Macroeconomic Models:
Weekly Update

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Weekly Summary

- Here is the hierarchy of CPI componenent categories/levels.

    - Major Group > expenditure class > item stratum > entry level items
    - Entry level items represent the actual sampling units.

- The conversation last week focused on Major Groups, and we identified Transportation—with a correlation of ≈ 0.85 with CPI—as a first Major Group scraping target.

- Now zoom in on Transportation, to transportation expenditure classes; and to the item stratum within expenditure classes.

    - Private Transportation

        [4] "New and used motor vehicles"
        [5] "Motor fuel"
        [6] "Motor vehicle parts and equipment"
        [7] "Motor vehicle maintenance and repair"
        [8] "Motor vehicle insurance"
        [9] "Motor vehicle fees"

    - Public Transportation

        [11] "Airline fares"
        [12] "Other intercity transportation"
        [13] "Intracity transportation"

- I focus on the correlation in month-to-month changes as before, but this time with Transportation item stratum.

- Here are the month-to-month change correlations among Transportation item strata. The first row/-column represents the Transportation Major Group index itself.

	Tr	MVs	Fuel	P&E	M&R	Ins	Fees	Air	Inter	Intra
Transportation	1.000	0.218	0.983	0.003	0.037	-0.142	0.025	0.383	0.057	0.056
New and used motor vehicles**	0.218	1.000	0.113	0.090	-0.115	0.032	0.089	0.103	0.020	-0.003
Motor fuel**	0.983	0.113	1.000	-0.016	0.020	-0.194	0.009	0.302	0.045	0.047
Motor vehicle parts and equipment	0.003	0.090	-0.016	1.000	0.147	-0.050	0.023	-0.027	0.014	-0.002
Motor vehicle maintenance and repair	0.037	-0.115	0.020	0.147	1.000	0.086	0.090	0.083	-0.096	0.071
Motor vehicle insurance	-0.142	0.032	-0.194	-0.050	0.086	1.000	0.034	0.000	-0.074	-0.002
Motor vehicle fees	0.025	0.089	0.009	0.023	0.090	0.034	1.000	-0.057	-0.121	-0.014
Airline fares**	0.383	0.103	0.302	-0.027	0.083	0.000	-0.057	1.000	0.082	0.086
Other intercity transportation	0.057	0.020	0.045	0.014	-0.096	-0.074	-0.121	0.082	1.000	0.072
Intracity transportation	0.056	-0.003	0.047	-0.002	0.071	-0.002	-0.014	0.086	0.072	1.000

- **Motor fuel (0.983), airline fares (0.383), and new/used motor vehicles (0.218) are the strata whose month-to-month changes are the most correlated with the Transportation Major Group index month-to-month changes.