```
                  __   ____   ____   ____   ____ (R)
                 /__    /    ____/   /    ____/
                ___/   /   /___/    /   /___/
                  Statistics/Data analysis
```

fk_cycle —   Fiorito & Kollintzas (1994) version 1.0

Description

fk_cycle implements the Fiorito & Kollintzas Cycle Decomposition (1994) for time series.

This decomposition is applied through a cross-correlogram. In its current version all variables must be previously detrended. The *beta* version (available upon request) will include more options for panel data such as winsorsing.

Examples

Setup: Requires you to install bking, cfitzrw and hprescott from ssc
        ssc install bking
        ssc install cfitzrw
        ssc install hprescott

We use GVAR macroeconomic quarterly data from Argentina (1979-2019) to assess the timming, transimission channels and the relative importance of different shocks named: inflation, nominal interest rate, exchange rate, raw materials, oil an prices on output (Real GDP).
The direction and sign of variables that shape economic cycles may provide additional information for sound macroeconomic policies in developing countries with cronic inflation and output volatility.

Data must be tsset. Time can be monthly, quarterly, yearly.

    . **use fk_example1.dta, clear**
    . **tsset t**

Visual inspection

    . **twoway (line y HP_y_sm_1 t), title("Real GDP vs trend: Hodrick-Prescott filter") subtitle("Argentina: 1979-2019") legend(col(2) region(lstyle(none))) legend(on order(1 "GDP" 2 "Trend"))**

    . **twoway (spike HP_y_1 t), title("Business cycle") subtitle("Argentina: 1979-2019") ytitle("") legend(col(1) region(lstyle(none)))**

Hodrick-Prescott (default)
    . **fk_cycle Dp_hp ep_hp r_hp poil_hp pmat_hp pmetal_hp, outcome(y_hp) lag(12)**

Baxter-King
    . **fk_cycle Dp_bk ep_bk r_cf poil_bk pmat_bk pmetal_bk, outcome(y_bk) lag(12)**

Christiano-Fitzgerald
    . **fk_cycle Dp_cf ep_cf r_cf poil_cf pmat_cf pmetal_cf, outcome(y_cf) lag(12)**

Acknowledgments

This command was written to asses the timming, transimission channels and the relative importance of different shocks during economic cycles using traditional filters.

Program has been tested to work under Stata 17.

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