people are retired. Income groups are defined using the predicted values of f_{total} for the Basic monthly observations.

My only explanation for the gap between the ASEC estimates and Basic estimates would be that the people in the Basic are a subset of the people in the ASEC. ASEC has additional groups added in order to improve

national representation and, for some reason, the subset of those individuals who appear in the March Basic survey have slightly different patterns in labor force participation by income category.

2 LFPR by income, monthly frequency

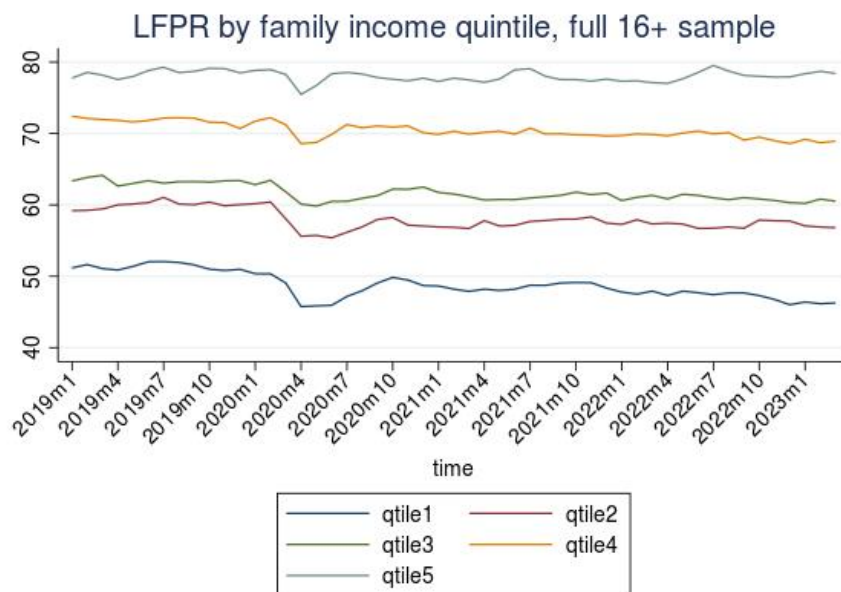


Figure 1: Full 16+ CPS Basic sample

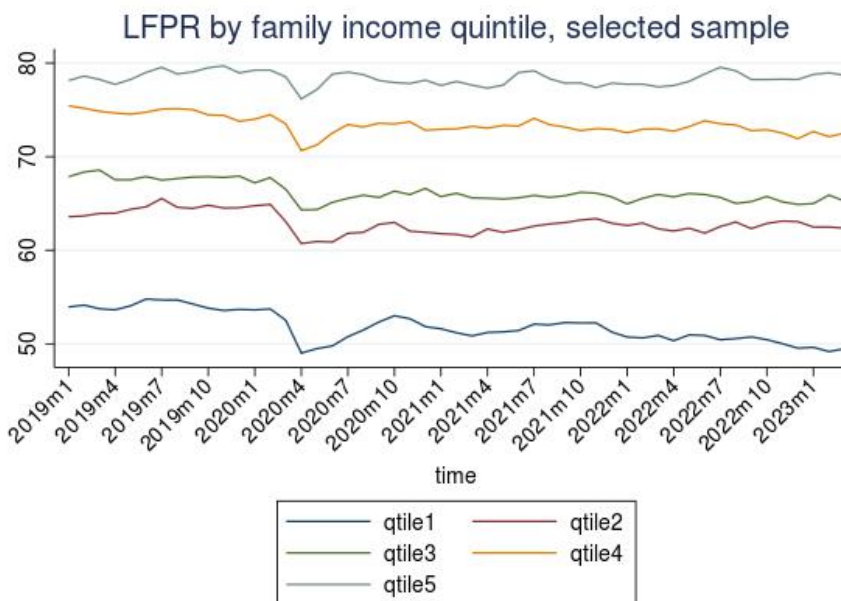


Figure 2: 16+ CPS Basic sample, excluding 2-person retiree households