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Gomory: Transferring Production Offshore Is Not Free Trade

The traditional theory of free trade, in place for two centuries, no longer makes sense and must be replaced with a new model, given the radical changes that have taken place in the global economy over the past 30 years, argues Ralph Gomory, president of the Alfred P. Sloan Foundation.

Traditional trade theory has broken down because companies are no longer bound to the interests of their home countries. The link between a company's motivation for after-tax profit and

acknowledged this fundamental change and its implications on economic theory, says Gomory.

Multinational corporations are now highly profitable, but by shifting their production offshore, they are no longer adding to the nation's GDP. "The country and companies are going off in two different directions," says Gomory. "That is something that most people feel intuitively."

Gomory, a mathematician and former head of research at IBM, has become a respected voice among those questioning current free trade policies and theory. His book on the subject with economist William Baumol entitled "Global Trade and Conflicting National Interests" published in 2000 continues to gain adherents, particularly as the

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a nation's desire to improve the wealth of its citizens by growing its GDP have been de-coupled. Companies can now make more profits by moving their production to other countries with cheap labor and subsidies and then exporting that output back to the United States. Most economists have not

Blinder Warns Of A Political Upheaval When Millions Of Skilled Service Workers Lose Their Jobs To Outsourcing

When former vice chairman of the Board of Governors of the Federal Reserve and member of Bill Clinton's original Council of Economic Advisors Alan Blinder declared earlier this year that between 30 million and 40 million high-end U.S. service sector jobs could be outsourced he created a stir. But he's not backing down, despite criticism from many in the economics profession.

Those jobs are "potentially" offshorable, he says in his defense. Just as the United States has not lost all of its manufacturing jobs, despite the fact that they continue to disappear, so, too, will be the case for many millions of service sector jobs. But that should not make many U.S. professionals in the service sector rest easier.

With high-speed Internet connections and an educated, English speaking workforce, India, in particular, is on the cusp of securing hundreds of thousands of coveted U.S. jobs. "Shipping electrons is a lot easier

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Blinder...*(From page one)*

and cheaper than shipping physical goods," says Blinder, a professor of economics at Princeton University and director of the university's Center for Economic Policy Studies. "While still in its infancy, electronic offshoring has already begun to move well beyond traditional low-end jobs, such as call center operators, to highly skilled jobs such as computer programmers, scientists and engineers, accountants, security analysts and some aspects of legal work — to name just a few," he told a recent hearing of the House Science Committee. "There is little doubt that the range and number of jobs that can be delivered electronically is destined to increase greatly as technology improves and as India, China and other nations educate more and more skilled workers."

Despite the political rhetoric about how the United States has the best workforce in the world, "Americans have no biological or neurological superiority to these foreign workers," says Blinder. "Millions of skilled workers in developing countries are educated about as well as Americans are, and those numbers are bound to increase as more poor countries, notably China and India, continue to participate more vigorously and effectively in the world economy."

American workers earn far more than workers in Asia and India because they have access to better technology and physical capital. But in an increasingly globalized economy, physical and financial capital are mobile and move to "where the cheap labor is, thereby raising labor productivity and wages there," says Blinder.

As U.S. service sector jobs are lost overseas, the political reverberations could be substantial, given that there are five times as many service sector jobs than there are manufacturing jobs, Blinder told the politicians. "Unlike factory workers, the people who hold these jobs are not accustomed to competing with low-wage foreign labor," he says. "You can be sure they're not going to like it. Many of the professionals who are seeing or who will see their jobs

become offshorable are vocal and politically engaged. You can judge for yourself, but this strikes me as a politically potent group. Members of Congress will hear from many actual and prospective job losers clamoring for protection."

Blinder believes the preponderance of service sector jobs to be lost in coming years will be those that do not require face-to-face contact with customers. He classifies these as "impersonal service" jobs. "It would be nice to say that only low-skilled jobs are vulnerable while high-skilled jobs will remain in America," he explains. "We may have once believed that, but it does not appear to be so. My research finds hardly any correlation at all between the educational attainment of an

"I remain an advocate of open trade, just as I have always been. Protectionism is a loser's game and it's not a game the U.S. should be playing."

occupation and its susceptibility to offshoring."

Cab drivers, brain surgeons, teachers, psychoanalysts and members of Congress are safe. But people engaged in impersonal services that do not require face-to-face interaction are in trouble and will soon be joining tens of thousands of manufacturing workers "seeking employment in personal service jobs instead," he says. "We will be better off as a nation if government, businesses and schools approach that occupational migration deliberately, thoughtfully and with appropriate policy responses, rather than letting it take us by surprise."

Blinder says his research has been misinterpreted as being hostile to trade. "Nothing could be further from the truth," he says. "I remain an advocate of open trade, just as I

have always been. Protectionism is a loser's game and it's not a game the U.S. should be playing. I believe our country stands to be a big winner from globalization — eventually. Besides, how do you stop electrons at the border?"

The U.S. government needs to start preparing the country for a potentially large-scale exodus of jobs because trade policy "will not look so good to people who lose their jobs," he says. "Some people have accused me of overemphasizing the downsides of service offshoring and under-emphasizing the upsides — such as job gains and cost reductions. There is truth to this criticism, but I have reason. I believe that American policymakers must focus on and ameliorate the downsides of offshoring — both for basic fairness reasons and to preserve the open trading system."

Congress needs to increase the safety net for those losing their jobs by improving the Trade Adjustment Assistance program to provide retraining, unemployment insurance and some form of health insurance to those losing their service jobs to offshore outsourcing, he says. "I can't believe that my

country can't do better" with the TAA program, Blinder comments.

The country needs to re-design its educational agenda for the offshoring of impersonal service jobs, "but hardly anyone in the education business is now thinking about how to do this," he adds.

The country also needs to start investing more in an innovation agenda. The United States "must grab the first-mover advantage in a disproportionate share" of new industries, he says. "It requires that we remain a hotbed of business creativity and innovation." The U.S. government must invest in basic science and research, support scientific and engineering education and improve the tax code. "There is much to do and the time to start is now," says Blinder.

Trade Policy Debates Lead NAM To Propose Changes To Its Constitution

The National Association of Manufacturers has proposed changing its constitution as a result of the controversy over a June 27, 2006, vote by one of its policy committees endorsing legislation that would challenge Chinese currency manipulation. That decision was subsequently over-ruled by NAM's Board, which in turn led to a fiery meeting between NAM president John Engler and a group of domestic manufacturers upset by NAM's policy-making process.

The changes, which need the approval of NAM's board of directors, are intended to make the trade group's policymaking process more transparent and interactive, explains Jay Timmons, NAM's senior vice president of policy. "A lot of people didn't know how policy was made at the NAM and, frankly, it was even difficult for new staff members like me at the time." NAM looked at its constitution to determine what process was in place to allow members to have a say in NAM's policy deliberations.

NAM determined that proxy voting on policy proposals would be eliminated. Only people employed by a member company would be able to cast a vote, either in person at the committee meeting or via telephone.

At the June 2006 meeting of the International Economic Policy Committee 43 NAM members voted against approving the Hunter-Ryan bill, while 38 voted to support it. But 37 proxy voters put support over the top. NAM officials at the time said the small- and medium-sized manufacturers packed the meeting to get the outcome they desired, much to the chagrin of NAM's large multinational members, some of whom threatened to quit NAM if the vote stood. Some of those who voted as proxies for members who could not attend were not NAM members, and, in fact, were some of the association's most ardent foes.

The event had a lasting impact, particularly on NAM's reputation as being a voice for its big members. It led to a contentious meeting between the association's ad-hoc Domestic Manufacturing Group (DMG) and NAM president John Engler, who got rankled when he

was told that he wasn't following the rules. According to one senior NAM executive who was at the meeting, Engler said: "You will always get a reaction from me if you tell me I wasn't straight with somebody. Believe me, I have a reputation for being straight, and I have great faith in the rules. I follow the rules — and I did here. If anybody here said I didn't, let them come forward."

The draft changes to the constitution involve renaming policy committees and subcommittees and directing those groups to recommend policy positions to the board for final approval at "full membership meetings."

"This is going to be a whole new ballgame because they want to prevent us from continuing to function as powerfully and effectively as we have," says one NAM member involved in the DMG. "They don't want us to function effectively and they aren't going to give us opportunities to do that. They will have meetings and do it in such a way as to make it a non-event."

Timmons says that's not the case. The new process is the result of "very valuable conversations we had with small guys and specifically conversations" with Dave Frengel, an executive with Penn United Technology and coordinator of the DMG. "What we really wanted to do is to make our policymaking process interactive because he brought up some very good points," says Timmons.

NAM wants to eliminate non-NAM members from attending its meetings and voting as a proxy on policies without, in some cases, their even having any involvement in manufacturing. "We've seen that

is some instances and it isn't fair to the membership," says Timmons. "We've tried to focus it on the ability of members to participate more robustly than in the past."

Contacted by *Manufacturing & Technology News*, Frengel said that members of the DMG are "not going to give up on trying to have a voice there." The leadership of NAM "still claims that it speaks for [domestic] manufacturers and they haven't told us yet that they have changed their mind." Members of the DMG have asked if NAM really wants to give a voice to the small guys, "because we need a voice," says Frengel. "And they said, 'Yes, we do.' To one degree or another — to the extent that we found out that they are or aren't going to do that — we're staying involved or are leaving."

Timmons says that the policy making process at NAM will get a new boost of energy with another proposed constitutional change. All NAM policies would sunset after four years. "We actually have policies on the books that refer to legislation from the 1940s and the names of government programs from the 1930s," he says. "We really have to refresh and revise our policy. Having that sunset clause is a trigger for all of our policy committees to review our policies on a regular basis and make sure they are current and reflect the positions and desires of our current membership." The process NAM is putting into place "will encourage more participation and allow more input from our members in the policymaking process," says Timmons.

The DMG plans to meet on September 19, followed by a meeting of the International Economic Policy Committee on September 20. After that meeting "everyone will scatter and then we'll have to sleep on it and through e-mail and phone calls we're going to have to decide what to do," says Frengel. "DMG is not an organization that has agreed to move in unity. It's all individuals using it as a resource and deciding on their own what to do."

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trade deficit continues to remain so high.

The trade deficit is not a petty concern, Gomory notes. It is "dangerous," he said in a recent interview with *Manufacturing & Technology News*. "We are going into debt to the tune of 6 percent of our GDP each year and we are not finding a way to pay it back. In truth, we are going into debt each year at a greater rate than the year before. A country cannot forever consume more value than it creates," says Gomory. "This is an important issue: when you owe an amount that you cannot pay back, you will find that you are increasingly under the control of the lender. We must balance trade.

"If we really had a free market system out there, it would balance automatically. It shouldn't be inherently difficult to balance trade because it's something that should happen unless it's screwed up. A starting point is to enforce agreements, but our negotiators really represent the interest of the multinational companies."

Economic theory "says absolutely nothing that suggests that tearing down your own capability and building it abroad is good," Gomory says. "That distinction is simply not presented." Why, Gomory is asked? "Although there are many references in the economic literature to this distinction, most economists who understand the point are reluctant to discuss it because of their fear of protectionism.

"I've talked to a fair number of people on this," he recounts. "If you want to do anything about the transfer of capabilities, you're labeled as interfering with free trade. But it isn't free trade." Gomory argues that economic theory has no basis for saying it is good to shift a factory overseas. "In fact, it is almost certainly bad. But people just blindly mix that with trade. That piece of confusion is very hard to overcome."

The Asian countries have figured it out. They are exploiting the divorce between a country's GDP and its companies' desires for profits. "They are saying, 'If you want profits, come over here and we'll give you tax breaks. You'll get profits and we'll get GDP. Your profits are only a small fraction of what you add to our GDP.'"

As production goes offshore, wages follow, as does the wealth of a nation. Americans have been told that this shift of production is inevitable and that it will only impact those workers involved in noncompetitive industries. "We are assured that it is bound to make us richer in the long run after the pain of change has been absorbed," Gomory told a recent hearing of the House Science Committee. "...There is no basis for these claims. Analysis shows that the results can go either way, so the people of this country should not count on some long-range outcome that must inevitably make up for present pain. That day may never come."

From this angst, rises protectionism, an unwelcome proposition. But if protectionism becomes a prevalent policy option, then the United States would forego the benefits of trade, Gomory argues.

There is a better answer. Gomory proposes changes to the U.S. corporate tax code to encourage companies



Gomory: "[Economic theory] says absolutely nothing that suggests that tearing down your own capability and building it abroad is good."

to invest in high-value products and services made in the United States. If the United States wants GDP then it should provide companies that contribute most to GDP with a lower tax rate.

"If you measure the value added per hour of workers, you can take that whole value add of the company and divide it by the number of workers to set the corporate tax rate," he says. This can be made revenue neutral: a low corporate income tax is assessed to companies with higher value-added per worker; a higher corporate income tax would be assessed for low value-added companies. "That is an inducement for companies to invest here," he says. "We're not picking on any company. We're not saying it's R&D. What we're saying is the companies that can figure out how to produce stuff in the country will be rewarded."

In his book, Gomory suggests that it is important for countries to preserve their "retainable" industries. "Retention of an established position, as in the case of semiconductors, steel and automobiles, proved to be a task far less difficult than the creation of an equivalent industry from scratch," he writes.

Gomory likes the fact that his views are gaining an audience. "For the first time, people are saying that there is something wrong and here is an explanation,

(Continued on next page)

Cities With The Best Job Growth, And Worst

The worst job markets continue to be located in the industrial heartland of the country, according to recent data from the Bureau of Labor Statistics and MBG Information Services. Flint, Mich., was the nation's worst job market for the year ending in July, with a decrease of 4,900 jobs, or 3.3 percent of its workforce, followed by Bay City, Mich. (2.6 percent decline or 1,000 jobs); Atlantic City, N.J. (2.6 percent decline or 4,100 jobs); Anderson, Ind. (1.9 percent decline or 800 jobs); Saginaw, Mich. (1.9 percent decline or 1,700 jobs); Elkhart-Goshen, Ind. (1.9 percent decline or 2,500 jobs); Jackson, Mich. (1.9 percent decline or 1,100 jobs); Holland-Grand Haven, Mich. (1.7 percent decline or 2,000 jobs); Lima, Ohio (1.6 decline or 900 jobs); and in tenth place Youngstown-Warren-Boardman, Ohio (1.4 percent decline or 3,500 jobs). Detroit lost the most number of jobs over the year: 18,000 or 0.9 percent of its workforce.

The cities with the best job growth were: Gulfport-Biloxi, Miss. (10.1 percent growth or 10,000 new jobs); Provo-Orem, Utah (6 percent growth or 10,600 new jobs); Columbus, Ind. (5.8 percent growth or 2,500 new jobs); Grand Junction, Colo. (5.6 percent growth or 3,300 new jobs); McAllen-Edinburg-Mission, Texas (5.5 percent growth or 10,600 new jobs); Wichita, Kansas (5.3 percent growth or 15,300 new jobs); Jacksonville, N.C. (5.1 percent growth or 2,200 new jobs); Topeka, Kansas (5.1 percent growth or 5,500 new jobs); Midland, Texas (5.1 percent growth or 3,200 new jobs) and in tenth place Kennewick-Richland-Pasco, Wash. (4.8 percent growth with 4,200 new jobs). The most number of new jobs were created in Austin, Texas, with 33,000, followed by Salt Lake City with 28,600, and New Orleans with 21,900.

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plus something we can do about it," he comments. "It's a system problem, not an evil man problem; I know this because I'm one of the evil men." He says this because he sits on the board of Lexmark, a printer company. "As a director, I look out for the profits of the shareholders," he explains. "We have an incentive to make a profit. In Lexmark's case, it meant moving production to lower-cost countries. It's a system problem, and we need to change the system," Gomory says. "At the moment there is no will. The people in our government still are treating the companies as if they represent the country, and they do not."

As he and his co-author, well-known economist William Baumol, write in their book published by MIT Press: "A country that ends up producing little of value will have little to consume at home and little to trade abroad, and will have a low standard of living."

Companies Struggle To Improve Innovation

Executives with major companies worldwide are becoming increasingly frustrated with the returns they're making on investments in innovation, according to the Boston Consulting Group. Of the nearly 2,500 executives BCG surveyed only 46 percent said they were satisfied with their returns on innovation spending, down from 52 percent in 2006. Sixty-six percent said they considered innovation to be a top-three priority, down from 72 percent in 2005. Sixty-seven percent said they expect to increase spending on innovation, down from 72 percent the year before.

Most companies feel they should be getting more and better new products and services from innovation spending, stronger internal processes, improved customer experiences and more effective business models. "Yet in many cases, these benefits remain elusive," says James Andrew, author of BCG's "Innovation 2007" report. "They're increasingly frustrated."

"Companies believe it is getting harder to innovate, but 'that is not the case,' says Andrew. "Innovation has always been hard. Creating an innovative company takes a lot of work — often rewiring the DNA of the organization. But it's worth the effort. Successful innovation is the surest way to build asset value and shareholder return."

The companies that survey respondents said are the most innovative are also the most successful, outperforming their peers by nearly 400 basis points per year in terms of stock price. The biggest obstacles to innovation are having a risk adverse culture and a failure to focus on speed.

"Most executives (54 percent) said their companies did a poor job moving from idea generation to initial sales quickly enough," says the survey. This view was particularly true among industrial and manufacturing executives (65 percent), energy companies (64 percent) and consumer products makers (61 percent).

The two most popular metrics used to measure innovation were customer satisfaction (57 percent) and overall revenue growth (51 percent). But the least used metrics are the ones that could be the best metrics for driving better performance: time to market (used by only 18 percent) and return on innovation investment (used by only 22 percent), says BCG.

Only 64 percent of American companies said they will increase spending on innovation, versus 76 percent of Asian companies and 74 percent of European companies.

Apple remains the most innovative company among those surveyed followed by Google, Toyota, General Electric, Microsoft and Procter & Gamble. "The most innovative organizations excel not just at idea generation but also in capabilities necessary to transform those ideas into profits," says Andrew. "In our experience, the vast majority of companies have an abundance of ideas, but only a handful are capable of consistently generating profits from those ideas. Companies that can do that are the true innovators."

Cato Says Quit Whining About Manufacturing Decline

The United States manufacturing sector is experiencing record growth, record profits, record output, record exports and record return on investment and is in no need of legislative or protectionist support from Washington, according to the Cato Institute. The United States is producing two-and-a-half times more output than China, despite the loss of three million jobs since 2000. Since the nadir of the manufacturing recession in 2002, U.S. manufacturing job declines have "leveled off to historic losses," says Cato.

The perceived ill health of the U.S. manufacturing sector is a "fallacy," says the institute's Center for Trade Policy Studies in a report "Thriving in a Global Economy — The Truth About Manufacturing and Trade."

Between 2002 and 2006, the U.S. manufacturing sector's revenues increased by 22.5 percent to \$4.99 trillion, and profits jumped by 49.5 percent to \$353 million.

Yet more than two dozen protectionist trade related bills have been introduced in Congress that "rely on the presumed precariousness of U.S. manufacturing as justification for the legislation," according to Cato. "Justification for those bills is predicated on the belief that manufacturing is in decline and that the failure of U.S. trade policy to address unfair competition is to blame. But those premises are wrong."

The one manufacturing myth that is particularly galling is the loss of three million jobs. "That number has been cited and repeated so frequently that it is treated with a certain solemnity, a false significance, which far exceeds its utility as a measure of the condition of U.S. manufacturing then and now," says the report. "The fact that the U.S. manufacturing sector has recovered fully from its recession in

2001-2002, and has even reached new heights with respect to several important indicia, has been nearly totally lost in the political debate about what must be done to save manufacturing."

The Michigan congressional delegation is particularly critical of the Bush administration for, in the words of Sen. Carl Levin (D-Mich.), "not lift[ing] a finger to support manufacturing in America," notes the Cato study. This rhetoric can be expected and should be dismissed. Michigan's economic growth from 2005 to 2006 was dead last among 50 states. "The strength of manufacturing outside of Michigan is strong evidence that unfair trade toward it are not to blame for Michigan's problems," says Cato.

"Manufacturing's woes in that state likely have more to do with the relatively high level of labor force unionization, restrictive work rules and state laws and regulations that deter investment and business formation there."

Politicians would do well to start listening to manufacturing officials who have described the real situation facing manufacturers, argues the Cato Institute. The National Association of Manufacturer's Frank Vargo's recent testimony before Congress "should be required reading for all lawmakers who are considering supporting trade legislation on behalf of manufacturers," according to Cato. Vargo said that it is "common to hear that U.S. manufacturing is on its last legs, that we have been hollowed out and that our production base has moved overseas. A look at the factory shipments and industrial production...shows this is not true."

Ed McGaffigan

Ed McGaffigan, a commissioner on the Nuclear Regulatory Commission and former top science and technology aide in Congress, passed away on Sunday, September 2, of melanoma. He was 58 and cast his last vote as the longest serving NRC commissioner in history the previous week. Prior to joining the NRC, he was the top legislative aide on the staff of Sen. Jeff Bingaman (D-N.M.).

McGaffigan was rare individual in Washington: a trained scientist who worked effectively in a long-term, high-profile political capacity promoting the sciences. He was a physics undergraduate major at Harvard and received master's degrees in physics from the California Institute of Technology and public policy from the Kennedy School of Government. He served for 13-and-a-half years on Bingaman's staff.

His efforts in the late 1980s and early 1990s on issues related to the defense industrial base and U.S. competitiveness put his boss in the national spotlight. He help spur the Reagan administration to make substantial investments in dual-use technologies, many of which drove the U.S. economy throughout the 1990s, and to adopt trade policies that led to the retention and growth of the U.S. industrial base. Nothing of the sort has been tried since, and Reagan remains a hero. So, too, among those fortunate to know him, McGaffigan.

McGaffigan "was a major part of everything we did here in the Senate — everything I was involved in for many years," Bingaman told MTN. "He had an intellectual capacity that was unmatched and he had devotion to his work which was unmatched. Besides being a extremely decent human being, he was a superb person to work with."

When McGaffigan left Bingaman's staff to join the NRC in 1996, "his departure left a void in the Senate," says Bingaman. Without his passion and commitment, subject areas related to long-term investment to assure the future prosperity and security of the country have languished. "He pulled all these issues together," says Bingaman. "We are searching for that kind of leadership. He was an inspiration."

MARKETS

The United States **port industry** is booming. Port sector businesses generated \$1,976 billion last year in revenue. Of this amount, \$207 billion came directly from businesses involved in handling international waterborne commerce, according to the American Association of Port Authorities (AAPA).

A total of 507,448 Americans held jobs in the nation's seaports, including such jobs as terminal operators, longshoremen, freight forwarders, steamship agents, ship pilots, tug and towboat operators, chandlers, warehousemen, as well as jobs in dredging, marine construction, ship repair, trucking and railroad industries.

"These direct port-sector jobs supported another 630,913 indirect jobs due to purchases of food, housing, transportation, apparel, medical and entertainment services," says the AAPA. Port-sector businesses paid more than \$102 billion in federal, state and local taxes.

"The tremendous growth in overseas trade volumes moving through our ports in the past decade has been a huge boon to the American economy," says Kurt Nagle, president of AAPA. "The jobs these imports and exports create are spread through the country, not just in port cities, making them a vital part of our nation's economic fabric."

The total of direct and indirect jobs associated with ports stood at 1,444,650. Another 7 million people were employed by firms involved in handling imports and exports, such as retailers, wholesalers, manufacturers, distributors and logistics companies, says AAPA.

The U.S. **cruise industry** grew by 10 percent last year to \$35.7 billion in revenue. The industry supported 348,000 American jobs and paid \$14.7 billion in wages. "Direct purchases by the cruise lines for goods and services such as food and beverage, fuel, equipment, business services, port services, vessel maintenance and repair as well as purchases by crew and passengers of goods and services related to cruising, including pre- and post-cruise stays, airfare and lodging, totaled \$17.6 billion in 2006," according to the Cruise Lines International Association.

Embarkments from U.S. ports increased by 4 percent last year to 9 million, accounting for 78 percent of the total global cruise patrons. Worldwide, 12 million people took a cruise last year, an increase of 7 percent over 2005. The cruise industry fleet last year increased to 151 vessels with a combined capacity of 249,691 lower berths. The industry operated in 2006 at an occupancy rate of 104 percent.

The U.S. **printed circuit** board industry is in a trough. Shipments of rigid PCBs are down 10.4 percent from January through July of this year, and bookings are down 14.6 percent. Compared to June, July shipments were off by 17.7 percent and bookings were down by 17 percent, according to the IPC the Association Connecting Electronic Industries. The North American flexible circuit book-to-bill ratio declined but remained positive at 1.04 in July.

The **air conditioning and heat pump market** is beginning to feel the impacts of a slowing economy. July shipments of air conditioners and heat pumps were down 3 percent from the same month in 2007, to 637,606 units, according to the Air Conditioning and Refrigeration Institute. Year-to-date combined shipments are down 11 percent from the same period last year to 4.2 million units. Heat pump shipments stood at 169,417 in July, down 7 percent from July 2006; and year to date sales (1.2 million) are down 11 percent from the same period in 2006.

DOD's R&D Account Can't Be Deciphered

The Government Accountability Office has concurred with anyone who has ever tried and failed to figure out the budget for the Defense Department's Mantech Program or for the Defense Advanced Research Projects Agency: there is no way of understanding DOD's R&D budget documents.

"Neither the RDT&E program element code structure nor the budget exhibits consistently provide accurate, clear and complete information on the nature of DOD's proposed research and development efforts," concludes GAO in an audit. One-third of DOD's requested funds for R&D are for efforts "that are not identified as research and development in their program element codes," says the GAO. "In addition, a majority of the remaining funding request misidentifies the budget activity as it is stated in program element codes."

There was no way to determine if research and development projects fall under the classification for basic research, management support or development.

DOD requested \$73.2 billion for 2007 for research programs, but its budget documents are "difficult to understand, frequently lacked information about the accomplishments and planned efforts of each project, lacked appropriate cross-references between efforts and were frequently missing key schedule data," says GAO.

The agency found that DOD does not require identification of any RDT&E effort in program element codes. Regulations governing the structuring of the coding are vague. "This results in budget exhibits being insufficient as decision-making tools, according to DOD officials," says GAO in its report (GAO-07-1058), located at <http://www.gao.gov/cgi-bin/getrpt?GAO-07-1058>.

Best Mfg. Practices

The Best Manufacturing Practices Center located at the University of Maryland and funded by the Office of Naval Research has published two new surveys of best practices: one describing those at the University of New Orleans' College of Engineering, and another for the Raytheon Network Centric Systems Manufacturing Center. They are located at: <http://www.bmpcoe.org/bestpractices/surveys.html>.

Manufacturing Jobs Take Another Monthly Hit

Manufacturing employment continues to get hammered. In August, manufacturing establishments shed 46,000 jobs. Manufacturers have reduced employment by 215,000 workers over the past year, according to the Bureau of Labor Statistics. There are now 14,003,000 people working in the U.S. manufacturing sector.

The automotive sector lost 11,000 jobs in August (to 983,000), followed by food manufacturing (-7,400), machinery (-7,000), wood products (-7,000), furniture (-4,000), semiconductors and electronic components (-4,000), apparel (-4,000) and textile mills (-2,000).

Overall, the economy shed 44,000 jobs in August. The construction industry lost 22,000 jobs.

But some areas showed growth. Retail trade added 12,500 jobs; health care and social assistance added 49,000 jobs; leisure and hospitality added 12,000 jobs, with food services and drinking places adding 24,100 jobs; professional and technical services added 17,000 workers. Government jobs fell by 28,000 to 22,154,000.

Those working in the manufacturing sector made an average weekly wage of \$714.56, up from \$693.43 for the same month in August 2006. You don't want to work in the leisure and hospitality industry. The average weekly earnings were \$269.62. Those working in retail trade had average weekly earnings of \$388.51. Education and health services workers received average weekly earnings of \$587.78. Utility workers are the highest paid of all the work categories. They make an average weekly wage of \$1,183.22, far better than the weekly wages of those in the "professional and business services" sector (\$699.13) and "financial activities" (\$697.93).

USTR Files Case Against China For Protecting Pirates

The United States Trade Representative has filed a case with the World Trade Organization's dispute settlement panel aimed at challenging China's legal system for protecting and enforcing copyrights and trademarks. After three months of negotiations, the USTR and China have not been able to resolve differences in the protection of intellectual property rights in China. "That dialog has not generated solutions to the issues we have raised, so we are asking the WTO to form a panel to settle this dispute," says USTR spokesman Sean Spicer. China has taken some steps to resolve differences, but "we still see important gaps that need to be addressed," says Spicer. The USTR filed the case on Aug. 13.

The USTR says China continues to provide pirates and counterfeiters "a safe harbor to avoid criminal liability." The United States wants China to destroy IPR infringing products seized by Chinese customs authorities. China allows for these products to be resold after their fake labels are removed.

This is one of five WTO cases the United States has brought against China and the third case against China in which the United States has requested a WTO dispute settlement panel.

OMB Watch Claims Chemical Companies Siderail Cancer Research

The chemical industry is playing games with the National Institutes of Health's National Toxicology Program, resulting in the obstruction of research on cancer-causing chemicals, according to OMB Watch. The chemical industry is using a two-paragraph provision in the 2000 Data Quality Act to remove chemicals from the National Toxicology Program's Report on Carcinogens (ROC), says OMB Watch. "As a result, government agencies and public health officials have been denied access to the latest information on the most dangerous toxic chemicals," says the group in a report entitled "An Attack on Cancer Research."

"As industries succeed in slowing down National Toxicology Program procedures, others may be emboldened to misuse the law by promoting delay," says the report. "The Data Quality Act process has the potential to drain federal funds and divert resources away from the important work of protecting public health."

The Report on Carcinogens is used to guide regulations on toxic chemicals that can cause cancer or genetic mutations. It was first published in 1980 with 26 hazardous chemicals and now includes more than 1,700. The 12th Report on Carcinogens, the most recent, was delayed by more than a year due to "industry's systematic attack" on the publication, says OMB Watch. "It appears industry challenges fall into two strategic categories, delay of agency activity and elimination of information...Industries have submitted information quality challenges in an attempt to restrict public release of scientific findings....The ROC is often viewed as a significant threat to companies' bottom lines....Because having a chemical listed in the Report on Carcinogens can result in significant financial consequences, industries often attempt to avoid Report on Carcinogens listings. In recent years, they have found the Data Quality Act to be a useful tool to prevent and delay the study of chemicals. Almost every aspect of the review and nomination process has been attacked by industry and National Toxicology Program staff time has been squandered rebutting frivolous challenges."

Companies and organizations submitting challenges include the Chemical Products Corp., the Nickel Development Institute, the Styrene Information and Research Center, the American Chemistry Council, the Center for Regulatory Effectiveness and Airepel. All of the challenges have been denied.

For a copy of the report go to <http://www.ombwatch.org/info/NTPDataQuality.pdf>.

OECD REPORT: CHINA IS BECOMING AN R&D FORCE

China is well on its way to becoming the world's largest exporting nation "and is regaining its former historic place in the world economy," according to the OECD. But the majority of its exports of information and communication technology products are primarily from foreign companies that have opened plants there, and the country is beset with problems associated with inducing economic growth based on innovation and investments in science and technology, says the OECD.

China has set a goal of creating an innovation oriented society by 2020, which "seems likely," says the OECD in its "Review of Innovation Policy, China, Synthesis Report." Its intention to invest heavily in R&D "would allow China to emerge in time as a significant contributor to global innovation and to benefit better from international technology flows."

But the country must overcome a "large scope" of issues for it to become an innovation powerhouse. It has problems with an educational system that stresses passive learning and exam-based performance; it lacks corporate governance systems driven by market forces rather than heavy investment in government owned enterprises; its financial system is underdeveloped with severe shortages of capital for new ventures. It doesn't have a legal and regulatory structure for the creation of venture capital, or protecting intellectual property. There are few firms and professionals with the experience necessary to invest in high-risk or long-term ventures. The country's standards system is skewed to protecting current industries.

Nevertheless, research spending in China has been growing at a "stunning annual rate of almost 19 percent since 1995 and reached \$30 billion in 2005, the sixth largest worldwide," says the OECD. "The R&D/GDP ratio has more than doubled in a decade and reached 1.34 percent in 2005, compared to only 0.6 percent in 1995. This is a spectacular achievement, but does not mean that the innovation capabilities of the Chinese economy are already on a par with those of OECD countries which have a similar R&D intensity of production."

Intel CEO Barrett: India And U.S. Are A Lot Alike

Intel has bypassed India for a new semiconductor factory in Asia because the government there was too slow in making decisions, according to a report in the Economic Times of India. "India has the same issues as the United States," Intel chairman Craig Barrett is quoted as saying. In India "it is a democratic government. The decisions are slower to be made. You have to listen to all the constituencies. In China, they are much more direct...In China, it is a central planning form of capitalism." As a result, Intel recently announced new factories in Vietnam and China.

India's economic development is four- to five-years behind that of China, but it's not hard to predict what India will look like in coming years, said Barrett. "You just look at what happened in China in the last four to five years; all those things will surely happen in India," he is quoted as saying. "We were in serious discussion for chip manufacturing in India, but the government was a bit slow on semiconductor manufacturing proposals."

Consultant: Be Careful Outsourcing Design Work

Manufacturing companies should be "extremely cautious" when they hire overseas outsourcing firms to do product design and engineering work, says Rai Chowdhary, a specialist in Indian outsourcing and quality systems.

"There is a great disparity in education, experience and competence in the engineering community overseas," says Chowdhary. "Few institutions of higher learning can deliver the level of education needed for today's intricate design work. The experience and expertise for developing complex equipment and technical systems takes much experimentation and trial and error. A majority of the workforce is still being educated in schools using labs and curricula developed a half century or more ago. This is especially true in developing countries; after all, many of them were passive players in the Industrial and Technology Revolutions and are latecomers to the Information Age as well."

Graduates from the top universities in many developing countries are being siphoned off by large multinational companies. These graduates usually end up working overseas or are doing non-technical work. "This exacerbates the problem because local businesses in these countries are left a competency vacuum that is hard to fill," says Chowdhary, based in Austin, Texas. "A common complaint among Indian business leaders is that well-qualified engineering staff is increasingly difficult to find. Often they hire students up to one year before graduation and new graduates are assuming higher levels of responsibility earlier in their careers." Companies are not spending much time training their recent engineering recruits.

"This situation is pervasive and unlikely to change any time soon thanks to a myopic focus on cost-cutting and increasing profits," says Chowdhary. "The world is increasingly dependent on workforces of India, China and the Pacific Rim. Design errors can occur more frequently, and escape notice, causing failures in the field. Business leaders should not ignore the new risks posed by products designed and developed in such regions."

Mexican Truck Scheme Succumbs To Political Pressure

The Bush administration's decision to allow 100 trucking companies in Mexico to drive their cargo to destinations throughout the United States has been beaten down in the House and Senate after drawing opposition throughout the country. The Senate approved action on September 11 by a vote of 75 to 23 to stop the pilot program, after similar action was taken in the House of Representatives. Trucking organizations, labor groups, environmentalists and members of Congress filed legal motions against the Bush administration to halt the pilot program.

The Department of Transportation's "Cross-Border Demonstration Program," which would have provided Mexican domiciled trucks full access to U.S. highways, "not only poses a serious threat to our national security and the safety of American drivers, it also endangers American jobs and our economy," claimed Rep. Walter Jones (R-N.C.). Jones helped delay the program after it was announced last February by inserting provisions in the Iraq War Supplemental on May 25. That law said the program could not begin until U.S. trucks gain similar access to Mexico and the Transportation Department's inspector general provided Congress with proof that there are mechanisms in place to ensure that Mexican trucks comply with federal safety laws.

The Owner-Operator Independent Drivers Association (OOIDA) filed an injunction against the Department of Transportation to halt the program. "I am honestly stunned by the administration's contempt toward the American public, Congress and the rule of law," said Todd Spencer, executive vice president of the group. "They are determined to open our highways to Mexico-domiciled trucking companies regardless of the public's concerns and what's in the law books. It is truly amazing that the administration is choosing to ignore Congress and the people they were elected to represent."

Public Citizen filed suit in the U.S. Court of Appeals for the Ninth Circuit in San Francisco. Public Citizen was joined by the International Brotherhood of Teamsters Auto and Truck Drivers, the Sierra Club and the Environmental Law Foundation. "There is no harm in delaying the program for a short time to make sure it is done right," said Public Citizen attorney Bonnie Robin-Vergeer.

Passage of Senate Amendment 2792 to HR 3074, the

appropriations bill for the Department of Transportation, was driven by "fear and not the facts surrounding DOT's actions to date to ensure the safety of the American public in conducting this pilot," said Maria Luisa O'Connell, president of the Border Trade Alliance. Added Stephanie Caviness, president of the Foreign Trade Association in El Paso, Texas: "DOT's pilot program would have increased the efficiency of trade conducted at our border with Mexico providing well-needed relief to our already over-burdened infrastructure."

The National Association of Manufacturers also supported the effort, saying it would spur manufacturing growth in Mexico and the United States and improve efficiency by eliminating the need to transfer cargo from one truck to another.

Senators voting against the amendment to delay the program included Wayne Allard (R-Colo.), Robert Bennett (R-Utah), Christopher Bond (R-Mo.), Jim Bunning (R-Ky.), Richard Burr (R-N.C.), Thad Cochran (R-Miss.), John Cornyn (R-Texas), Jim DeMint (R-S.C.), Pete Domenici (R-N.M.), Chuck Grassley (R-Iowa), Judd Gregg (R-N.H.), Chuck Hagel (R-Neb.), Kay Bailey Hutchison (R-Texas), Jon Kyl (R-Ariz.), Joe Lieberman (I-Conn.), Trent Lott (R-Miss.), Richard Lugar (R-Ind.), Mel Martinez (R-Fla.), Mitch McConnell (R-Ky.), Lisa Murkowski (R-Alaska), Ted Stevens (R-Alaska), John Sununu (R-N.H.) and David Vitter (R-La.).

The amendment was sponsored by Byron Dorgan (D-N.D.). The pilot program is the result of a 2001 ruling by a NAFTA tribunal that ordered the United States to fully open its border to Mexican truck companies.

Mfg. Workers Lose Their Spirit

Manufacturing workers aren't feeling too optimistic about their job prospects. In its monthly employment index, the Hudson Institute says manufacturing worker confidence slipped 2.8 points in August to 85.1, far below the level of a year ago, when it stood at 97.4. The manufacturing employment index is the lowest of all industries, with the average being 99.2. The industry with the highest level of worker confidence was legal (118.6), followed by the accounting and finance industry (113.1).

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