This is not to say the U.S. should overlook the market which **will** exist in China; it is only to point out the blatant deception tactics of China Card players who say Chinese trade is the only game in town.

Though there may well be increasing sales to China, and eventually a substantial market, it will be a slow process of many years. The Administration has somehow failed to inform businessmen of this fact; as it has failed to inform the U.S. population that a large proportion of Chinese imports will be paid for with with the proceeds of international dope dealing — the destruction of the minds of America's youth.

Sister Republic

There is no Third World country in a better position than Mexico to take the rapid strides in material progress and social development which are properly associated with the achievements of the United States. Mexico, like the pre-environmentalist era in the U.S., is a republic committed to industrial progress, and that is a fact of profound significance.

Alone of Latin American republics, Mexico fought a revolution 70 years ago to become a modern industrial state. Its 1917 Constitution embodies this commitment. In some regard, it is more advanced than the U.S. Constitution it is modeled on. Article 3 states explicitly that the republican and democratic form of government must be premised on the **constant advance in living conditions and education of the population.**

Mexico spends a larger percent of its federal budget than any other country in the world on education. It spends one of the smallest on military expenditures.

Mexico has a leadership not merely upholding this tradition but deepening and extending it. It can count on channels for instilling nation-builder conceptions into mobilized, politicized peasant and worker sectors unmatched elsewhere in the Third World where the "peasant problem" remains culturally almost impenetrable. The López Portillo leadership has launched a far-reaching political reform program — opening greater political opportunities for parties outside the ruling Institutional Revolutionary Party (PRI) — in order to revivify these channels.

Speaking to an assembly of education ministry workers recently, the city-builder President of Mexico stated emphatically: "the rural areas are no longer a solution. We must prepare ourselves to absorb (the rural population) in the activities that are only offered by the city.... We are committed to solving the problems" involved in city-building and providing services to a rapidly-growing population, "and will succeed." The basis of the effort? "The human, technical and economic resources of the country," and "Article 3 of the Constitution."

U.S. role in Mexico's industrial boom

On Jan. 4, Mexican President Lopez Portillo told reporters that his nation will only increase oil revenues as it has the capacity to "digest" them in development projects. The New York Times and the Financial Times of London interpreted the remark to mean that Mexico will put a freeze on oil development after it reaches its 1980 goal of 2.25 million barrels per day (bpd).

In fact, the President's remark was an invitation for foreign partners to help Mexico speed up the design and execution of its development projects — and thus speed up the rate of oil production.

The Executive Intelligence Review presents here a prospectus of what the U.S. stands to gain if it pitches in to help — and not hinder — the creation of a "Japan south of the border."

Parameters of trade

U.S. exports. At a time when the U.S. balance-of-trade continues deep in the red due primarily to a decline in exports of manufactured goods, the coming Mexican import boom to fuel its development looks good indeed.

To start with current trade figures: in 1977 Mexico imported a total of approximately $5.5 billion, overwhelmingly heavy machinery, raw materials, and capital goods. It exported some

The rundown on Mexico's economy

The following figures on the positive rate of growth of almost every aspect of the Mexican economy during 1978 explain why the government of President Lopez Portillo asserts that in order to solve its longstanding social problems, Mexico will double its industrial plant by 1982. The government's full industrialization plan, to be released shortly, will detail more precisely how this goal will be achieved. The Mexican economy grew in 1978 as follows:

Population growth

The rate of population growth maintained a steady 3.5 percent, bringing total population to 65 million. Unemployment for the 17 million-member workforce varied between 10 and 20 percent, and 30 to 40 percent of the labor force was underemployed. The Gross Domestic Product, moving toward the $100 billion mark, grew at a 5.7 percent rate last year, double the previous year's. The inflation rate was controlled at 15 percent and the floating exchange rate was maintained at a rate of 22.6 pesos to the dollar.

$3.7 billion, largely oil and agricultural products. In 1978 both imports and exports increased substantially, approximately $2 billion in each category.

And this is only the beginning of a takeoff in trade. Fig. 1 shows estimates for import growth over the next five years, projected at a hefty 15 to 20 percent yearly, and reaching over $15 billion by 1983.

The United States has traditionally been Mexico's biggest trade partner, involved in 65 percent of all trade transactions. Mexico is the U.S.'s fourth largest trade partner. But in the absence of a strong "oil-for-technology" education and export stimulus program in the U.S., these percentages have begun to slip. First-half figures for 1978 showed Mexican imports from the U.S. at 54 percent of total imports.

Capital goods. The heart of Mexico's import program is capital goods. This is not only because Mexico has maintained tariffs against foreign dumping to protect domestic consumer goods manufacturers (many of which represent coinvestment with U.S. firms). More important, it reflects Mexico's total commitment to in-depth industrialization based on its own creation of a capital goods industry. That is, a large percentage of the capital goods Mexico stands to import are going to be the **capital goods it requires to produce capital goods**. That is a sophisticated market, one which will bolster a corresponding core element of American industrial production.

The chief architect of Mexico's drive for a domestic capital goods industry is in an eminent position to do something about implementing it. He is David Ibarra Muñoz, now Mexico's finance minister.

In April of 1978 Luis Almeida, the Director of Programs for Mexico's national development bank, Nafinsa, estimated that Mexico's capital goods demand for the next 10 years would total $45 billion. Based on the surge in oil reserves announced in the course of 1978 and corresponding declarations from government officials of revamped development goals, Executive Intelligence Review, now estimates capital goods demand at a **conservative** $80 billion for that period.

Typical of the considerations figuring in the dramatic upscaling of demand was the November announcement of the gigantic Chicontepec oil field in the old Golden Lane area stretching south from Tampico. Pemex director Jorge Diaz Serrano detailed that Mexico will drill 16,000 wells in this field, estimated to contain 106 billion barrels of oil, over a 13 year period. The price figure for the resulting demand for drilling equipment, pipelines and storage was conservatively set by the oil company director for this field alone, at $5 billion.

The Pemex expansion is at the heart of Mexico's confident move into domestic capital goods manufacture. But the market is too large for even the fastest domestic expansion of capital goods production. A Mexican congressional leader in mid-January estimated that fully 50 to 75 percent of Pemex equipment needs will be imported in 1979. Given a 1979 Pemex budget of close to $10 billion, most destined for expansion activity, big imports will continue. Reports that a Texas-based group of drilling equipment manufacturers have landed a $5 billion multi-year contract with Pemex confirm the dimensions of the market.

Petrochemicals and the nuclear industry

The oil extraction industry is only the beginning of the import demand boom. Production of basic petrochemicals, under Pemex control, is slated to rise from 4.9 million tons in 1976 to

Industrial and farm output

Total industrial output in the first three quarters of the year averaged 11 percent growth. Oil production jumped up an outstanding 25 percent. Other industrial areas took substantial steps forward: steel grew 8 percent, building and construction materials grew 8 percent; basic chemicals grew 7 percent; motor vehicles grew 10 percent; electricity output grew 10 percent.

Farming products output showed approximately 4 percent growth. Grain production increased 10 percent, and farm exports reached $1.2 billion. Imports totaled $620 million. An important new area developed by the government was fishing, with an increase of 25 percent to a total value of $486 million.

Debt and the budget

The foreign trade deficit in 1978 was estimated $2.5 billion. Total public foreign debt is $26 billion, and private approximately $12 billion, with gross payments of $9 billion ($4 billion net) for 1978. The 1979 budget was announced at $56.6 billion, 20 percent larger than the previous year, from which oil investments through the national oil company Pemex will get $9.4 billion, or 39 percent of total investment.

Oil production and earnings

Total oil production at year-end 1978 was 1.5 million barrels per day (bpd), with exports of 500 million bpd. This is expected to rise to 1.9 million bpd in 1979 and 2.25 million bpd in 1980, with exports of 717,000 and 1,100,000 bpd respectively in those years.

The total export earnings from oil and gas are estimated to rise as follows: 1978: $2 billion; 1979: $3.7 billion; 1980: $8 billion; 1983: $11 billion.

21.7 million tons by 1982 — an increase of over 400 percent. The number of petrochemical plants will almost double, from 60 to 115. Some of these, such as La Cangrejera in the Tehuantepec area, are among the largest petrochemical complexes anywhere in the world.

The nuclear industry is another startling example of expected growth. Mexico, set to begin construction on its first nuclear plant, the twin reactors of Laguna Verde on the Gulf coast, in 1982, has just passed enabling legislation to broaden and accelerate its nuclear effort. Government plans call for 20 nuclear reactors by the year 2000. France, Canada, the Soviet Union, Japan, and Sweden are all now in line negotiating different aspects of nuclear collaboration with Mexico. This is a market worth $5 to $10 billion over the next ten year period. But U.S. "antiproliferation" legislation has so far succeeded in totally freezing the U.S. out of the running.

Four poles of development

From the base in such areas as oil extraction, petrochemicals and the nuclear industry, the need for capital goods and heavy industrial production fans out into almost every other major sector of the economy, multiplying the opportunities available for U.S. high technology manufacturers. Mexican government planners have designated four port industrial complexes to be "poles of development" for industrial expansion nationwide (see map). These are Tampico, on the northern gulf coast; the Coatzacoalcos-Minatitlan complex to the south, adjacent to the prolific Reforma fields; Salina Cruz, across the Tehuantepec Isthmus from Coatzacoalcos, on the Pacific coast; and Las Truchas, up the coast from Salina Cruz, in Michoacan state.

These "industrial port complexes," as Industries Minister Oteyza has called them, are each designed to include petrochemical or fertilizer production and be fed with natural gas from the nation's ambitious gas distribution grid. The southern two ports, Salina Cruz and Coatzacoalcos, are conceived as the anchors for an industrial corridor stretching in an arc from the Isthmus of Tehuantepec over to Villahermosa, capital of oil-rich Tabasco state.

This corridor is already the home for the bulk of the country's refining and petrochemical capacity. Ten new petrochemical installations are soon to be inaugurated. Projected to unite the two anchoring superports is a high-speed electric rail line, first proposed in 1975 and to cost half a billion dollars. It is designed to replace the Panama Canal for certain kinds of cargoes. An oil pipeline from the Reforma fields to Salina Cruz is well along to completion. It will deliver oil for embarcation to Pacific markets, particularly Japan. Japan has contracted to import 20 percent of Mexican exports as of 1980, 220,000 bpd, in exchange for capital goods and other development aid. It is putting $1 billion plus into the financing of the port facilities and related infrastructural projects.

By the end of the century, the corridor's currently sparse population — less than a million — is expected to increase tenfold.

Further up the Pacific coast, the Las Truchas development will be centered on one of the largest steel complexes in the world. Its first stage, completed in 1975 by the government of Luis Echeverría at a cost of $1 billion, raised national steel capacity by over

phases, price tagged at $3 billion, has been held up by International Monetary Fund strictures. The Japanese are now discussing financing with Mexico to get the project underway again. Upon completion of all three phases, production will reach 10 million tons — surpassing total capacity nationwide today.

The steel will serve as the basis of a major shipbuilding project, as well as heavy machinery manufacture and capital goods production. All products — from raw steel to finished machine goods — are expected to be placed on the international as well as the domestic markets. The population of Las Truchas will climb to several million by the late 1980s.

The industrial port of Tampico will develop on the basis of oil refining and petrochemicals, according to the "pole of development" plans. The discovery of the adjacent Chicontepec field has spurred the prospects for an industrial renaissance in this old oil center.

To attract a wide range of secondary petrochemical plants to these four poles of development, the government has extended a substantial 30 percent discount on raw materials from Pemex's "upstream" basic refineries, as well as discounts on fuel and electricity. Secondary petrochemicals, unlike primary, are open to private investment. Foreign companies are welcomed as 40 percent minority investors in these enterprises. The prospects for shifting over to large-scale export of Mexican petrochemicals in the coming period are excellent.

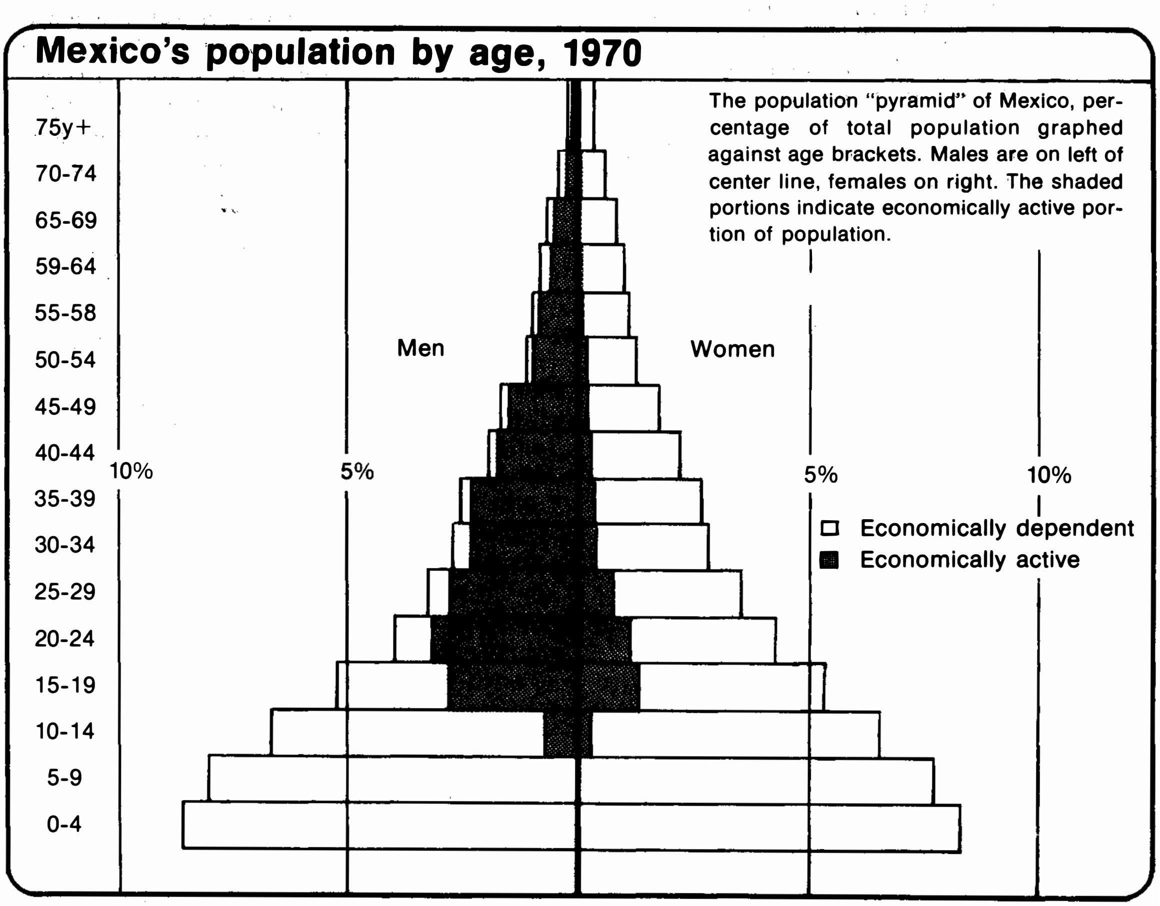
Farm mechanization

While Mexico's energy and petrochemical industries will provide the core demand for U.S. capital goods and technology exports during Mexico's industrial boom, the farm sector must not be discounted as a significant factor in U.S. export plans.

Last fall the Mexican agriculture and agrarian reform ministries released a National Program for Agricultural Mechanization. "Faced with the need of intensively developing a program to permit the mechanization of Mexican agriculture in the short term, it has been determined that the stock of tractors must increase by 60,000 above and beyond current domestic production," the report stated. Domestic production can provide only 10 to 15 percent of total needs. That is an increase of almost 50 percent over total existing tractor stock of 115,000 units and almost 70 percent over serviceable units, estimated at 92,000.

The government immediately began negotiations with three U.S. firms — International Harvester, John Deere, and Massey Ferguson — for purchase of 10,000 units at a total price of $200 million. If the entire 60,000 unit program moves ahead during its five-year lifetime, U.S. manufacturers could win contracts worth over $1 billion.

These tractor purchases are in turn only one element in the mechanization plan. And domestic manufacture stimulated by the program will require capital goods imports further up the line.



The population "pyramid" of Mexico, percentage of total population graphed against age brackets. Males are on left of center line, females on right. The shaded portions indicate economically active portion of population.

Mexico's greatest resource: its population

Ask most Mexican observers what they view as Mexico's greatest problem and they chorus: "the exploding population." They add: "The overwhelming unemployment problem will not be relieved by the relatively few jobs created in the capital-intensive oil industry."

The truth is exactly the opposite. Not only is Mexico's surging population its greatest resource, but the capital-intensive industrial boom now underway will create the high social productivities and capital formation rates which will spread millions of skilled jobs throughout the country in interlinked paths of expansion.

As can be seen in the accompanying chart, Mexico's "population pyramid" is swollen at the bottom; over half the population is under the age of 18.

This places an enormous burden on Mexico's educational system. But if the challenge of educating and training this coming adult generation is met, then Mexico will have solved the most important bottleneck it faces in its race to become a First World nation by the year 2000: that of skilled manpower to run the advanced technologies of its surging industry.

Education has historically been accorded the largest share of the Mexican budget. Today one classroom is built every hour. The Council of Science and Technology, under presidential directive, has recently drawn up an ambitious four-year plan to upgrade research and development programs across the country and direct university research toward national development goals.

To promote across-the-board upgrading of labor skills, the Mexican Congress last year passed, on executive initiative, an amendment to the Mexican Constitution decreeing that the right to job training was constitutionally guaranteed and protected.

The U.S. has a key role to play in aiding Mexico's education and training efforts — an opportunity for the U.S. less widely recognized than the obvious opportunity for export of capital goods and technologies, but a dollar and cents question nevertheless. U.S. consulting and technical firms have a lot to gain if they "think big" about exporting U.S. training programs to Mexico and about establishing expanded training programs with Mexican participation in the U.S.

— *Timothy Rush*