The Plastics Industry in the 21st Century: *The Rules Have Changed*

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What's Happened to the Industry?

- Productivity growth is shrinking jobs
- Materials costs are diverging regionally
- Globalization and the Internet have heightened competition everywhere
- Consolidation of publicly held companies is being driven by the financial community and increasing government regulation
- *Even so, the industry is growing 2x GDP*

Manufacturing Productivity Growth – That's a Good Thing, Isn't It?

- The good news is that productivity growth keeps companies competitive globally
- The bad news is that high productivity growth cuts jobs in manufacturing
- The mixed news is that job losses are publicized while job creation is not, leading to confusion about what is happening in manufacturing, e.g., is US manufacturing "dying," moving overseas, etc.?

BLS Payroll vs. Household Surveys

- Press reports BLS payroll survey data but omits BLS household survey data, despite BLS cautions using both surveys
- Payroll survey shows medium to large business employment, but household survey shows self-employment and also small business, which accounts for about *one-third* of all manufacturing jobs, *55%* of all jobs in chemicals manufacturing

BLS Payroll vs. Household Surveys

- Between November 2001 to December 2004, from recession trough to end of last year, BLS reported total job gains as follows:

  Payroll survey – +1,395,000

  Household survey – +3,752,000

- The message is clear: real current job growth is in small business and self-employment, not large companies, which are consolidating and restructuring

Is US Manufacturing Moving Offshore?

- US Census data show manufacturing has held its position in the economy (20% of the GDP) by continuing to grow inside the US over past 20 years (1977-1997):
  - A. Number of firms *up* 3%
  - B. Employment *down* 10%
  - C. Productivity *up* 147% (1987-2004)
  - D. Sales *up* 282%
  - E. New capital investment *up* 292%

Cost of Materials in the US

Q. Have polyolefins become commoditized?

A. Yes and no – it depends on how you define "commoditized"

- *Yes*, if you mean returns on investment and earnings that follow (or overshoot) economic cycles both up and down
- *No*, if you mean growth rates in excess of GDP rates

Feedstock Costs Are Pushing US Polyolefin Costs Up

- US polyolefin costs are driven by natural gas prices, which have been at record levels for past two years with no relief likely before 2010 without US energy policy changes
- Fuel uses compete with polymer uses for olefins feedstocks, keeping prices up
- Global polyolefin demand (mainly China) has been so strong that US producers are exporting there *at US domestic prices*

Regional Cost Differences Foretell Long-Term Business Shift

- Middle East natural gas costs are the lowest in the world – gas has been burned as waste for many years in the past, now accounted to cost only pipeline transport and storage
- Substantial Middle East olefin/polyolefin capacity is coming onstream in 2006 and beyond that will be able to out-compete producers in virtually every other regional market

Are We Running Out of Oil and Gas?

- Predictions of the coming exhaustion of oil and gas have been issued regularly since 1860. Are they any more credible now?
- Sharply increased demand from China and India, which do not have sufficient internal supplies, are a leading cause of the upward trend in prices
- Recent wide price *swings* are more due to fear of supply interruptions (war, natural disasters, etc.) rather than oil/gas fields going dry
- Inflation-adjusted price of oil today is much lower than in periods of actual shortage, e.g., 1979-1980

Globalization and the Internet

- In the eyes of many US manufacturers, "Globalization" = China (& India)
- The Internet is also part of globalization:

  it brings competition to virtually everywhere, in an instant, e.g., "supply chain management"
- Both have made outsourcing & offshoring a necessary part of corporate business strategy for survival as well as growth

Globalization (cont'd)

- China is both the US' largest non-NAFTA supplier of manufactured goods <u>and its largest export market</u>
- China requires that companies who set up manufacturing there also share their technology – not only for China to be manufacture at state-of-the-art immediately, but also to become <u>self-sufficient</u> faster

Globalization (cont'd)

- Chinese yuan pegged to the dollar at a low rate, making Chinese goods very competitive overseas as well as China-US increasingly closer trade partners
- China's economy based on state control – state sets export taxes and rebates, selects who gets loans and owns companies in which sectors
- Chinese private debt quality poor – thought to be 30 to 50% uncollectible

Globalization (cont'd)

- China's middle class growing rapidly, buoying economy but also raising expectations for rising affluence, demands for more personal freedom
- Another Asian financial crisis similar to 1997 due to bank loans going sour could lead to political instability
- Political relationship with US is uneasy, e.g., issues over Taiwan, N. Korea, Iran

Globalization (cont'd)

- India claims that it has a bigger middle class market than China today and will rival China's total population by 2025
- India economy growing at rate only a little less than China's but without as much tight state control
- As India has become less socialist, political relations with the US have become friendlier

Currency Exchange Rates

- US Dollar has weakened dramatically vs. Japanese Yen and EU Euro in past 18 months – helping US exporters (but raising the cost of US imports)
- Yuan:dollar exchange rate a point of contention but re-pegging of rate unlikely
- Long-term potential effects of weak Dollar include significant inflation (rising costs of non-Chinese imports, higher interest rates)

The Influence of the Financial Community

- Publicly-held companies face a quarterly challenge: continually increase earnings or fall from favor
- Losing favor means a falling share price
- Falling share price means becoming an acquisition target, as well as putting stock options "under water"
- Privately-held companies face difficulties in raising capital

The Financial Community (cont'd)

- One result of these pressures is that companies find it necessary to spend increasing amounts of time on "portfolio management" vs. business management
- The outcome of portfolio management is mergers, acquisitions, and divestitures – and turmoil in employment
- Portfolio management and restructuring often come at expense of focus on *existing business growth*

The Financial Community (cont'd)

- Cost cutting pressures to raise short-term earnings have forced R&D budgets lower, with more focus on short-term
- Reduction of longer-term R&D reduces new product flow – which allows current business to become more commoditized and less profitable – "Catch 22"

Conclusions

- Most markets for the plastics industry are far from saturated or mature, and they are global as well as local
- Competition is much more widespread and intense than at any time in the past 50 years
- Regional shifts in raw material costs within the next two years is going to affect sourcing of many polymers, to the detriment of US polymer producers

Conclusions (cont'd)

- China and India are "must" markets for all but the smallest companies now, offering high growth – but the opportunities are by no means risk-free
- Publicly-held firms risk takeovers or delisting if they cannot maintain rising earnings – may be better off, if privately-held ("the Huntsman method")