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## **American Higher Education - - Not What It's Cracked Up To Be?**

In the turmoil of today's economy, manufacturers more than ever need a well educated work force. And, more than ever, we are looking to our institutions of higher learning to provide the people we need. Less and less can we adequately fill our needs with workers who don't have at least a two year college certificate or similar training.

America's system of higher education has long been the world's envy. The GI Bill of Rights after World War II was a massive investment in our veterans and colleges, and it paid off handsomely on both fronts. Recent evaluations by two leading rating organizations showed 167 U.S. schools among the top 500 research universities (33%) and 95 among the top 400 universities (24%). More impressively, the studies showed U.S. schools dominating their top 10 lists, with 7 of our schools on one list and 8 on the other.

However, as is usual with silver linings, some dark clouds appear on the horizon. Some observers suggest that the ratings are based largely on reputation and other subjective factors and do not measure how effectively the schools are training their students. In the words of *Economist* magazine, "The new idea is to look at the end result – how much knowledge is really being imparted". This kind of critique has led the Organization for Economic Cooperation and Development ("OECD") to undertake a new ranking that will attempt to judge the relative quality of the educations the universities are providing. That study is due to be completed in 2010.

Meanwhile, there are some empirical data that show all is not well with American higher education:

- In 2007, the number of students earning bachelor's degrees in engineering declined for the first time since the 1990s. Because undergraduate enrollment has also declined in recent years, the trend is likely to continue. The Bureau of Labor Statistics says we will have 160,000 entirely new engineering jobs by 2016. Filling those positions in addition to replacing retiring engineers will be a daunting task.

- In 2005, a coalition of fifteen major business groups, like the U.S. Chamber of Commerce, the National Defense Industrial Association and the Business Roundtable, projected the need for 400,000 new graduates per year in science, engineering, technology and math by the year 2015. Recently, the group reported that the number of graduates in these fields has flattened out at about 225,000, and much more national action is required to meet the goals.
- Traditionally, a good number of our college and grad school students come from abroad, many of whom choose to stay here and add their skills to our national pool of talent. However, America's share of worldwide cross border students has been rapidly shrinking, from 26.1 percent in 2000, to 21.6 percent in 2005. Major reasons for this decline appear to be snarled bureaucracy in our visa issuing agencies, over-zealous homeland security measures and the failure of Congress to enact immigration reforms that would allow more students of merit to remain here.
- In 1988, the U.S. produced 38 percent of the world's published articles on science and engineering. That number declined to 31 percent by 2001. Meanwhile, the EU had a greater share.
- In 2002, we spent (public and private) 2.6 percent of our GDP on higher education, well in excess of any other industrialized country. Yet our college graduation rate of 34 percent is below the OECD country average. The number of students enrolled in college increased 21 percent between 1995 and 2003, well below the OECD average of 38%. We are now 9<sup>th</sup> among the OECD countries in the percentage of post-secondary school enrollment; we were first 20 years ago.
- Colleges do best when educating students who are prepared. Our statistics on this score are nothing short of abysmal. We rank 16<sup>th</sup> in the rate of high school graduation among OECD countries. A 2003 UNICEF study ranked the U.S. 18<sup>th</sup> of 24 countries on the effectiveness of each country's educational system. The 2006 Program for International Student Assessment of the OECD ranked U.S. 15 year olds 24<sup>th</sup> among 30 developed countries for math skills and 18<sup>th</sup> among 30 in the sciences. About 36 percent of first and second year college students have taken a remedial course since high school.

At a time when it looks as if our colleges are slipping, the price of a college education continues to go up, up, up. In 1976-77, the weighted average tuition and fees at a four year public college was \$617; in 2006-07, it was \$5,836. At private institutions the two figures were \$2,534 and \$22,218. Even adjusting for inflation, the increases were remarkable – 166 percent for public colleges and 147 percent for private.

At the same time, total state and local funding for public colleges has declined every year since 2000, as has the dollars expended per student (from about \$7,000 to \$6,000). In 1977, full professors in public universities received salaries of about 91 percent of their brethren in private schools; today it's about 77 percent.

What's the lesson of all of these numbers? In our opinion, they show that our country has yet another unaddressed problem, one that could rob us of one of our most important assets – an educated citizenry and work force.

Here are this month's specifics on costs:

- Scrap and Pig Iron. Also going up, up, up are the prices for scrap. Both #1 dealer bundles and # 1 busheling (Chicago) reached \$890 per mt. That's a jump of \$115 (13%) in a single month. Pig iron prices rose only a moderate \$20 per ton, but to another record high of \$920 per mt for Brazilian product (cif New Orleans).
- Natural Gas. While not at the all time record high, the Nymex contract price increased again to \$12.96 per mcf. Eleven months ago the price was \$5.35.
- Ocean Freight. The Baltic Capesize Index did actually decline this month, from 11,534 to 9,147.
- Foreign Exchange. At this writing, the euro is worth \$1.57, up two cents from last month. The pound is at \$1.99, up three cents, and the Canadian dollar is worth 98 cents, up a penny.

We call your attention to Corey Steel's remodeled website, still at [www.coreysteel.com](http://www.coreysteel.com). Please look it over and let us know what you think. This letter will be posted on that site and on the international site [www.steelonthenet.com](http://www.steelonthenet.com).