Discussion of Price Elasticity of Demand

C.-Y. Cynthia Lin Lawell, Ph.D.
University of California at Davis

Workshop on Issues in Short-Term Domestic Gasoline Consumption Modeling
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Issues to consider when modeling the price elasticity of demand for gasoline
Issue #1:

When estimating demand, make sure to distinguish between supply and demand.
It is hard to distinguish between supply and demand
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Suppose we had data on gasoline price and gasoline quantity each month.
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- Method: Instrumental variables
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- For more information: See Section 2.3 of Lin and Zeng (2013):
Issue #2:

Gasoline price volatility affects the price elasticity of demand for gasoline.
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• As prices become more volatile, consumers will be less responsive to changes in gasoline price since the price changes so much.
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- **Implications for EIA studies:** Control for the volatility of gasoline price when estimating demand for gasoline.

- **For more information:** See Lin and Prince (2013):
Issue #3:

In the long run, consumers are more elastic.
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- Consumers are more responsive to changes in gasoline price in the long run.
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- If gasoline prices are high for a long time, consumers may make more substantial behavioral changes that reduce their demand for gasoline.
  - For example:
    - Consumers may buy a more fuel efficient car.
    - Consumers may move closer to work.
    - Firms may develop better technologies to make alternative vehicles better and less expensive.
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• **Implications for EIA studies**: Even when forecasting short-term consumer demand for the near future, need to consider whether price changes are long term.
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- **For more information**: Previous estimates of long-run and short-run price elasticities of demand are in Table 1 of Lin and Prince (2009) and Table 8 of Lin and Zeng (2013):
Issue #4:

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• **For more information**: See Lin and Prince (2009) and Lin and Zeng (2014):
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Thank you!