



Economic Formula for Milk Price Discovery

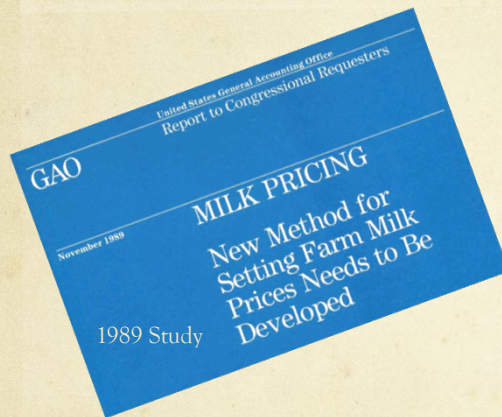
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What are Today's Dairy Problems?

- Milk & feed price volatility for the producer
- Maybe milk price volatility for the processor
- Dissatisfaction with product price formulas used in FMMOs and state orders
- Are these issues related?

Options for Setting Milk Prices



- Regulated Grade A manufacturing price series
- Deregulated Grade A manufacturing price series
- Product price formula
- Economic formula
- Administratively determined

Options for Setting Milk Prices

- Competitive Pay Price
 - Gold standard, but almost impossible to achieve
- Product Price Formulas
 - Reverse engineering cost-plus pricing
 - Competitive Pay Price moving one step up the marketing chain
- Economic Formulas
 - Always discussed, seldom employed
 - Dairy Price Support Program

Economic Formulas

- Most common version takes a starting point value and moves prices with an index
- They have been used before in milk pricing
 - Dairy Price Support Program
 - California state order pricing for many years
 - Federal order class I pricing in the late 1940s-50s
 - Boston, New York and other orders
 - All discontinued by the late 1960s
- Major problem is price inflation over time

Economic Formulas

- Usually include factors for the ability and willingness of consumers to pay
- Often a measure of general economic conditions such as CPI or Consumer Sentiment
- Always cost of production such as feed, etc.

One Example...

- During the 1990s debate, Wisconsin Farmer's Union requested Ed Jesse to develop an economic formula price.



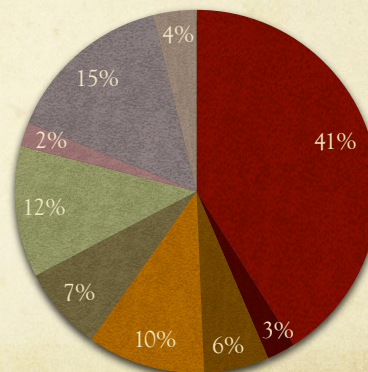
- The devil is in the details...
- His formula is resurrected after lying dormant for 15 years.

Cost of Production Sub-Index

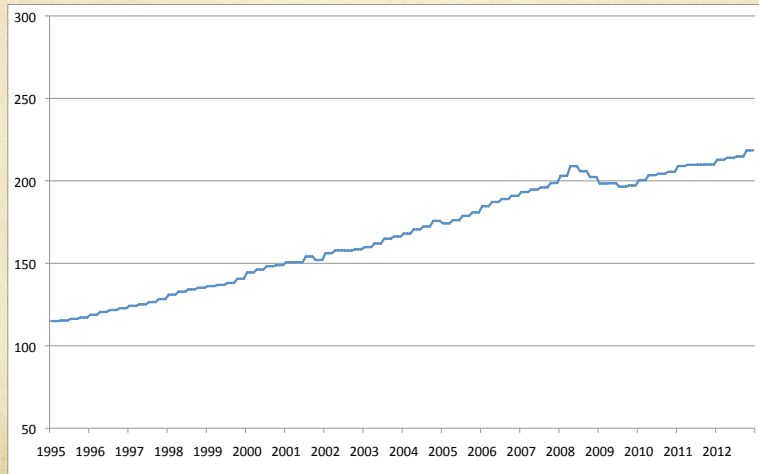
NASS Indices '90-92

- Feed
- Fuels
- Supplies & Repairs
- Farm Machinery
- Farm Services
- Interest
- Taxes
- Wage Rates
- Prices Paid

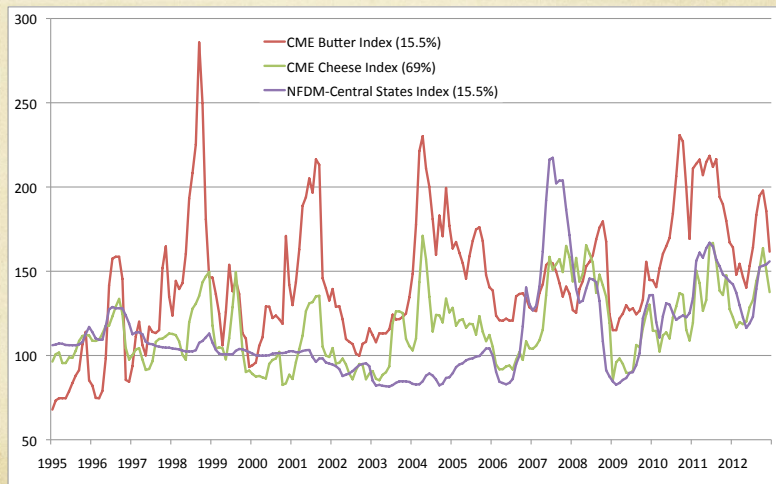
Weights



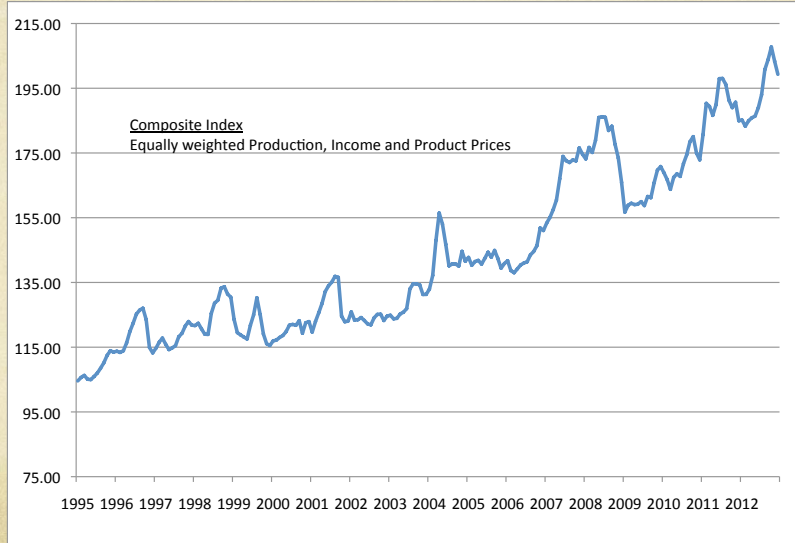
Consumption—Per Capita Disposable Income Sub-Indices



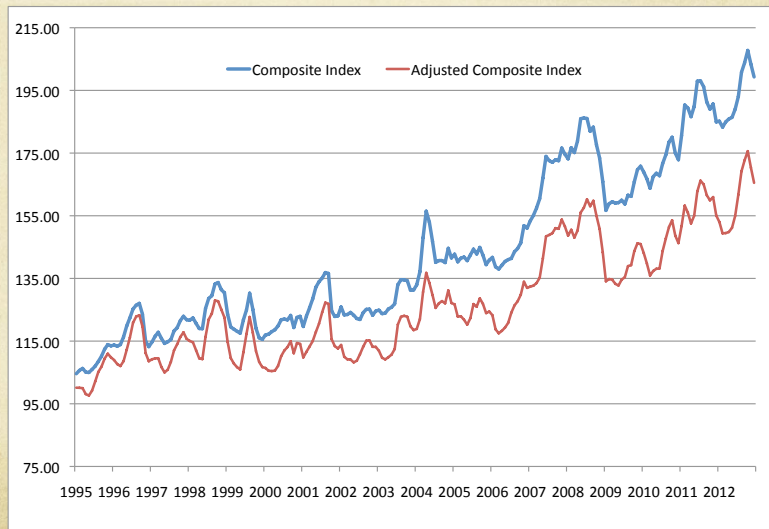
Consumption—Product Price Sub-Indices



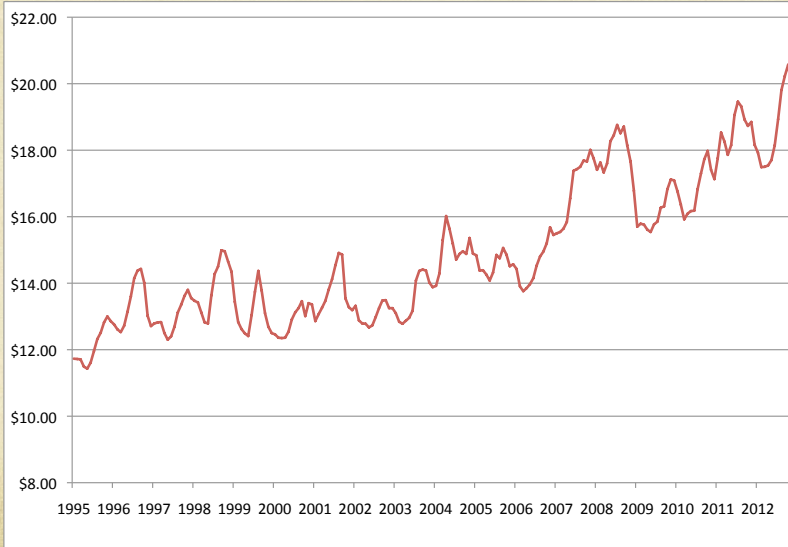
Composite Index



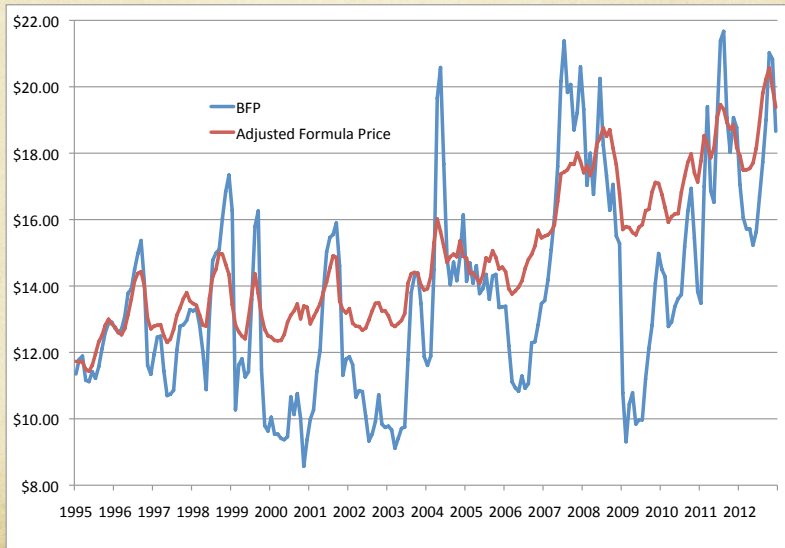
Productivity Deflated Composite Index



Economic Formula for BFP



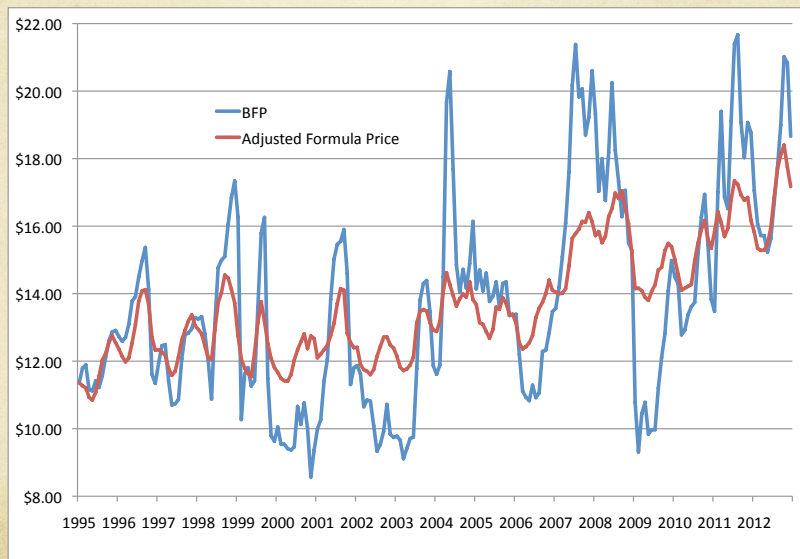
Economic Formula versus BFP



Observations...

- Economic formula captures all major turning points
- Economic formula does not suffer greater lags than MW, BFP, or Product Price Formula
- It is less volatile than current and previous Class III
- It is transparent and can be readily calculated with current data
- It is somewhat price inflationary (+\$1.12)

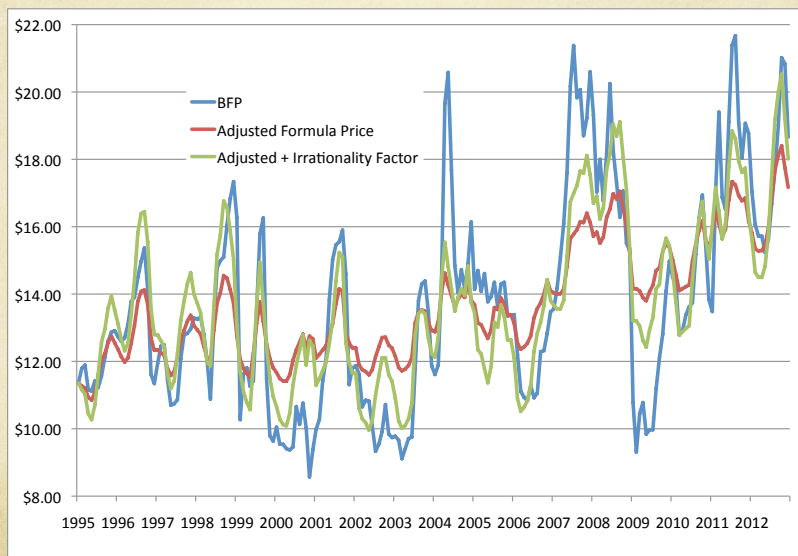
Revenue Neutral Economic Formula



In Summary...

- Ed's formula tracks demand changes well
 - Look at 2007-08, 2009
- The formula tracks producer cost of production quite well
 - Look at 2011-12
- The formula has a productivity governor that can dampen inflationary tendencies
 - Might want to include indices for farm size and plant size as other measures of increasing economies
- We have learned from volatility modeling that if the highs aren't as high, the lows don't have to be as low.

One More Thing...



Maybe I Was Too Hard on Ed



Nah...It doesn't really fit.



Questions?