

# BRITISH COLUMBIA INDUSTRIAL DEVELOPMENT BULLETIN

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A bulletin concerned with industrial advances affecting the B.C. economy

## International Outlook

The latest International Monetary Fund forecast predicts that the major industrial non-Communist countries' economies will grow an average of 3.5% this year and 2.9% in 1990, following on the 4% growth of 1988. The IMF also indicated that a global recession appears unlikely, provided inflation can be contained.

In the first half of 1989 exports and business investment each accounted for 1/3 of the growth in the United States GNP. The persistent strength of the American dollar does not, however, auger well for the continued growth in merchandise exports. Additionally, the fact that much of the money associated with 1989's 10% increase in capital spending has already been spent suggests that the driving power of these two factors will lose momentum in 1990.

As exports and capital spending become less robust, the importance of consumer spending will become pivotal to the continued short-term growth of the U.S. economy. Steady job and income growth in 1989 has kept domestic demand chugging along with a sharp third quarter increase due to clear-out incentives for automobiles. This consumption will likely slow in the fourth quarter and plod through 1990 as moderating growth eases interest rates. Growth estimates for America's GNP are just over 2% for both 1989 and 1990.

### What's inside

- Instant Prototypes
- Surfs Up in Seattle
- Ultra Health Food
- Potable Sewage
- Baby Boomers in the 1990's - Big Four O
- Export Trade Month

## Canadian Outlook

The Canadian economy will see growth slow to just under 3% in 1989 from the 5% experienced last year. The Bank of Canada's tenacious opposition to inflation has kept interest rates and the value of the Canadian dollar high, which has in turn negatively impacted goods exports.

The sluggish export performance has however, been partially offset by respectable consumer spending growth, forecast at 3% for the year due to tax reform refunds and income growth. The economy has also benefited from a surprising 10% increase in business investment.

Inflation continues to grow, currently hovering around 5%, largely as a result of sales and excise tax increases associated with recent federal and provincial budgets. Although murmurs of a recession for 1990 have become less audible, economic growth will likely soften to around 1.5% in 1990 as demand for resource products and automobiles continues to suppress export growth and business investment tails off.

## Provincial Outlook

Someone should tell British Columbia that the boom times are over because you wouldn't know it from living here. Real gross domestic production should increase by about 3.7% in 1989, very respectable given the Canadian and U.S. estimates.

The vitality of capital investment in residential construction and the expansion and



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modernization of industrial facilities has continued in 1989. Statistics Canada's capital intentions survey for the province was revised in June to show an increase of 21% over the 18% surge experienced in 1988.

The tourism industry is poised to break its third revenue record in the past four years, namely the \$3.3 billion rung up during Expo'86 and the \$3.5 billion in receipts last year.

The inflow of Canadians from other provinces continues to be very strong. Forecasts estimate a 15% increase in net interprovincial migration for 1989 for a yearly total of 35,000, or approximately half of the province's total population increase. While this influx has made Vancouver's housing market the hottest in the country, increased demand for other goods and services has also helped fuel the province's growth.

This issue of the Bulletin will profile some product and service developments around the world which are examples of just how rapid and profound the technological revolution has become. It will affect you and your business; it is critical that Canadian industry earns a comfortable seat on this bandwagon.

### **Prototypes in Minutes**

The use of computer assisted design (CAD) equipment has become widespread in recent years and a product introduced by 3D Systems of Sylmar, Calif. allows for the transformation of CAD designs into plastic prototypes in as little as a few minutes.

June's issue of High Technology Business describes how 3D System's stereolithographic process reads the modelling data in the CAD computer and sends it to a laser which scans the surface of a vat of liquid plastic. By hardening

designated areas on the plastic pool's surface a thin cross sectional slice of the prototype is made. The successive layers are created by lowering the hardened portion after each scan until the prototype, of up to 10 inches square, is completed. Although CAD systems have already been linked to numerically controlled machine tools, which can manufacture a finished product, the conversion of a CAD design into tool readable form is time consuming, taking days or weeks, and the production of prototypes through such a system ties up expensive manufacturing equipment. Thus, the 3D System permits the quick production of prototypes which can be evaluated for basic functionality. Other prototype manufacturing systems currently being developed will also be able to produce prototypes from powdered ceramics, metals, plastics and composites.

Producing such prototypes on a contract basis could become a new service industry. It was further suggested that refinements to the prototype systems may allow for some direct small batch manufacturing.

### **Seattle Gets Gnarly**

A recent article in *The Economist* indicates that our Pacific Northwest neighbours in Seattle are feeling the effects of in-migration similar to ours in Vancouver. It seems that Seattle, with its clear air and spectacular scenery, has become the latest object of California's herd mentality.

Fleeing from the grid-lock, pollution and astronomical housing prices, a flock of some 50,000 Californians cruised into Seattle last year and over 60,000 are expected in 1989. This influx coupled with the strength of Boeing, the advanced technology industry and Pacific Rim trade has made Seattle one of the fastest growing urban economies in the United States.

The migration of the terminally mellow has, however, produced some side-effects that

are disturbing established residents and sound familiar. Seattle's housing market has turned red hot with prices rising 25% per year, agricultural lands are being swallowed by expanding housing developments and traffic congestion is building.

In light of all these rapid changes a Californian backlash has developed with some employers even admitting they discriminate against Californians. Again this sounds familiar. It should be noted that benefits associated with such influxes - new skills, new consumers, new investment, a new economic dynamism - help regional economies grow and help sustain and improve the standard of living for everyone.

### Potable Sewage

In many of the world's communities, sewage is either dumped directly into waterways, pumped into septic tanks or directed to treatment facilities that are often overwhelmed by sheer volume. The resultant pollution has made closures of public beaches and contamination of ground water wells a common occurrence. Offering a natural solution to this increasingly distressing problem is an innovative sewage treatment facility recently featured in Business Week magazine. The facility is located inside a greenhouse and purifies the sewage by running the effluent through a series of open tanks in which bacteria and algae break down the sewage into nutrients for a wide variety of plants and fish.

The "solar aquatic waste-water treatment" facility is the brainchild of John H. Todd, who has put the system to work producing 20,000 clean gallons of water a day from Providence, Rhode Island's sewage. Todd's process avoids some of the drawbacks of conventional sewage treatment facilities that use chlorine and aluminum salts which render the water undrinkable and create solid waste which must be taken to

landfills. An additional benefit of the natural system is that it is 10% to 75% cheaper than conventional treatment facilities.

Before you start lobbying your municipality for an organic system, it should be noted that it does have some bugs to be ironed out. Toxic material has a tendency to build up in the plants which end up having to be disposed in landfills. Plastic and metal objects can also clog the system due to the time required for these materials to break down. Nevertheless, it would appear that taking cleaning lessons from mother nature offers some very promising solutions to our serious environmental problems.

### Home Shopping Gets Airtime

Think you can escape the Home Shopping Network's latest zirconium encrusted treasure by hopping a plane out of town. Think again.

The June 30th issue of Marketing Week reports that Plessey Avionics will begin installing in-flight entertainment and communications systems in the back of Paramount Airlines seats next year.

The six inch screens, linked to shops and services on the ground, will allow passengers to play video games, rent cars, make hotel reservations and purchase duty-free items as they wing their way to their chosen destinations. Parents will now be able to pre-arrange their duty-free liquor purchases to recover from the eight mind numbing hours of Donkey Kong their kids racked up on the flight from Cleveland.

### Ultra-Health Foods

First it was low-cal, then sodium-reduced, followed by caffeine-free and the latest food fad: oat bran. As aging baby boomers become ever more conscious of their health - and their bodies refuse to tolerate junk food - health foods have ventured out

from the realm of sandal-clad bohemians and into the Madison Avenue marketing, thirty-something, mainstream. What's more, a recent Stanford Research Institute article suggests that the 1990's will bring food with ingredients that will further improve our health and even contain medicines that people regularly require.

Food and pharmaceutical companies in the United States and Japan have been investigating the prospect of medical foods for the past few years. Japan's Ministry of Health and Welfare expects to publish regulations governing such "functional foods" later this year. The Ministry has defined functional foods as food which is absorbed in the same way as is regular food, contains naturally occurring ingredients, can be consumed as part of a daily diet, and regulates some bodily function.

Recent discoveries that could lead to future functional foods include the immunity strengthening qualities of vitamin E, links between dietary fat and breast cancer, the cancer preventive properties of certain fatty acids and the connection between the consumption of particular cheeses and the prevention of tooth decay.

On the more medicated side, it is conceivable that over-the-counter medicines such as aspirin, antihistamines, and antacids could be incorporated in foods purchased at the grocery store. While patients on multiple prescriptions could avoid forgetting to take all their medications by obtaining prescription meals from their local pharmacist.

As health care costs continue to escalate and preventive medicine receives greater emphasis, the link between good food and good health would suggest the future for functional food may indeed be very bright. We may subsequently expect to see the integration of some of the pharmaceutical companies and large food processors. With

such integration would it be long before we began to see dosaged breakfast cereals, soups and spaghetti sauce?

How do you spell relief from upset stomach? ... B-E-E-F-S-T-E-W.

## Did You Know ?

Proportion of Americans whose first job was at MacDonalds: 1 in 8

Canada's 1988 per capita consumption of:  
Beer: 81.46 litres  
Potato chips: 2.7 kg

Tax as a proportion of beer price in:  
Canada: 52%  
United States: 15%

Number of cellular phone users in B.C.: 40,000

Colours which enhance:  
Serenity blue  
Implementation of ideas green  
Generation of ideas red  
Comfort and efficiency beige

Number of chemical substances introduced to the world each week: 6,000

Estimate of how much drug abuse costs U.S. firms annually: \$33-\$100 billion

Management guru Peter Drucker's estimate of a firm's chance of selling to a:  
New customer: 1 in 16  
Past customer: 1 in 4  
Current customer: 1 in 2

Average starting salary of a Harvard MBA: \$65,100 U.S.  
Proportion that go into consulting: 26%

**Baby Boomers Become 40 Something - Economic and Organizational Impacts**

For those of us born between 1946 and 1964, the infamous baby boom generation, the 1990's will see us move through or approach our 40's. As if this wasn't enough to contemplate, the fact that baby boomers will be settling down to pay off their mortgages and spend quality time with their families is likely to have a stabilizing affect on the North American economy and make employers much more flexible. Recent articles in the Report on Business, Canadian Business Review and Business Week have examined these likely impacts and painted an encouraging picture.

While the hairum-scarum North American economics of the 1980's has led many to forecast imminent doom in the 1990's, some economists are now suggesting that the changing spending patterns of the baby boomers, coupled with increasing global competition will bring more stable steady growth.

Boomers will hit their peak incomes in the 1990's and labour participation will hit all-time highs as parents put in more hours as their children grow up. Spending patterns among boomers will also change as the spend thrift consumption, which has been blamed for many of the ills of the '80's, will give way to increased savings and investment as the boom generation settles down to the business of paying off their mortgages and saving for early retirement and their children's education. Thus, although boomers will be making more than ever before they will also be saving more than ever.

Evidence supporting such a scenario has been forwarded by New York's Prudential-Bache economist Ed Yardeni. Having identified what he refers to as yuppie-driven consumption, Yardeni saw it grow by 7% between 1983 and 1986, moderate to 4% in 1987 and 3.4% growth in 1988 and actually fall by 2% in the first half of 1989.

If such conspicuous consumption is in fact beginning to be reigned-in, control of inflation, the trade and budget deficits, and exchange rates in North America would indeed seem more attainable. Yardeni also suggests that increased global competition will bring fierce competition which will keep world prices in check and further temper the business cycle's historic swings.

North American organizations will have to become more flexible in the 1990's as the dwindling supply of entry level employees forces firms to accommodate baby boomers' changing priorities: primarily their quality of life and family obligations.

The boom generation has provided employers with a constant supply of increasingly educated recruits for their organizational needs. However, Statistics Canada is projecting a 13% decrease in the number of Canadians aged 20 - 29 between the years 1986 and 1996, while the total population is expected to increase by 11%.

The entry of women into the labour force, who are staying in after child birth, is also creating a greater proportion of employees that must split themselves between work and family. The 1986 participation rate among married women with children under 6 was an astounding 62.1%, actually exceeding the overall participation rate for all women. Consequently, men are increasingly being called upon to shoulder their share of the family responsibilities.

At the same time that baby boomers are facing these other responsibilities, employees displaced from their jobs in the corporate shake-ups of the 1980's have, not surprisingly, become far less loyal to their companies and are giving higher priority to other parts of their lives.

The implication of all this for Canadian business is that while global competition is

pouring on the push for productivity, employers will have fewer new workers to draw from and will increasingly have to cater to the shifting demands of the baby boomers. The 1990's will likely see mounting emphasis on acquiring, retaining and motivating a qualified staff by being flexible enough to accommodate employees' other priorities such as raising families.

## Export Trade Month

October is Canada Export Trade Month and events are scheduled throughout the month to focus national attention on the importance of export trade to Canada's economy.

Spearheading federal trade month activities in B.C. is Industry, Science and Technology Canada's International Trade Centre in Vancouver. A key event of trade month is Export Marketplace 1989, where local business people have the opportunity to meet one-on-one with 35 trade commissioners from Canadian embassies and consulates worldwide.

"U.S. Monetary Policy", Oct. 20, 1989, 11:45 - 1:45 Hotel Vancouver, Martha R. Seger, the U.S. Federal Reserve Governor, will offer an insider's perspective on the United States' current monetary policy. Cost: \$35 per person, \$270 for a table of 8, \$20 student. Contact: Lorena Baran, Conference Coordinator, The Fraser Institute, (604) 688-0221.

Export Marketplace '89 Vancouver, Oct. 30-31, Robson Square Media Centre, Some 35 trade commissioners will be available for one-on-one discussions about recent developments in your key sales areas and advice on possible new markets. To help make the most of your interviews, there will be a general information seminar on both October 30 & 31. Cost: \$35.00; includes scheduled appointments, seminar & luncheon, Contact: Rick Stephenson, (604) 666-1443.

Export Marketplace '89, Nov. 1, 1989: Victoria, Kamloops, Prince George, Nov. 2, 1989: Sidney, Vernon, Abbotsford, Nov. 3, 1989: Nanaimo, Kelowna, Penticton, Chilliwack. In conjunction with local Chambers of Commerce, 8 trade commissioners and representatives from the International Trade Centre and B.C. Trade Development Corp. will hold breakfast meetings followed by company visits. Contact: Relevant Chamber of Commerce.

Export Marketplace will be held in Vancouver on October 30 and 31 at the Robson Square Media Centre. Smaller groups of trade commissioners will also be travelling to major centres on Vancouver Island, the Interior and Fraser Valley areas in conjunction with local Chambers of Commerce [see calendar below for details].

Marketplace offers a unique opportunity for B.C. firms to get first-hand information about possible export markets and for the trade commissioners to see the province's companies, their products and their services.

Speaking of exports, readers may wish to note that Info Export has taken over responsibility for answering initial enquires on the Canada-U.S. Free Trade Agreement. The new contact number is 1-800-267-8376 or 1-613-993-6435. Info Export will handle orders for the 85 FTA related brochures, including sectoral brochures produced by Peat Marwick.

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