FRBSF Weekly Letter

Number 93-40, November 19, 1993

Notice to our readers: The "Western Economy" edition of the *Weekly Letter* has been discontinued. Current statistical data that appeared in those issues can now be found in *Western Economic Developments*. To order copies or subscriptions, please contact the Public Information Department of FRBSF.

NAFTA and the Western Economy

The U.S. Congress will vote soon on ratification of the North American Free Trade Agreement (NAFTA). The agreement, drawn up during the Bush Administration and amended by the Clinton Administration in the areas of labor and environmental policies, would significantly reduce barriers to trade between the United States, Canada, and Mexico.

Considerable opposition has emerged to the treaty, and ratification remains uncertain. In this *Weekly,* we examine how NAFTA is likely to affect the Twelfth Federal Reserve District. According to our analysis, ratification would benefit the District by solidifying and expanding on the gains from trade that already have been seen, especially in California and Arizona. On the other hand, failure to pass NAFTA could jeopardize export growth, which has been one of the few bright spots in California's economy.

Trade and economic growth

Trade, whether between individuals, regions, or nations, has been a major source of economic growth and improvement in standards of living. A region (or an individual or a nation) specializes in producing goods or services for which it has a "comparative advantage"; that is, the region focuses on products it can make better or more efficiently than other regions can. That region can then trade those goods or services for other goods and services produced by regions that have a comparative advantage in those other products. By specializing and trading, the range, quality, and quantity of goods in the economy as a whole is vastly increased.

Competition is the process by which individuals and firms sort out their comparative advantage and identify their specialties. Competition also encourages innovation, improvements, and gains in efficiency and productivity. If current producers do not innovate or improve their production processes, others can make advancements and undercut the current producer's price. Ultimately, the competitive process increases per capita consumption of goods and services.

Trade and competition require that economic agents respond to changing conditions. If somebody builds a better mousetrap, the established mousetrap-maker has two options: It can adapt, by acquiring new skills and developing new products and services, or it can go out of business. Thus, firms in a competitive economy have a strong incentive to innovate, rather than holding steady. Innovation is essential to long-term improvement in standards of living, but some firms go through difficult adjustment periods and some jobs are lost in the process.

Tariffs and other trade restrictions interfere with the competitive process. Occasionally there are valid policy reasons for protecting domestic industries. For example, defense considerations can lead to trade restrictions on certain technologies, and developing countries may want to nurture infant industries. However, production that is sheltered from competition tends to become less efficient over time.

Where does NAFTA fit in?

NAFTA would reduce trade barriers between the U.S., Canada, and Mexico. Since the U.S. and Canada already have entered into a free trade agreement, NAFTA's primary impact for the U.S. would be on its trade with Mexico. More open trade would allow further specialization in the production of the two countries. Since Mexico and the U.S. have different levels of capital investment, different labor force characteristics, and different relative prices, the comparative advantages of each should sort themselves out relatively quickly. With fewer trade restrictions, we would expect Mexico to specialize in labor-intensive production where low labor costs are very important, while U.S. producers would tend to specialize in more capital-intensive production that requires more technological sophistication and demands a more highly trained and productive work force.

With more open trade, both countries should gain. Increased production in Mexico would raise incomes there, perhaps significantly, which

would increase demand for U.S. goods. Meanwhile, the U.S. would gain jobs in industries where workers are paid more because their workers are highly skilled and productive. However, the tendency for the U.S. to lose low-wage jobs that require relatively little training, which has been apparent for more than a decade, might be accelerated somewhat by NAFTA. Some of these costs might be mitigated if retraining programs are available to displaced U.S. workers. (For a review of NAFTA's effects on U.S. labor markets, see Moreno 1993.)

For some time, the Mexican government has recognized the gains attainable from increased trading with the U.S. Since 1987, Mexico's average import tariff has been reduced from 23 percent to around 10 percent, and the Salinas government has made broad moves toward more liberalized trade. As a result, between 1987 and 1992 the dollar volume of U.S. merchandise exports to Mexico rose 178 percent, a change of $26 billion. These figures overstate the growth in trade, because they include the sharp increase in exports of components to Mexico for assembly that are returned to the U.S.; still, growth in trade of finished products has been substantial.

The West's share

Among all states,California ranked second to Texas in exports to Mexico in 1992, at $6.6 billion, while Arizona ranked third, at $1.8 billion. Taken together, the seven other Twelfth District states exported a relatively modest $831 million in merchandise to Mexico in 1992. Because of the large volume of exports from Arizona and California, the analysis will focus on these two states. In 1992, exports to Mexico equaled 1.0 percent of personal income in California. and 2.8 percent of personal income in Arizona.

California and Arizona benefited disproportionately from the growth in exports to Mexico during the past several years. Exports of merchandise from California rose 191 percent between 1987 and 1992, or $4.3 billion, providing one of the few bright spots in an economy hobbled by problems in the real estate and defense industries. Meanwhile, exports from Arizona rose 186 percent, or $1.2 billion.

In addition to growth in merchandise trade, exports of services have grown sharply. While state-level data on services exports are not readily available, at the national level services exports have risen 144 percent between 1986 and 1991, suggesting that exports of services from California and Arizona to Mexico have grown along with merchandise trade.

Trade theory also suggests that liberalized trade should be characterized by greater flows of high-value products from the country whose labor force is more productive. This pattern also has emerged in recent years. The largest volumes of exports from both Arizona and California are high-value products whose workers earn relatively high wages. For example, electronics and transportation equipment together accounted for 38 percent of Arizona's 1992 exports to Mexico. In California, industrial machinery, computers, and electronic equipment accounted for 39 percent of the 1992 exports to Mexico. For each of these industries, the average compensation is higher than the average of compensation across all of the relevant state's manufacturing industries.

Benefits of passing NAFTA

These gains have come largely because Mexico has unilaterally reduced its barriers to trade. If NAFTA passes, the gains that we have already seen from Mexico's unilateral trade liberalization would be solidified. Moreover, further reductions in Mexican tariffs would result, since the average level of tariffs is still more than twice as high in Mexico as it is in the U.S. Tariffs on computers, which are now much higher than average, are especially likely to fall. The impact on exports from California and Arizona would definitely be positive.

Many have expressed concerns that the passage of NAFTA could induce U.S. manufacturing firms to locate in Mexico to take advantage of wage rates that are only a quarter of those paid to U.S. manufacturing workers. Indeed, as demonstrated by rapid growth in the past decade in the *maquiladora* program, many labor-intensive manufacturing firms have moved operations across the border.

However, wage rates are only one part of the picture. Research at the Federal Reserve Bank of Dallas (1993) finds that productivity is nearly five times higher for manufacturing workers in the U.S. than in Mexico. Thus, adjusting for productivity differences, wages per unit of output are actually lower in the U.S. because of the access

to higher skilled workers, efficient transportation and communication networks, capital equipment, and other inputs.

In nearly all estimates of NAFTA's effects, the results show a modest net gain of jobs in the U.S. Moreover, the industries in which U.S. producers have a comparative advantage over Mexican producers tend to be those in which education, training, and skill levels make U.S. workers especially productive. Electronic equipment, computers, and industrial machinery, which are particularly important sources of exports from Arizona and California to Mexico, fit this description. The industries that are more likely to lose jobs are those that do not require the education or productivity that would justify paying higher U.S. wages.

Thus, the jobs that are vulnerable to being lost to Mexico are the same jobs that have been moving overseas (to Asia as well as to Mexico) for the past decade. That is, increasingly open trade with Mexico has caused and will continue to cause some movement of low-wage jobs out of the U.S. However, it is worth noting that the jobs that are threatened by NAFTA are in industries in which U.S. manufacturers already have had trouble competing against many low-wage countries. Thus, even without NAFTA, many of those jobs will be lost to other countries in Asia or Latin America.

An additional way in which NAFTA would be expected to affect labor markets is through immigration. At present, there is a great deal of concern, especially in California, about the adjustment costs associated with absorbing large numbers of immigrants. Many of those immigrants are from Mexico, and most are searching for better jobs than they currently can find in Mexico. Over time, however, the passage of NAFTA would likely result in substantial improvements to the standard of living in Mexico relative to the present situation, and in doing so, ultimately would reduce the incentive to migrate to the U.S.

Opponents of NAFTA also have raised concerns about environmental standards. Firms, they argue, will cross into Mexico to use highly polluting processes and then market the product in the U.S. The side agreements address this issue by creating mechanisms to increase environmental quality in Mexico and by making it more difficult to cross the border and pollute.

Moreover, increased attention to environmental quality typically rises with a nation's standard of living. Consequently, to the extent that growing trade with Mexico boosts Mexico's standard of living, the attention to reducing pollution there is likely to rise over time. This increased interest in pollution control could even create an additional market for U.S. products, since the U.S. is a leader in environmental technologies. This potential market is particularly important to the states of the Twelfth District, where some of the leading environmental technology firms are located. According to the California Governor's Office of Planning and Research, California alone accounts for 7.5 percent of the world's revenues to environmental industries.

Conclusion

California and Arizona have benefited greatly from recent growth in trade with Mexico—growth that has been associated with Mexico's unilateral reductions in trade restrictions. NAFTA would solidify many of these gains and would stimulate further gains. Some job dislocations can be expected, particularly in low-wage industries, which suggests a need for domestic policies for worker retraining. Overall, however, there is likely to be a net gain in the number of jobs, and the job gains should come in high-wage industries in which U.S workers are especially productive. More open trade, by exposing industries to increased competition, forces domestic industries to keep innovating. The result, therefore, is continuing improvement in the standard of living in the U.S. and some much needed stimulus to California's beleaguered economy.

Ronald H. Schmidt
Senior Economist

Carolyn Sherwood-Call
Economist

References

California Governor's Office of Planning and Research. 1993. *The North American Free Trade Agreement: Implications for California*. Sacramento.

Federal Reserve Bank of Dallas. 1993. *The Southwest Economy* (November/December).

Moreno, Ramon. 1993. "NAFTA and U.S. Jobs." *FRBSF Weekly Letter* 93-24 (June 24).

Opinions expressed in this newsletter do not necessarily reflect the views of the management of the Federal Reserve Bank of San Francisco, or of the Board of Governors of the Federal Reserve System.
Editorial comments may be addressed to the editor or to the author. . . . Free copies of Federal Reserve publications can be obtained from the Public Information Department, Federal Reserve Bank of San Francisco, P.O. Box 7702, San Francisco 94120. Phone (415) 974-2246, Fax (415) 974-3341.

Printed on recycled paper with soybean inks.

Research Department
Federal Reserve
Bank of
San Francisco
P.O. Box 7702
San Francisco, CA 94120

Index to Recent Issues of *FRBSF Weekly Letter*

DATE	NUMBER	TITLE	AUTHOR
4/30	93-17	Is Banking on the Brink? Another Look	Levonian
5/7	93-18	European Exchange Rate Credibility before the Fall	Rose
5/14	93-19	Computers and Productivity	Schmidt
5/21	93-20	Western Metal Mining	Schmidt
5/28	93-21	Federal Reserve Independence and the Accord of 1951	Walsh
6/4	93-22	China on the Fast Track	Cheng
6/18	93-23	Interdependence: U.S. and Japanese Real Interest Rates	Hutchison
6/25	93-24	NAFTA and U.S. Jobs	Moreno
7/16	93-25	Japan's Keiretsu and Korea's Chaebol	Huh/Kim
7/23	93-26	Interest Rate Risk at U.S. Commercial Banks	Neuberger
8/8	93-27	Whither California?	Sherwood-Call
8/20	93-28	Economic Impacts of Military Base Closings and Realignments	Sherwood-Call
9/3	93-29	Bank Lending and the Transmission of Monetary Policy	Trehan
9/10	93-30	Summer Special Edition: Touring the West	Cromwell
9/17	93-31	The Federal Budget Deficit, Saving and Investment, and Growth	Throop
9/24	93-32	Adequate's not Good Enough	Furlong
10/1	93-33	Have Recessions Become Shorter?	Huh
10/8	93-34	California's Neighbors	Cromwell
10/15	93-35	Inflation, Interest Rates and Seasonality	Biehl/Judd
10/22	93-36	Difficult Times for Japanese Agencies and Branches	Zimmerman
10/29	93-37	Regional Comparative Advantage	Schmidt
11/5	93-38	Real Interest Rates	Trehan
11/12	93-39	A Pacific Economic Bloc: Is There Such an Animal?	Frankel/Wei

The *FRBSF Weekly Letter* appears on an abbreviated schedule in June, July, August, and December.