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
U.S. Energy Information Administration
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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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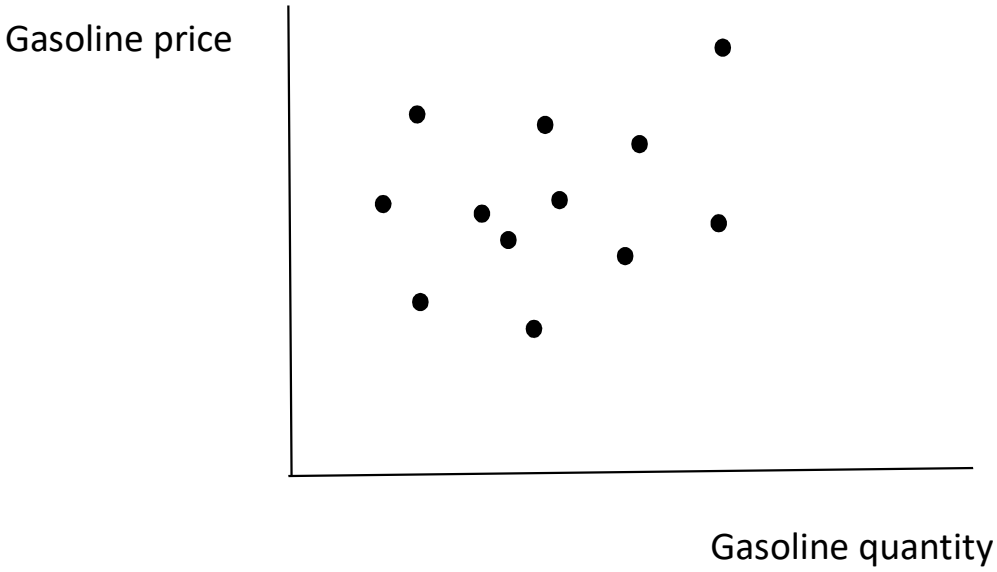

Suppose we had data on gasoline price and gasoline quantity each month.

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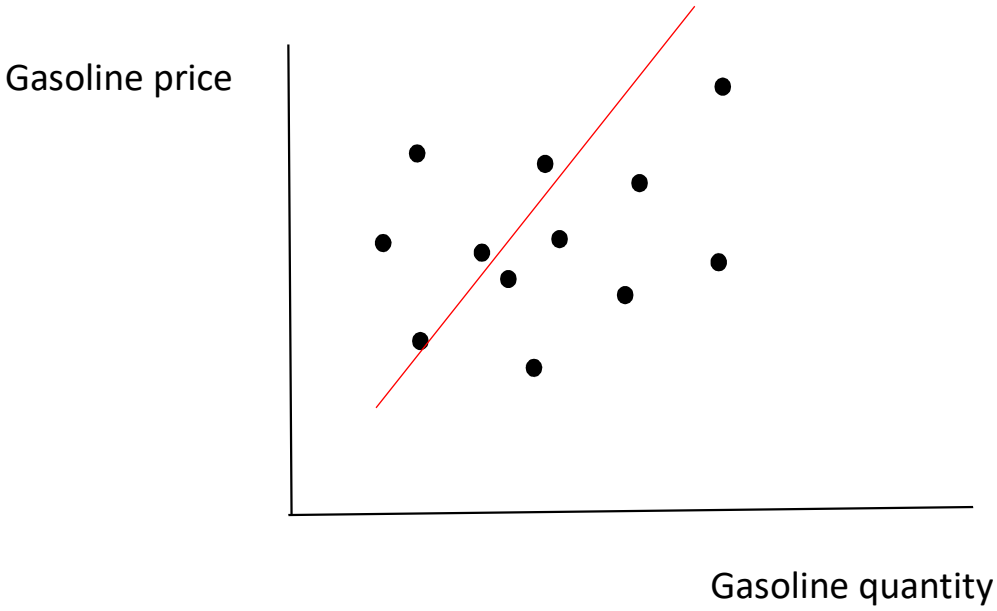

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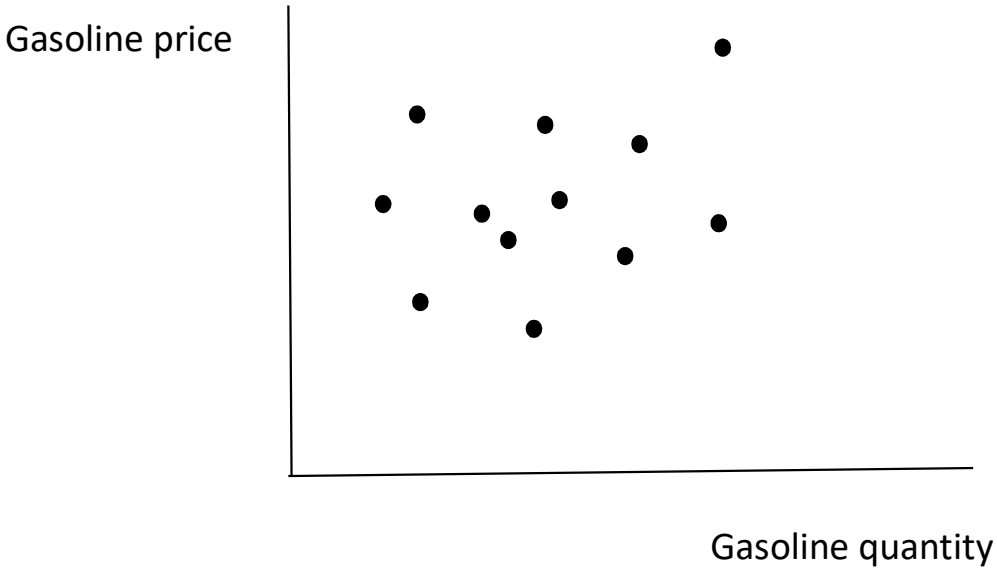

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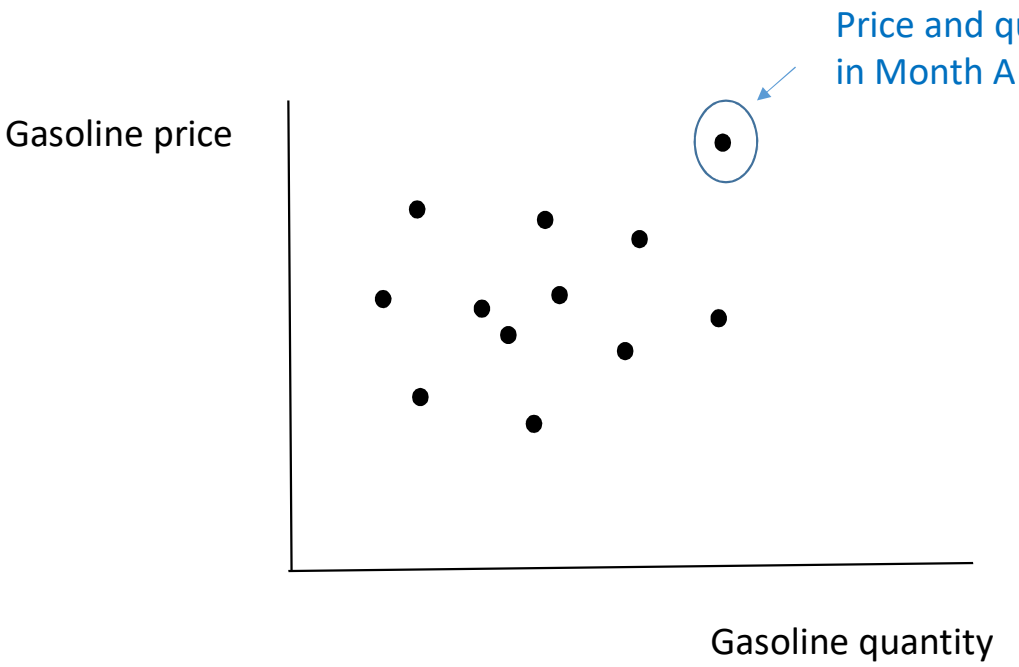

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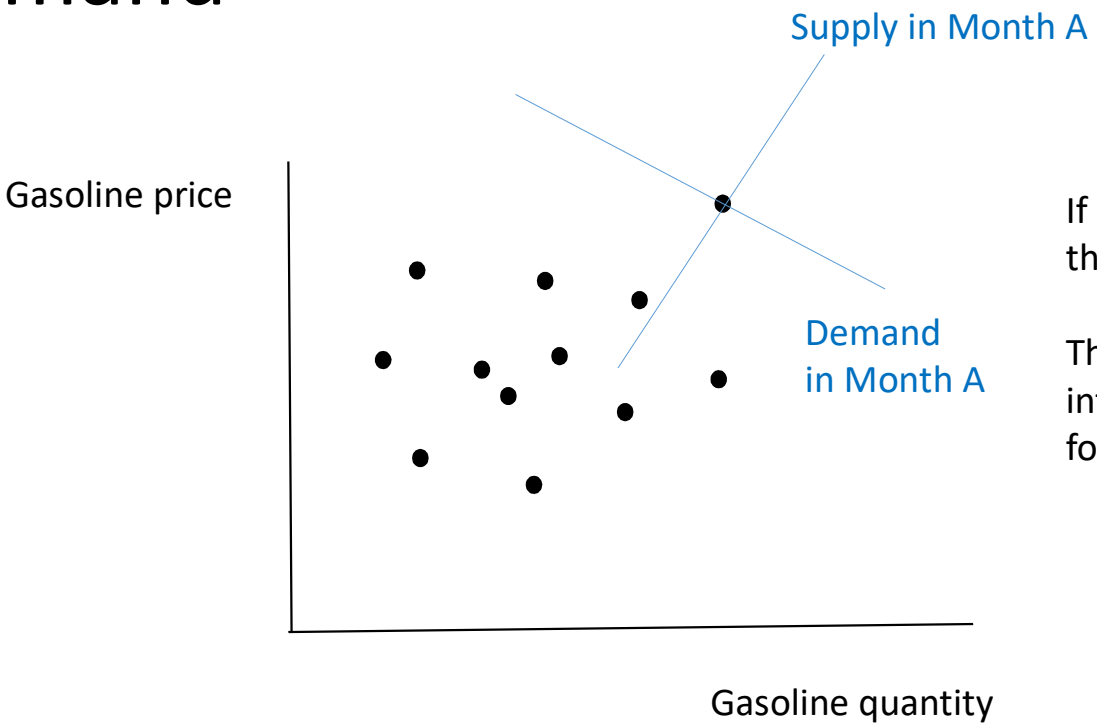

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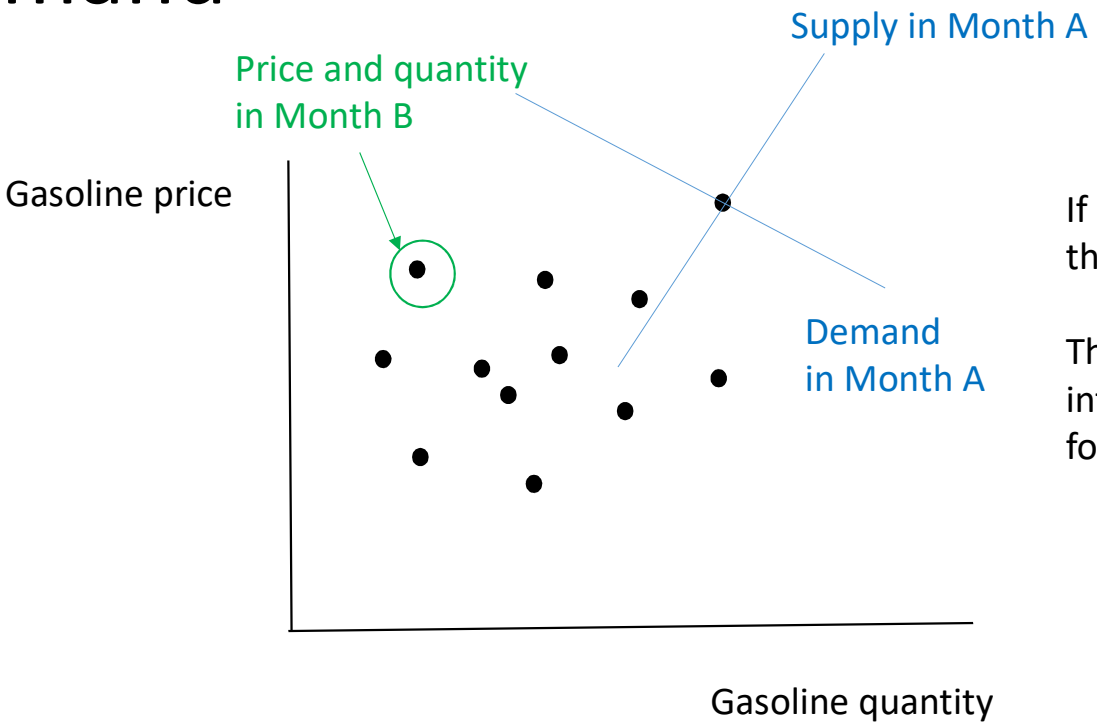

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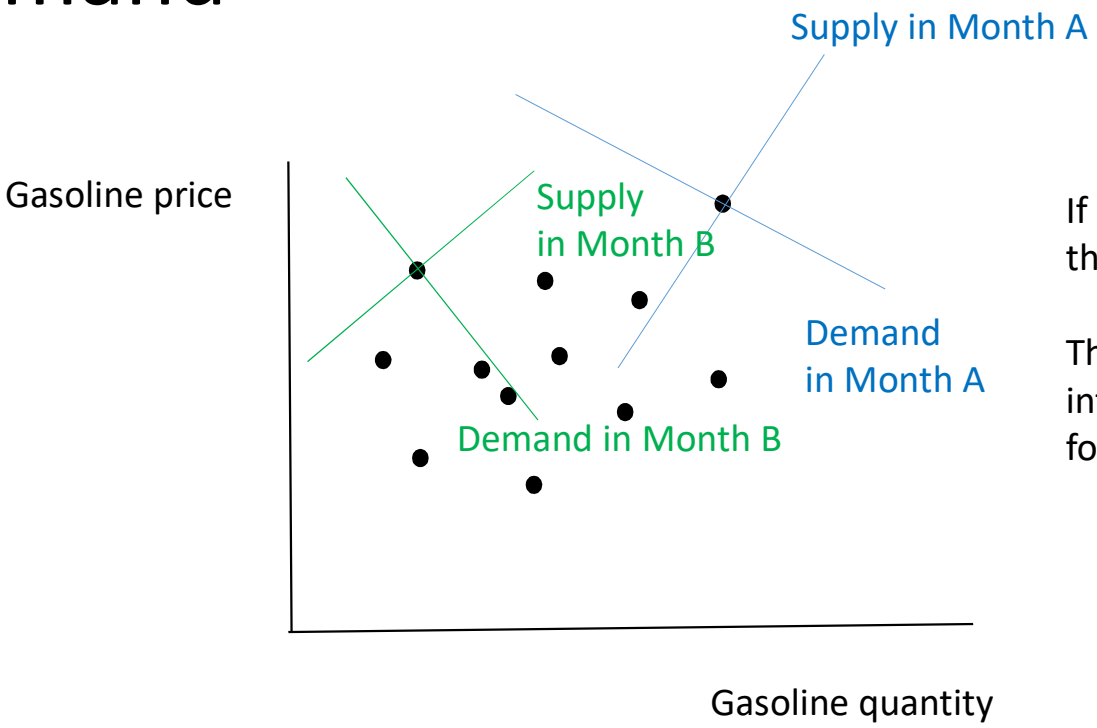

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- *For more information:* See Section 2.3 of Lin and Zeng (2013):
  - Lin, C.-Y. Cynthia, and Jieyin (Jean) Zeng. (2013). The elasticity of demand for gasoline in China. Energy Policy, 59, 189-197.

Issue #2:

Gasoline price volatility affects the price elasticity of demand for gasoline.

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- *For more information:* See Lin and Prince (2013):
  - Lin, C.-Y. Cynthia, and Lea Prince. (2013). Gasoline price volatility and the elasticity of demand for gasoline. Energy Economics, 38, 111-117.

Issue #3:

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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- *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):
  - Lin, C.-Y. Cynthia, and Lea Prince. (2009). The optimal gas tax for California. Energy Policy, 37 (12), 5173-5183.
  - Lin, C.-Y. Cynthia, and Jieyin (Jean) Zeng. (2013). The elasticity of demand for gasoline in China. Energy Policy, 59, 189-197.

Issue #4:

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Issues to consider when modeling the price elasticity of demand for gasoline

- When estimating demand, make sure to distinguish between supply and demand.
- Gasoline price volatility affects the price elasticity of demand for gasoline.
- In the long run, consumers are more elastic.
- The price elasticity of demand is important for policy.

Thank you!