The Outlook for the World Coffee Market 2010-2019

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OUTLINE

- Introduction
- Modeling framework
- Main results
- Major uncertainties and conclusion
Modeling framework

- Vector autoregressive model (VAR)

- VAR is a time-series model used to forecast the values of two or more economic variables.

- The VAR model uses past regularities and patterns in historical data as a basis for forecasting.

Model specification

- Prices:
  \[ WP_t = \alpha + \beta_1 WP_{t-1} + \beta_2 WP_{t-2} + \beta_3 C_{t-1,j} + \ldots + \beta_J C_{t-1,j} + \epsilon_t \]

- Production:
  \[ Q_{Xt,c} = \alpha + \beta_1 WP_{t-1} + \beta_2 WP_{t-2} + \beta_3 Q_{Xt-1,c} + \epsilon_t \]

- Consumption
  \[ C_{t,c} = \alpha + \beta_1 WP_{t-1} + \beta_2 C_{t-1,c} + \beta_3 C_{t-2,c} + \beta_4 GDP_{t-1,c} + \beta_5 \Delta POP_t + \beta_6 \Delta CPI_{t-1,c} + \beta_7 XR_{t-1,c} + \epsilon_t \]

- Stock:
  \[ \Delta S^X_{t,c} = \alpha + \beta_1 WP_{t-1} + \beta_2 \Delta S^X_{t-1,c} + \beta_3 Q_{Xt-1,c} + \epsilon_t \]
  \[ \Delta S^M_{t,c} = \alpha + \beta_1 WP_{t-1} + \beta_2 \Delta S^M_{t-1,c} + \beta_3 C_{t-1,c} + \epsilon_t \]

- Trade:
  \[ X^t_{e,c} = Q^t_{Xe,c} - C^t_{e,c} - \Delta S^X_{t,e} \]
  \[ M^t_{e,c} = C^t_{M} + \Delta S^M_{t,e} \]
International coffee prices in nominal terms to increase in the outlook to reach US$1.50/lb in 2019, and expected to hit a low of US$1.23/lb in 2012.

International coffee prices in real terms to remain relatively flat, but they will fluctuate at a higher plateau than the previous decade (outlook average: US cents 117 per lb vs past 10 years: US cents 78.5 per lb).

Outlook:
production, consumption, and stocks

- Production is to grow by 1.73% per year, up from 1.5% per year recorded in the last decade.
- Consumption is expected to expand by 2% per year, a lower growth than the previous decade when it averaged more than 2.5 percent.
Outlook: Trade

- Export to expand by 1.4% per year to reach 114.5 million bags in 2019, up from 104.5 million bags in 2010

Conclusion

- Coffee prices to stay high in real terms in comparison to the previous decade.
- Supply response enables production to surpass consumption, but market expected to remain tight.
- Consumption forecasted to grow lower than the previous decade – as high prices curve demand growth.
- Model specification can be developed to account for coffee varieties (Arabicas and Robustas)
Thank you

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World Sugar Research Organization
Beijing, China, 16 – 18 June 2010