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Recession Impacts Documented

As readers of this newsletter well know, the current recession has taken a severe toll on U.S. manufacturing in general and on the pulp and paper industry in particular. As measured by the real gross domestic product and reflected in Figure 1 (the shaded area denoting the economic recession), the nation is producing less, with real GDP falling from \$11.7 trillion in the second quarter of 2008 to \$11.5 in the third quarter of 2008. And preliminary estimates put the real GDP decrease for the fourth quarter at a staggering 6.2%, as seen by the sharp drop in Figure 2.

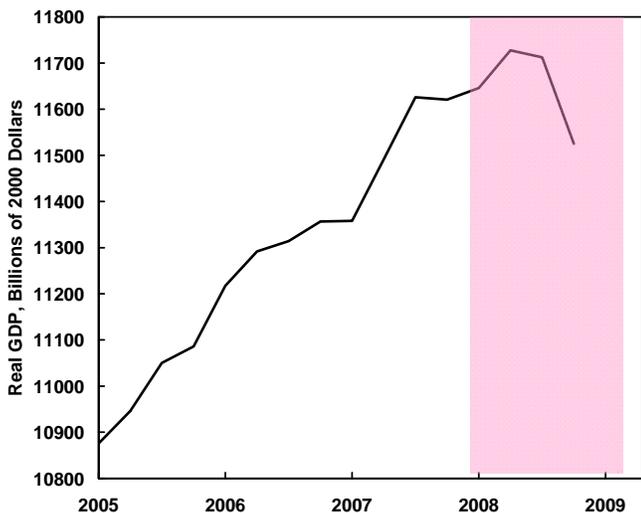


Figure 1. Real GDP, 2005 – 2008

The economic woes of the past months have been felt in all sectors of the economy and the paper industry is no exception. As seen in Figure 3, manufacturing production (blue line) increased subsequent to the recession in early 2000 (March 2001 – December 2001) and through 2007. Production in paper mills (red line), however, in the post-2001 recession period continued a downward trend through 2004 and then remained relatively flat through 2007. Since mid-year 2008, both manufacturing and paper mill production have experienced a precipitous fall, seen in Figure 3 as falling

off a cliff, with a glimmer of hope offered by the small uptick in the most recent period.

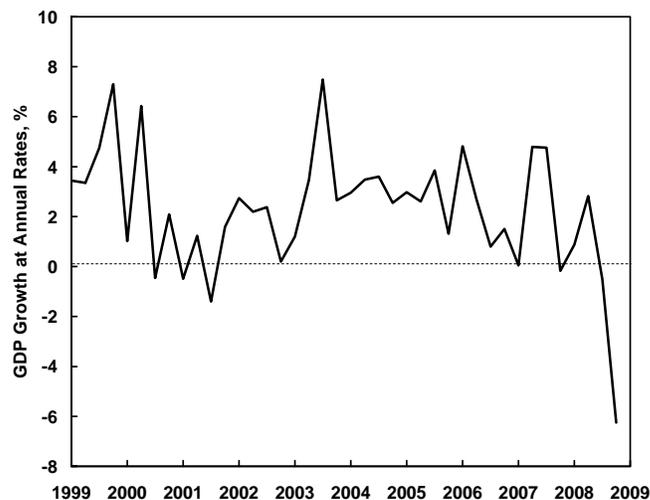


Figure 2. GDP Growth, 1999 – 2009

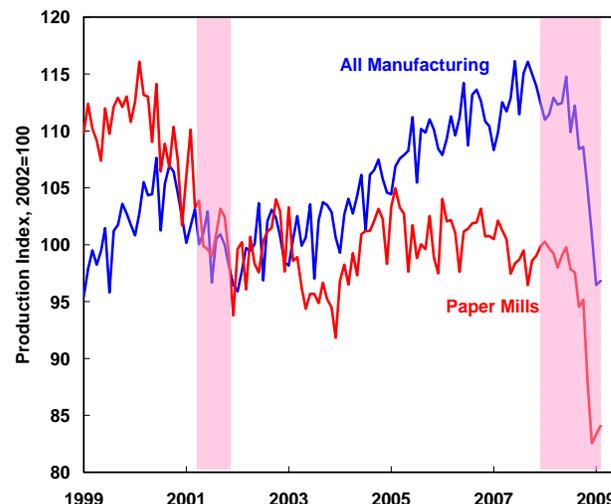


Figure 3. Production: Paper and All Mfg.

Figure 4 documents the overall loss of jobs in the industry and the impact that the current economic downturn has had on employment. In the 2001 recession, the industry lost nearly 10% of its workforce, with some leveling off from 2004 through 2008. Overall, employment in paper mills

has decreased from 586,000 in April 2001 to 450,000 in April 2008. Since April 2008, the industry has lost an additional 25,000. Although the economy and employment will ultimately recover from the current downturn and job losses, data in Figure 4 suggest that the industry's rebound will be in the form of fewer losses rather than positive growth.

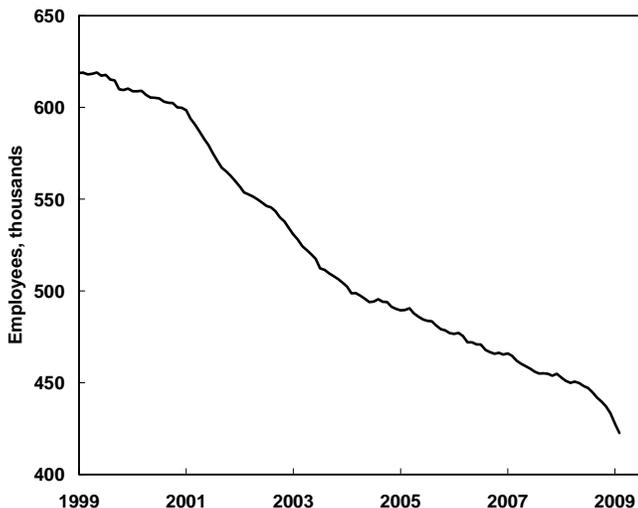


Figure 4. Paper Industry Employment, 1999 - 2009

New Sustainability Report Now Available

The May 2008 issue of this newsletter reported that Georgia Tech researchers, with CPBIS support, were embarking on a survey of sustainability initiatives by Georgia manufacturing industries, including the pulp and paper industry. It followed a 2005 survey by the same researchers, which resulted in a Sloan Foundation Industry Studies working paper that was the most sought after paper on the site during the third quarter of 2007.

A report on the 2008 survey can now be accessed on the CPBIS Web site by clicking on a conspicuous icon at the bottom of the home page. The report, entitled “Practices and Plans for Sustainability in Georgia’s Pulp and Paper Sector: Results from the Georgia Manufacturing Survey 2008” was authored by Jan Youtie of Georgia Tech’s Enterprise Innovation Institute and Philip Shapira and Luciano Kay, both of the School of Public Policy.

The authors conclude the “Introduction” section of their report with the following::

“In summary, sustainability is a subject that encompasses a range of technologies, techniques and outcomes. Included here are those both specific to

energy and environmental areas as well as general process practices. In addition, there is an open question about the link between sustainability practices and business outcomes. The pulp and paper industry provides a context for examining these issues of practice and performance, in part because of its diversity of size and business focus (mills versus converters), but also because of the energy intensity of the industry. These attributes suggest several research questions. To what extent do pulp and paper manufacturers adopt sustainability practices? How do these rates compare with those of other manufacturing industries? And is there a business performance impact associated with reducing non-sustainable features? These research questions are the probes for inquiry for this study.”

The following paragraphs are directly quoted from the “Conclusions” section of the report:

“We showed that reducing energy intensity, measured as energy expenditures per million dollars of sales, is associated with increased productivity in terms of value-added per employee. This presents an opportunity for pulp and paper manufacturers because, as is widely understood and referenced in other studies, energy intensity in this industry is higher than other manufacturing industries by in large. Indeed, large pulp and paper establishments have gotten more efficient than other manufacturing sectors, even though energy prices increased from 2005 to 2007.

Pulp and paper manufacturers were also shown to be “greener” than other industries in that they have adopted sustainability practices into more of their manufacturing processes than other manufacturing sectors. Pulp and paper manufacturers are also more likely to have formally set targets for energy reduction than other sectors. However, pulp and paper manufacturers are less likely to offer sustainability training to employees than manufacturers in other sectors. Even though employee training is a relatively less prominent area of sustainability practice, nearly one-third of pulp and paper establishments plan to introduce sustainability training in the next two years. Facility design, logistics, and marketing/eco-branding are also common areas for planned activity in the next two years. These training and design issues have been shown to be a challenge to implementing

innovations outside of current practices in other studies (Youtie et al, 2006).

We also observed that while many manufacturers have a gap in adoption of sustainability practices between large and small establishments, such is not the case for pulp and paper manufacturers. Pulp and paper manufacturers with 100 or more employees have nearly the same percentage of respondents that introduced sustainability practices into their existing process as did their smaller counterparts. There are differences between mills and other pulp and paper facilities with mills have higher percentages of respondents introducing sustainability into supplier selection, product design, facility design planning, and packaging, while other pulp and paper facilities have higher percentages introducing sustainability practices in selection of raw materials and logistics.

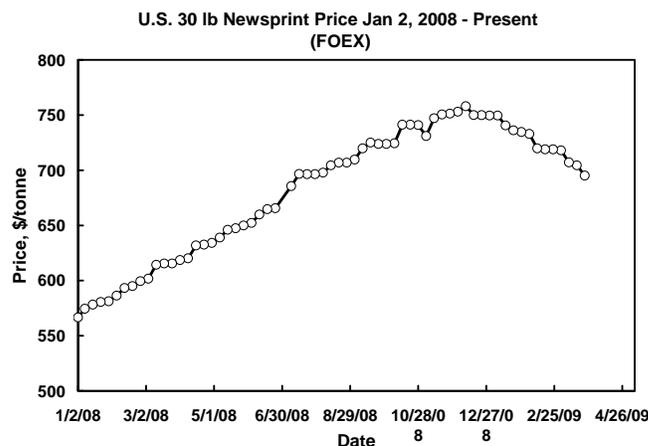
In the case of adoption of new sustainability technologies and techniques, pulp and paper manufacturers are in less of a leading position. Their most common areas of adoption –recycling of production materials and high efficiency lighting– are also the top practices for all manufacturers. Pulp and paper manufacturers place a greater emphasis on energy technologies and techniques such as energy audits but have less activity across the broader range of sustainability practices such as ISO 14000 and life cycle costing. Information about sustainability practices comes from suppliers for more than half of the pulp and paper manufacturers surveyed. More than 60 percent of pulp and paper manufacturers use internal knowledge sources such as energy or environmental managers, other existing staff, or other units in the enterprise group as knowledge sources. Online sources and printed journals are also used by more than 35 percent of pulp and paper respondents. Use of external sources such as customers, competitors, external consultants, or R&D and public organizations are less common. Reliance on suppliers, internal knowledge sources, and online information can provide good information although it may not necessarily lead to innovation in sustainability because these resources are available to all rather than offering distinctive advantage.

In summary, pulp and paper manufacturers have notable strength in energy usage and sustainability practices. To attain a broad-based sustainability position, pulp and paper manufacturers will need to engage in a balanced range of technologies and techniques in addition to their leading position in

energy reduction practices. Investments in employee training in sustainability practices and a diverse array of knowledge sources will be important in this regard.

Statistics Corner: Update on U.S. Newsprint Prices

Our November 2008 report on newsprint prices described a counterintuitive upward trend in the face of falling demand. The latest data show that the trend is now reversed, presumably reflecting recessionary pressures and further decreases in demand.



Upcoming Events

CPBIS-NCSU-PIMA Management Development Program, “Management Development for Enhanced Performance,” Global Learning Center, Georgia Tech, June 22 – 26, 2009. ■

Management Skills for the Paper Industry Turnaround

Guiding the industry through this difficult period will require excellence in management. Now is an appropriate time to prepare to participate in the leadership that will be required to help your company emerge stronger. Register now for the CPBIS-NCSU-PIMA short course, *Management Development for Enhanced Performance*. Go to http://www.cpbis.gatech.edu/education/educationprof/mgt_dev.htm