Monetary policy scheme going into private consumption dynamics

César Carrera
Gerencia de Información y Análisis Económico
Banco Central de Reserva del Perú
Objective

• Clarify the impact of a monetary policy shock on consumption

• Bottom – up the effect on different levels of consumption

• Consensus versus alternative views
Road map

• Discussion on consumption

• Monetary policy shock going into aggregate consumption

• Monetary policy shock going into Food, Good and Service

• Monetary policy shock going into Principal Components
Understanding consumption theory: Luo et al. (2017)

In intertemporal consumption-savings problems, households consumption is determined by:

• the annuity value of total wealth and then it follows a random walk (Friedman’s “permanent income hypothesis”).

• the slow process of extracting information from signals and therefore households respond sluggishly to innovations in permanent income (Sim’s “rational inattention”).
A monetary policy shock (Leon and Flores, 2015)

• The theoretical link between wealth and interest rates:
  
  • Can be the life cycle theory for financial wealth.
  
  • Could be either the life cycle model or the financial accelerator model for housing wealth. Interest rates affect housing wealth as well as housing prices, which in its turn affect consumption through its role as collateral for loans. If the price of housing rises, also does the amount that can be borrowed and therefore the amount that can be dedicated to consumption.
Most standard approach

\[ y_t = \sum_{i=1}^{q} A_i y_{t-i} + u_t \]

\( y \) is a vector of consumption and its determinants

Usual determinants for consumption are: prices, exchange rate, interest rate, wealth, and income
Growth rate of Principal components of consumption based on Input-output tables (Carrera, 2018)

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I. Aggregate consumption
Usual previous work ...

• Granger-causality tests suggest “causality” running from interest rate to consumption

• Identification for VAR estimation follows on Choleski decomposition, in which financial variables react faster than real variables

• Monetary policy transmission focuses on those mechanisms that may lead to more (less) consumption, as suggested in the literature
A standard result
II. Food, Good, Service, and Other
Aggregate products in 4 groups

• Identified in Carrera (2018), group principal components in any of the following groups: Food, Good or Service

• Any other component goes into a group called Other
Food
Good
Service
A matter of magnitude
At this level ...

- Most reaction to a shock in interest rate is coming from the group Good which probably is a group oriented to international trade.

- If a policy action has an effect on the exchange rate, this will trigger a price effect on those related products that are tied-up to international markets.

- However, the most important shock quickly dies after 2 or 3 periods. As pointed out, wealth effect tends to have a more important impact in the decisions for consumption.
III. Principal components
Good

Clothing

Cleaning products

Pharmaceutical products

Informatics and electronic products

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Food

Agricultural products

Meat and derivatives

Milling, noodles, and pastries

Bakery products

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Service

Restaurant

Ground transportation

Telecommunication

Health

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What disaggregated data says ...

• When a contractionary interest rate shock hits the system, households tend to initially consume more of “clothing and garments” and “informatics and electronic products”. In the next periods, the consumption lowers and in the aggregate it is negative.

• The same shock has lower impact and fewer periods effect in other principal components.
V. Conclusions
• The most standard result in Macro is that a contractionary monetary policy shock lowers aggregate consumption. For Peru, this result seems to last few periods and has a small impact.

• Nevertheless, this result is based on the even lower reaction (or no reaction) from most components of consumption.

• Here I identify those components with most significant reaction ("clothing and garments" and "informatics and electronic products") and argue that a wealth effect tends to dominate a price effect which leads to an aggregate negative result.
V. Thanks!