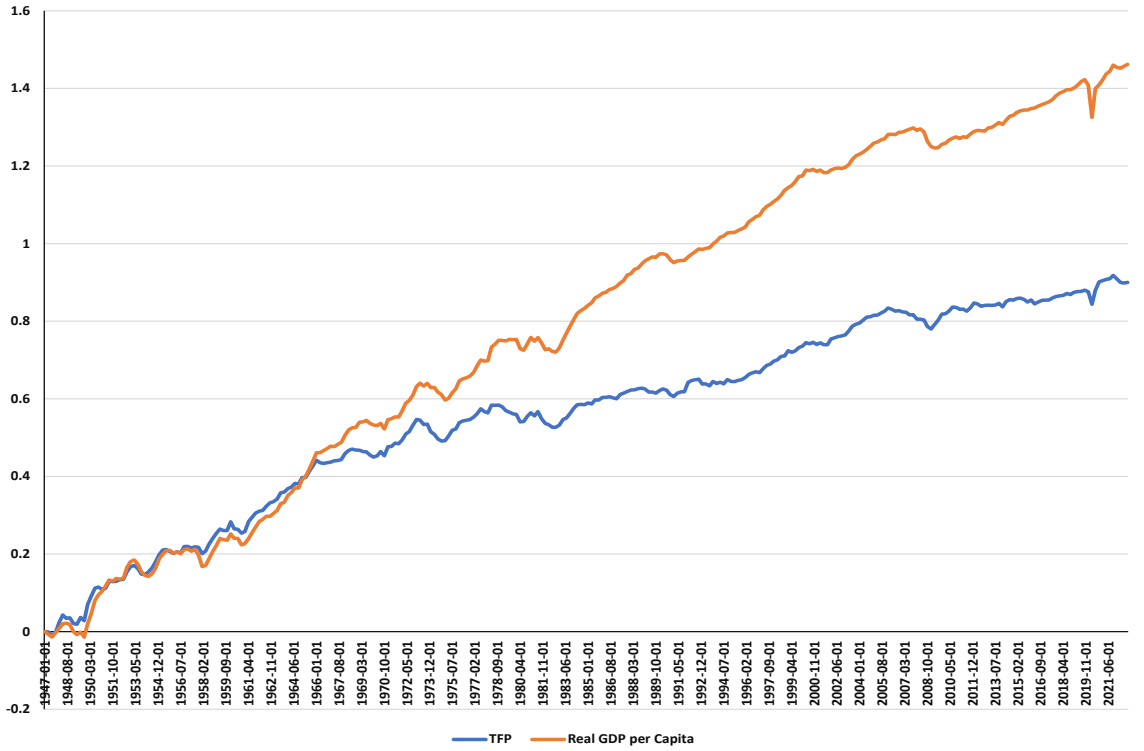


Figure 3: TFP and Real GDP per Capita



Next, I move away from long-run properties and focus on short-run properties of the data. To do so, I HP-filter all series (smoothing parameter of 1600) and calculate moments of HP-detrended data. The data are from 1947 quarter 1 to 2022 quarter 3. The selected moments are shown below.

Table 1: HP-Filtered Business Cycle Moments, Full Sample

Series	Std. Dev.	Rel. Std. Dev.	Corr w/ y_t	Autocorr	Corr w/ Y_{t-4}	Corr w/ Y_{t-12}
Output	0.0166	1.0000	1.0000	0.7878	0.0813	0.0000
Consumption	0.0110	0.6602	0.7550	0.6691	0.1548	0.0000
Investment	0.0444	2.6675	0.7593	0.8572	-0.0511	0.0000
Hours	0.0211	1.2677	0.8669	0.8198	0.2763	-0.0000
Avg. Labor Productivity	0.0114	0.6876	0.2721	0.6957	-0.4485	0.0000
Wage	0.0115	0.6943	-0.0129	0.7082	-0.1050	0.0000
Real Rate	0.0043	0.2568	-0.0020	0.4729	0.2711	-0.0000
Price Level	0.0096	0.5798	-0.0841	0.9072	0.1358	-0.0000
TFP	0.0127	0.7626	0.7789	0.7639	-0.2959	0.0000

The standard deviation of output is about 1.7 percent. Consumption is about two-thirds as volatile, and investment about 2.5 times as volatile as output. The standard deviation of hours worked is higher than that of output. The real interest rate, price level, and TFP are less volatile