

# Chile: In Search of a Second Wind

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## The Issues

In November 2000, Ricardo Lagos Escobar, Chile's president, traveled to Silicon Valley with a delegation of 150 Chilean entrepreneurs to put the country on the radar screen of New Economy investors. Meeting with a dozen top executives from some of the Valley's largest companies, he told them how attractive Chile was as a manufacturing and export base. With a stable, democratic government,<sup>1</sup> first-world governance standards,<sup>2</sup> a skilled workforce, and practically no trade barriers,<sup>3</sup> the country was, in many ways, an investor's paradise (see Exhibit 1 for basic indicators). Indeed, a number of multinational companies had already made Chile their Latin American base in spite of the country's small size and isolation from the rest of the continent and from major markets. "It's easy to be an investor in Chile," said a Shell executive. "Business activities develop within a completely respected framework, which is a tremendous advantage."<sup>4</sup> At the time of President Lagos' California trip, Delta Airlines was planning to locate its Latin American reservation and customer service center - which had started operations in July 2001- in Chile, and a number of other companies were making similar plans. Chile's overall performance in attracting investors was impressive. Gross Foreign Direct Investment (FDI) inflows totaled US\$ 43.3 billion between 1990 and 1999, growing at an average annual rate of 19.8%. Over 1995-99, FDI accounted on average for 8.3% of GDP, against only 2.8% for Brazil, 2.5% for Argentina and 1% for Venezuela, the region's heavyweights. However, the year 2000 showed a marked slowdown in foreign capital inflow, which slumped to a (still respectable) US\$3.7 billion, down from its US\$9.8 billion peak in 1999.<sup>5</sup> Given that the Chilean economy was, in 2000, just recovering from a severe downturn following the Asian crisis (see Exhibit 2), the prospect of a slowdown in foreign investment was taken very seriously by the government. Indeed, critics said the country had been insufficiently proactive in the global competition to attract investors. The critics' argument had its origins in a 1996 incident involving Intel's plans to set up a semiconductor plant.

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<sup>1</sup> As of July 2001, Chile was rated A- by Standard and Poor's and Baa1 by Moody's, the best ratings in Latin America. Euromoney's country-risk evaluation ranked Chile 1<sup>st</sup> in Latin America and 11<sup>th</sup> among emerging economies. [Foreign Investment Committee, (FIC) Chile, your best bet, p. 32].

<sup>2</sup> In the Heritage Foundation's 2001 economic freedom ranking, Chile ranked 2<sup>nd</sup> in Latin America, 5<sup>th</sup> among emerging economies and 13<sup>th</sup> among the 155 countries surveyed. Chile was also 1<sup>st</sup> in Latin America and 3<sup>rd</sup> among emerging countries in Transparency International's index measuring the absence of corruption. With a rating of 7.5 out of 10, it was on a par with Germany (7.4) and the US (7.6).

<sup>3</sup> In the Emerging Market Access Index produced by the Amos Tuck School of Business at Dartmouth College, which includes measures of trade barriers, intellectual property protection, government procurement practices and investment regimes, Chile was ranked 1<sup>st</sup> in Latin America and 2<sup>nd</sup> among 44 emerging countries (the first was Singapore).

<sup>4</sup> Foreign Investment Committee, *Chile, Your Best Bet*, Santiago, 2001, p. 25.

<sup>5</sup> These figures are for gross flows, i.e. inflows only, without counting offsetting outflows. Net flows are shown in Figure 7 and were negative in 2000.

### **Intel: A Missed Opportunity?**

When Intel decided, in the mid-1990s, to locate a \$300 million assembly plant for the Pentium III processor outside of the United States, six possible host countries made the company's shortlist: Argentina, Brazil, Chile, Costa Rica, Indonesia, Mexico and Thailand.<sup>6</sup> The winner was Costa Rica. Like Chile, Costa Rica offered a corruption-free, stable political regime with high governance standards and an effective legal system. Costa Rica's economy was very small (one of Intel's vice presidents likened Intel's presence in the country to that of "a whale in a swimming pool")<sup>7</sup> but the size of its domestic market did not matter for a factory that would in any case be export-oriented.

Although Costa Rica boasted relatively high educational achievements by the region's standards, Intel executives worried whether the workforce's education level would be adequate for the company's needs. They were also concerned by bottlenecks in the energy and telecommunications infrastructure.<sup>8</sup> However, Costa Rica was able to offset those concerns by offering an attractive incentive package. Although no special concessions were made to Intel in particular, existing advantages offered under the Puntarenas Export Processing Zone (EPZ) status were sufficiently generous. Corporations registered under this status enjoy an 18-year "tax holiday", that is, they are totally exempt of profits taxes for the first twelve years and pay only 50% of the normal rate for the following six years; they are totally exempt of all taxes on exports and repatriated profits, all their imported inputs enter the country duty-free, and the government subsidizes employment by reimbursing the corporation part of its payroll (see Exhibit 2).

The generous conditions that Costa Rica offers to foreign investors like Intel are generally not available to domestic investors. Chile, by contrast, applies a non-discrimination principle called "*trato nacional*", under which foreign and domestic investors get the same treatment. There is no guarantee that tax concessions alone could have wooed Intel away from Costa Rica, but the point is that Chile did not even try. Officials at the Foreign Investment Committee claim that the country's business environment is sufficiently attractive to make special concessions unnecessary. Other government officials and a number of academics also oppose tax favors because, they say, they are a Pandora's Box.

### **Rules vs. Discretion in Government Policy**

One of Chile's key assets in the global competition to attract foreign investors is its stable and transparent regulatory environment. Many emerging countries in Latin America and Africa in particular, have been plagued with frequent and sudden policy reversals, some due to government changes, some to the fact that the concessions granted in the first place were simply too costly to be sustainable. In all cases, such reversals, especially when repeated, tend to create a climate of uncertainty undermining the credibility of any concessions made. Lack

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<sup>6</sup> Felipe Larrain, Luis Lopez-Calva, and Andres Rodriguez-Clare, "Intel: A Case Study of Foreign Direct Investment in Central America", ch. 6 of F. Larrain, *Economic Development in Latin America*, Harvard University Press, 2001, p. 167.

<sup>7</sup> Id., p. 167.

<sup>8</sup> Id., p. 170.

of transparency is also a common source of concern for foreign investors, as the value of concessions given to one company can be reduced by deeper concessions granted to a competitor. Moreover, lack of transparency in dealings between foreign investors and the host country's government prevents traditional counterweights, like the courts and the media, from playing their role in tracking and punishing kickbacks and side-payments. Lack of transparency is thus often associated with high levels of corruption. It also reduces the likelihood that a large multinational company's decision to invest in a country will convince other investors to follow suit, since no-one knows what really attracted the company to that particular country. Indeed, cross-country evidence on the determinants of FDI suggests that discretionary and opaque business environments act as powerful deterrents to inward investment.

For all these reasons, many in Chile's ruling circles oppose granting special treatment to any investor, arguing that no single investment is worth squandering Chile's clean image. Politicians, they say, would be all too happy to grab the power to make concessions on an ad-hoc basis, not just because they enjoy power but also because that power could be easily converted into campaign contributions. Thus, the argument goes, the less the issue is discussed, the better for the country. Does that mean that in all circumstances, the best the government can do is get out of the way? And if the answer turned out to be yes, what would be the country's chances of ever catching up with the First World i.e. of breaking with a century of low growth?

## Chile's Economic Performance in Retrospect

### Productive Resources<sup>9</sup>

#### *The Land*

With an area of 749,000 km<sup>2</sup>, the combined size of France and Great Britain, Chile is a relatively large country. However, only 6% of its land mass is suitable for agriculture, against about a third in France and Great Britain. As a result, the country's population density is high relative to its agricultural potential: 333 inhabitants per square kilometer of cropland, against 131 in Argentina, 125 in New Zealand, 65 in Canada and 41 in Australia.

Chile's climate varies considerably because the country is spread over a wide range of latitudes (4,350km from North to South) and altitudes (sea level to 6,800m Andean peaks). The Atacama desert in the North is one of the world's driest zones, the South has a wet sub-arctic climate, and between them lies a temperate zone with a Mediterranean climate, the Central Valley, which accounts for 10% of the country's land area but 80% of its population. The Central Valley's climate is the Southern-hemisphere equivalent of California's, and it is where most of the country's agricultural products are grown, notably wine and fruit.

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9 This section draws from F. Larrain, J. Sachs and Andrew Warner, An analysis of Chile's long term growth: history, prospects and policy implications, mimeo, 2001.

The Atacama desert contains nitrates which accounted for half of Chile's exports at the turn of the century. It also contains a fourth of the world's copper reserves. Copper accounts today for 40% of Chile's exports, down from 80% in 1970. The country produces a third of the world's output, and the Chuquicamata open-air mine is the world's largest—its 100-ton trucks are so big that one of them is said to have crushed a pick-up truck under its wheels while backing up.

Chile's trade, both internal and external, faces formidable obstacles. Major markets in Europe, North America and Asia are far away: Valparaiso is 9,037km from Los Angeles (20 days at a speed of 10 knots), 8,454 km from New York via the Panama Canal (19 days), and 13,897km from Rotterdam (31 days). Neighboring Argentina is hardly accessible overland because of the Andes' formidable barrier, while Peru is on the other side of the Atacama desert, and is scarcely a market given its low income. Even Chile's own Southern region is isolated from the rest of the country by high mountain passes.

### *The People*

Overwhelmingly Catholic, of Spanish ancestry and "mestizo" (i.e. of mixed European and indigenous descent), Chile's population of 15 million is one of the most homogenous in Latin America. Only one distinctly Indian ethnic group survives, the Mapuche, who constitute 7% of the population and live essentially in remote areas.

Today, Chile's population is largely urban, with only 16% living in rural areas. However, with 4.6 million inhabitants in 1997, only Santiago, the capital, is a large city (and, with only 115,000 in 1865, a relatively recent one). Other cities are much smaller: Concepcion has 362,000 inhabitants, Vina del Mar 330,000 and Valparaiso 283,000.

Chile's adult illiteracy rate is 4%, a relatively low rate compared to other countries at similar income levels. However, drop-out rates are high and only 55% of children of secondary-school age are actually enrolled. Chilean students' scores in standardized math tests are relatively low by international standards, and surveys of business executives reveal general dissatisfaction with the level of education of the workforce.<sup>10</sup>

## **Actual and Potential Growth**

### *Chile's Growth Record: A Bumpy Road*

Chile was hailed throughout the 1990s as one of the very few success stories in the developing world, and practically the only one in Latin America. Policies based on the so-called "Washington Consensus" (budget balance, a stable rate of money growth, minimal state intervention in the economy, and flexible labour markets) delivered double-digit growth for most of the decade up to the Asian crisis, making Chile the darling of the markets and an example for the rest of the world.

However, the boom of the 1990s was too short-lived to close the gap substantially with the high-performance economies in Asia and elsewhere. Except for the golden decade 1987-1997,

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<sup>10</sup> Global Competitiveness Report 1999, cited in Larrain et al., op. cit., p. 87.

Chile has had, like the rest of Latin America, a disappointing growth performance throughout the twentieth century. For instance, Norway and Finland, two natural resource-based economies with per capita incomes respectively 10% and 20% lower than that of Chile in 1900, ended the century twice as rich.

A good deal of Chile's disappointing economic performance can be attributed to a succession of unfortunate policy experiments. The country's post-war economic history can be roughly divided into five phases, which overlap somewhat (but not completely) with phases of the country's political history: pre-1970, 1970-76, 1977-86, 1987-97, and 1998 to the present. (Real GDP growth over 1970-2000 is shown in Exhibit 3).

Up to 1969 the developing world as a whole enjoyed fairly rapid growth, and Chile was no exception. Protected by stiff import tariffs and a variety of non-tariff barriers, domestic industries offered rising employment and output. Over the decade 1960-69, real GDP grew at an average rate of 4.2% per year and exports at 5.6% (4.6% excluding copper), with gross investment amounting to 25% of GDP. However, inflation accelerated progressively to more than 25% per year, and in the last years of President Eduardo Frei's Christian Democratic administration (1964-70) an austerity program intended to keep it in check was implemented, albeit without much success. Moreover, structural issues such as persistent income inequality, rural poverty, low educational achievements and a weak infrastructure remained largely unaddressed.

The inability of the Christian Democrats to address these issues effectively - in spite of some progressive reforms - led to the election in 1970 of President Salvador Allende on a radical platform supported by the *Unidad Popular* (UP), a coalition of Socialists, Communists and Radicals. The UP's program involved sweeping nationalizations and expropriation of foreign (mostly US) interests in copper mining, an acceleration of the land reform initiated by the previous administration, minimum-wage rises, overt encouragement of collective bargaining in industry, and large increases in government spending financed by money creation.<sup>11</sup>

The UP's policies at first seemed successful, as low capacity utilization rates allowed a demand-led boom to develop (real GDP rose 9% in 1971) without accelerating inflation. However, as budget deficits financed by money creation rose to absurdly high levels, inflationary pressures rapidly built up. Price controls only served to make things worse, leading to widespread shortages and queues. By 1973, the working class's income gains in the UP's early years had been eaten up by inflation. Output was falling under the combined effect of strikes, in particular a truckers' strike allegedly financed by the CIA and the Brazilian military,<sup>12</sup> and chaotic government. Severely hit by the economic crisis, the middle class turned increasingly hostile to the UP. But the right wing's hope that the March 1973 legislative elections would produce a sufficient majority to initiate a constitutional

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<sup>11</sup> The Socialists viewed inflation as resulting from the class struggle rather than macroeconomic conditions. For instance, the UP's program stated that "[t]he facts prove that inflation in Chile is basically the outcome of deeper causes related to the capitalist structure of our society and not to wage increases, as successive governments, in order to justify the system and restrain workers' income, have tried to make us believe." (*Programa Basico del Gobierno de la Unidad Popular*, cited in Stefan de Vylder, *Chile 1970-73: The Political Economy of the Rise and Fall of the Unidad Popular*, Unga Filosofers Förlag, 1974, p. 85). By the same reasoning, the UP considered money-financed deficits, by themselves, as innocuous.

<sup>12</sup> See de Vylder, op. cit., p. 105.

impeachment procedure against President Allende failed to materialize, as the UP won 44% of the votes. On September 11, 1973, breaking with tradition, the Chilean Army decided to intervene, ousting President Allende in what would be the country's bloodiest coup.

The stabilization that followed was drastic. Deep spending cuts enabled the government to balance the budget within three years, starting from a deficit of close to a quarter of GDP (see Exhibit 4). State-owned firms were returned to the private sector and trade policy was liberalized, import tariffs being reduced to a uniform 11% in 1976 from a variable structure averaging 100% in 1973 (see Exhibit 5). Such brutal stabilization, against a background of worldwide recession and plunging commodity prices, could only choke the country's economy. Chile's GDP contracted by 17% between 1973 and 1976, taking per capita income back to its 1967 level. Politically, the stabilization of 1974-76 was inspired by a far-right ideology that was the polar opposite of the UP's. However, from an economic point of view, whether there was any other means of putting an end to the excesses of the 1970-73 period remains an open question. In spite of their opposite underlying philosophies, could the boom and the bust be seen as anything but two phases of one cycle?

By 1977, stabilization was well underway, except for inflation which was still running at three-digit level. Turning away from its former laissez-faire approach, the government of General Pinochet decided to use exchange-rate policy to reduce the inflationary momentum. In 1978, a "crawling peg" was adopted, by which the Peso would be devalued at fixed dates by an amount systematically less than inflation. This proved insufficient to slow down inflation, however, and in 1979 the Peso's parity with the dollar was permanently fixed. The fixed exchange rate finally brought inflation grinding to a halt but by the time it did so, Chilean prices were out of line with world prices and the trade balance severely in the red. An external event beyond the Chilean government's control, the second oil shock of 1979, also contributed to the trade deficit, which was financed by massive loans from foreign bank syndicates. These capital inflows, in turn, fueled a speculative bubble and consumption boom, boosting GDP growth to an annual average of 7.9% between 1977 and 1981. However, a boom financed by exponential growth of the country's foreign debt was not sustainable, and prosperity came to an abrupt end when Mexico defaulted on its own foreign debt in August 1982, triggering financial panic across Latin America.

The clean-up of the 1979-81 speculative bubble proved extraordinarily costly. GDP contracted by 14% in 1982 under the combined effects of widespread corporate bankruptcies, massive devaluation and worldwide recession. Recovery was slow, with GDP returning to its 1981 level only in 1987. By then, however, the Chilean economy was deeply transformed. State intervention in the economy had been rolled back everywhere except in the copper sector; regulations were, by and large, transparent and predictable, and key sectors like telecoms had been deregulated. Moreover, the economy's structural adjustment was largely complete: inefficient import-competing industries like textiles and machinery had all but disappeared while new, export-oriented ones (e.g. fruit and vegetables, fisheries, wine, pulp and paper products) were rapidly growing (see Exhibit 6).

The structural reforms of the 1980s enabled the Chilean economy, at long last, to ride the train of global growth. Export diversification, a booming world economy and a new wave of capital inflows led to renewed GDP growth at an average of 7.8% per year from 1987-97. Thanks to a realistic exchange rate and prudent macroeconomic policies (government finances were in order and money growth was stable and non-inflationary), Chile's new boom was

widely perceived to be healthy and sustainable. Moreover, GDP growth was fast enough to contain the rise of the debt/GDP ratio, a critical financial indicator for country-risk analysts, in spite of the foreign capital inflow. Was Chile finally catching up with the first world?

The Asian crisis of 1997 shattered hopes once again. With growth rates back down to the 2-3% range during 1998-2001, there was no catching up any more; Chile seemed to find it more difficult to recover from the Asian crisis than Asia itself. If the country was to return to its fast-growth trajectory, could it continue to rely on the proven recipes of the 1990s or was it time to seek new ones?

### *Natural Resources: Blessing or Curse?*

The price of copper, which collapsed by 50% between September 1997 and May 1999,<sup>13</sup> was, in real terms, lower in 2001 than during the Great Depression of the 1930s.<sup>14</sup> Moreover, given the outlook for the world economy, it did not seem poised to recover in the near future. This would be bad news for any copper-producing country but for Chile, which exported \$7.3 billion worth of the metal in 2000 (out of exports totaling \$18.2 billion), it was catastrophic. Indeed, Chile's growth performance has been closely correlated with the price of copper over sustained periods of time, and this strong dependence on copper (and, to a lesser extent, on other primary products) is, according to some economists, a problem.

Although plentiful natural resources are usually viewed by economic historians as an asset, cross-country data on growth and natural-resource endowments show a *negative* correlation between the two.<sup>15</sup> That is, everything else being the same, resource-rich countries tend to grow more *slowly* than resource-poor ones. There may be several reasons for this negative association, although none provides a really compelling explanation. First, a booming natural-resource sector can drain resources out of other sectors, in particular manufacturing, a phenomenon known to economists as the "Dutch disease". If manufacturing has positive spillovers on the economy (say, because it is intensive in R&D and the knowledge generated by R&D has social value), the natural resource's development may end up slowing down the economy's overall growth.<sup>16</sup> Second, easily-grabbed riches can encourage rent-seeking, predatory behaviour and inter-ethnic rivalries.<sup>17</sup> Third, if the price of primary products has a downward secular trend relative to that of manufactures, countries relying on primary-product exports will suffer declining terms of trade. The evidence for this is, however, inconclusive.<sup>18</sup>

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<sup>13</sup> Central Bank of Chile, *Monetary Policy Report*, May 2001, p. 21.

<sup>14</sup> "Chile's economy: In search of new tricks", *The Economist*, December 1<sup>st</sup>, 2001, p. 52.

<sup>15</sup> See for instance Jeffrey Sachs and Andrew Warner, "Sources of Slow Growth in African Economies", *Journal of African Economies* **6**, 1997, 335-376.

<sup>16</sup> On this, see for instance Kiminori Matsuyama, "Agricultural Productivity, Comparative Advantage, and Economic Growth", *Journal of Economic Theory* **110**, 1995, 681-712.

<sup>17</sup> This argument was developed by Philip Lane and Aaron Tornell, "Power Concentration and Growth", Harvard Institute of Economic Research discussion paper 1720, 1995.

<sup>18</sup> Larrain et al., *op. cit.*, p. 65.

Another problem with strong dependence on primary products is that almost all high-growth countries have had high *export* growth. However, natural resources like copper offer limited growth potential, as their worldwide market is mature and substantial market-share gains are unlikely for a country that already accounts for a third of world output.

Put differently, the question is whether Chile's export growth rate of 8-9% a year in dollar terms can be sustained without significant diversification. Keeping Chile's current export structure fixed, such a growth rate would require an increase in copper output of about 10% a year given that its price declines at a secular rate of 1.65% a year.<sup>19</sup> At this rate, even if world demand kept pace, Chile's copper reserves would be exhausted in less than two decades unless major discoveries were made. Therefore sustained export growth may well have to come from items other than copper. Pulp and paper products, in which Chilean companies invested aggressively in the 1990s and for which demand is growing rapidly, especially in Latin America and Asia, offer better prospects. As for products such as fisheries, fruit, vegetables and wine, which could in principle hold significant growth potential, the problem is limited access to foreign markets resulting from widespread agricultural protectionism. In sum, adding up the marginal contributions of the various items in Chile's current export portfolio, it is an open question whether the extremely high export growth rates that would be required for Chile to bounce back to 7-8% GDP growth could be achieved without another round of export diversification.

### **The Role of Foreign Direct Investment**

If Chile's economy were to diversify out of primary products, there is little doubt that at least part of the required capital investment would have to come from abroad, in particular in the form of Foreign Direct Investment (FDI). Chile was quite successful in attracting FDI throughout the 1990s, particularly in the second half of the decade when FDI flows totaled more than US\$31 billion, as shown in Exhibit 7. This, by itself, was a remarkable achievement given that the "tequila effect" following Mexico's December 1994 crisis had cooled foreign investor enthusiasm for Latin America. However, the marked slowdown in the inflow of foreign capital in 2000-2001 raises the question of how far the Chilean government should go in trying to woo investors. Should attracting FDI be a government priority?

#### *FDI's Benefits for Host Economies*

The effects of FDI on host economies fall into four broad categories. First, the opening of a new production facility has a direct impact on employment and subcontractors. Second, provided that some taxes are levied on the foreign firm's activities (which is not necessarily the case given that "tax holidays" are often granted to foreign investors), FDI affects the government's budget. Third, an investment that is large enough relative to the size of the host country's economy, like Intel in Costa Rica, can have macroeconomic effects, e.g. on GDP growth, prices and the trade balance. Finally, the inflow of foreign capital can have "spillover" effects on domestic managerial practices, worker training, and technological sophistication that trickle down throughout the host economy.

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<sup>19</sup> Larrain et al., op. cit., p. 39.

These effects have been quantified in a number of studies<sup>20</sup> and have been documented in the case of Costa Rica's Intel plant. Direct outlays totaled US\$390 million, \$90 million more than originally planned. In 1999, direct employment was over 2000 employees (mostly professional), with total payroll approximating US\$25 million.<sup>21</sup> Intel's wages are above Costa Rica's manufacturing average, reflecting both a high skill level and a premium. Additional tax revenue for Costa Rica's state was severely limited by the long tax holiday granted to Intel, but for the economy as a whole, Costa Rica's Central Bank estimates that Intel's investment boosted GDP growth by 0.7 percentage point in 1997, 2.1 percentage points in 1998, and 5 percentage points in 1999 (see Exhibit 8). The effect on the country's trade balance was also considerable, since it swung from a deficit of US\$497.6 million in 1997 to a surplus of US\$632.1 million in 1999, Costa Rica's first surplus in 50 years.<sup>22</sup> However a large part of the trade-balance surplus attributable to Intel (roughly US\$1.5 billion in 1999) was offset by the repatriation of profits (US\$1.2 billion). The positive net effect on Costa Rica's current account was US\$300 million.

Spillovers are less easily quantified, but improved training and education is one that can be observed and measured. In Costa Rica, Intel made the country's Technology Institute, ITCR, an "Intel Associate", a status involving about \$300 million of annual funding. Language training was improved and a new one-year degree in semiconductor manufacturing was introduced for technical graduates. No doubt as a result of Intel's presence, the number of engineering students jumped from 577 to 874 between 1997 and 2000. Intel also facilitated an exchange program for faculty and students between ITCR and Cal Tech.

In the long run, foreign investment does not just bring capital; with it come engineering expertise and managerial best practice. For instance, according to a 1999 survey,<sup>23</sup> 35% of Intel's service providers and 17% of its input suppliers received training from the company, and 18% of the input suppliers declared having changed their organizational practices. Moreover, as modern manufacturing activity relies on worldwide supply chains, when a multinational company sets up an assembly plant, complex trade flows develop that encourage the upgrading of the host country's transportation services and logistics chains. This has positive spillover effects on the economy as a whole, as other industries benefit from improved logistics. Modern manufacturing also relies on just-in-time processes that require the proximity of subcontractors; thus, when a large assembly plant is set up, subcontractors will tend to locate close by. For instance, Intel's investment in Costa Rica attracted input suppliers like RVSI, NTK, Phillips, Alphasem Corp., and Esec USA, Inc. Because of such interactions between vertically-linked companies, manufacturing activities tend to develop in clusters, and once a country is recognized by investors as a credible production and export base, it can benefit, in the long run, from powerful agglomeration forces.

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<sup>20</sup> See for instance Gordon Hanson, "Should Countries Promote Foreign Investment?", G-24 Discussion Paper #9, February 2001, and references therein.

<sup>21</sup> See Larrain et al., *op. cit.*, p. 174.

<sup>22</sup> *Id.*, p. 177.

<sup>23</sup> *Id.*, p. 185.

In Chile's case, however, these forces do not yet seem to have materialized in spite of massive FDI inflows in the 1990s. Of all the capital that entered the country between 1974 and 2000 under the Foreign Investment Statute, only 13.1% went to industry, while over a third (34.5%) went to mining (essentially copper), and 36.9% to services and privatized utilities in electricity, gas, water and telecommunications.<sup>24</sup> There is no denying that foreign capital has helped modernize Chile's economy. Together with deregulation, it has helped to make Chile's service sector arguably the most efficient in Latin America. In telecommunications, for instance, with 22.1 main lines and 22.4 cellular subscribers per hundred inhabitants in 2000, Chile was ahead of Argentina (respectively 21.5 and 12.1) and Brazil (14.9 and 13.6), the two nearest contenders.<sup>25</sup> A call to New York City from Santiago de Chile cost US\$0.29 per minute in 2000, less than half the cost from Buenos Aires and a quarter of the cost from Sao Paulo, in fact barely more than from Miami (US\$ 0.27).<sup>26</sup> But the big push into manufacturing has yet to happen. What would it take for foreign investors to adopt Chile as a manufacturing and export base in sectors other than the country's traditional industries?

### *What Drives FDI?*

The key question for policymakers in any country wishing to attract foreign investors, is to what extent multinational companies choose the location of their manufacturing activities on the basis of fiscal inducements (e.g. tax breaks and subsidies) vs. the host country's "fundamentals" such as the size of its economy, proximity to large markets, literacy rates or infrastructure. Of course, an ideal host country would both offer adequate inducements *and* good fundamentals. But giving tax breaks has an opportunity cost: the foregone tax revenue cannot be invested in schools and highways. As every government faces budget constraints, priorities have to be set. What policy will most effectively attract FDI (fiscal inducements or investment in fundamentals) depends on the relative emphasis that multinational companies put on these two broad classes of factors.

Empirical evidence on the determinants of FDI is ambiguous. One study<sup>27</sup> showed that once "fundamental" factors of attraction are controlled for, a statistically traceable effect for tax differences remains, and the effect goes the expected way. That is, lower taxes attract FDI and the effect is quantitatively non-negligible. However, a number of other studies found no effect for the host country's tax pressure on inward FDI flows; some even found a hard-to-explain positive effect.<sup>28</sup> Thus, it is fair to say that the statistical evidence does not yet give a completely clear answer one way or the other. Governments, however, do seem to believe that tax incentives have a role to play, since many around the world use them (see Exhibit 9).

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<sup>24</sup> Foreign Investment Committee, op. cit., p. 42.

<sup>25</sup> Id., p. 36.

<sup>26</sup> Id., p. 36.

<sup>27</sup> James Hines, "Altered States: Taxes and the Location of Foreign Direct Investment in America", *American Economic Review* **86**, 1996, 1076-1094.

<sup>28</sup> See for instance David Wheeler and Ashoka Mody, "International Investment Location Decisions", *Journal of International Economics* **33**, 1992, 57-76; or Lael Brainard, "An Empirical Assessment of the Proximity-Concentration Tradeoff between Multinational Sales and Trade", *American Economic Review* **87**, 1997, 520-544.

Some countries offer special incentives for investment in backward regions. For instance, Brazil offers special inducements for investments in the poor Amazon region, while Chile offers Export Processing Zone (EPZ) treatment in the country's southernmost and northernmost areas. In some cases there seems to be excessive inducement. Federal structures, for instance, can encourage wasteful bidding wars between regional governments to attract investors: Ford is said to have received generous incentives from Brazil's state of Bahia which was competing with Rio Grande do Sul for the establishment of an assembly plant to be completed by 2002. Rio Grande do Sul is also said to have offered subsidies amounting to US\$250 million to General Motors for the establishment of an assembly plant in 1999 in addition to tax breaks worth close to US\$1.5 billion.<sup>29</sup> The European Union's poorer member states, like Portugal and Ireland, similarly subsidize foreign investment but even rich countries do it: Germany subsidized AMD's investment in Saxony and Motorola's in Bavaria, while the US subsidized Mercedes-Benz in Alabama and BMW in North Carolina.

Thus, a strict hands-off policy while possibly justified on principle, would be, by international standards, an oddity. Therefore, if some sort of meddling with market forces seems to be the rule rather than the exception, what general principles ought to guide intervention in order to stay away from purely ad-hoc measures? Are there lessons to be drawn from Chile's own economic history?

## **What Role for the State?**

Industrial policy has a long tradition in Latin America. Although the old model based on the import-substitution is now unanimously rejected by academics as a failed and counter-productive idea, some of its themes have resurfaced in recent debate.

### **The Import-substitution Model**

The so-called "import-substitution" development strategy was promoted in the 1950s and 60s by Raúl Prebisch and economists at the United Nations Economic Commission for Latin America (CEPAL under its Spanish acronym). Its central tenets were as follows: First, a pattern of international trade in which Northern countries export manufactured products while Southern ones export primary products merely reproduces the old colonial order. CEPAL economists claimed that the price of primary products relative to that of manufactured goods had a downward trend, hence market forces left to themselves could well lock Southern countries in a poverty trap. Thus government-led diversification into manufactured products was a prerequisite for long-term economic development. But, and this was the school's second key tenet, the technological and market dominance of large corporations in industrial countries would prevent infant industries from emerging in peripheral regions of the world economy unless they were protected by import barriers. Thus, development also required protectionist policies in the South.

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<sup>29</sup> Gordon Hanson, *op. cit.*, p. 19. The subsidy package was later bargained down by a newly elected left-wing government.

Widely applied in Latin America throughout the 1960s, the import-substitution model failed to deliver long-term growth. Industries that developed under the protection of high tariff walls turned out to be inefficient, often poorly managed and unable to export. Trade protection led to widespread rent-seeking and corruption, while bloated public sectors led to chronic budget deficits and accelerating inflation. In Chile, the model's failure was hastened by the *Unidad Popular's* macroeconomic excesses.

### **The Free-market Model**

Partly as a reaction to the failure of Latin America's import-substitution policies, partly also because economists shifted to a paradigm based on the assumptions of rational expectations and market efficiency, a laissez-faire philosophy gained prominence in the 1980s, ending the 50-year supremacy of Keynesian ideas. Nowhere were the new ideas, many of which originated from the University of Chicago's economics department, espoused more enthusiastically than in Pinochet's Chile. Applied ruthlessly by the so-called "Chicago boys", Pinochet's team of young economists, they enabled the Chilean economy to modernize itself through liberalization, privatization, and deregulation. Those industries that managed to develop with little trade protection or state subsidies were lean, efficient, and export-oriented.

However, whether the model can be relied on to deliver stable and sustainable growth in the long run remains, for its critics, an open question. The premature liberalization of capital movements in the late 1970s produced a financial crisis that proved almost as costly as the socialist excesses of the Allende years. Over the years, human-capital accumulation proved insufficient to keep pace with the economy's needs. Because many teachers and academics opposed the military dictatorship, General Pinochet was reluctant to extend adequate funding to the state school system. But beyond political considerations, according to the free-market model's critics, the state's roll back went so far as to cripple its ability to provide basic education, health and infrastructure services. In addition, the market has yet to demonstrate that it can engineer the Chilean economy's transformation from a developing-world stereotype based on a small number of primary products into a modern, diversified economy.

### **A New Role for a New State?**

Whereas the corruption and deficits of the 1960s had crippled the state's ability to play any useful role in the economy, the fiscal conservatism and public-sector modernization of the 1990s put it back in a position to do something. The question is 'what?'. No one contests the need for a significant effort in education and infrastructure, but what more could the State do?

Chile currently grants EPZ treatment to companies that invest in the frontier regions of the North and the South. However, such business locations, while socially valuable for their contribution to poverty alleviation (both regions are poor), are unlikely to become major industrial clusters. A policy aimed at triggering industrial agglomeration would have to give inducements to investment in a credible industrial location like the Central Valley. If successful, such a policy would necessarily reinforce regional income disparities. How desirable would this be?

Employers also complain that the Socialist government of President Lagos failed to introduce the required flexibility in hiring and firing. In fact, reforms were introduced in 1999-2000 that employers claim will make labor-market rigidity even worse. Pushing liberal reforms further, critics say, is necessary to make Chile more attractive to foreign investors. But how far should a country go in letting its social choices be dictated by foreign companies trying to escape their own countries' regulations?

A policy aimed at attracting FDI would also have to grant more favorable tax treatment to foreign companies than to domestic ones, since extending generous tax exemptions to domestic companies would excessively reduce the state's tax base. But would it be legitimate for a poor country to grant tax exemptions ultimately benefiting the shareholders of multinational companies, many of whom are affluent people living in industrial countries? Worse, could it be that tax exemptions granted by host countries are offset by taxes levied by the multinationals' home countries on their worldwide income? Would it make sense for Chilean taxpayers to subsidize American or European taxpayers that way?

Then again, if other countries play that game, would it be wise for one that sorely needs the investment and job creation to sit idle waiting for manna to fall from heaven? In sum, what (if anything) should be done to speed up the transformation of Chile's economy?

**Exhibit 1**  
*Basic Indicators of Chile's Economy, Compared*

	Chile	Argent.	Brazil	C. Rica	Mexico	Malaysia	Poland	S. Africa
Population (millions, 2000)	15	37	170	4	98	23	39	43
Density (inhab./sq. km)	20	14	20	71	51	71	127	35
Population growth (%/year 1990-2000)	1.5	1.3	1.4	2.0	1.6	2.5	0.1	2.0
National Income (billion US\$, 2000)	70	276	607	14	498	79	162	129
National Income per capita (US\$, 2000)	4600	7440	3570	3960	5080	3380	4200	3020
Nat. Income p. capita, PPP (US\$, 2000)	9110	12090	7320	8250	8810	8360	9030	9180
GDP growth rate (%/year, 1990-2000)	4.0	-1.7	3.2	0.0	5.4	6.0	4.1	1.4
Life expectancy at birth	76	74	67	77	72	72	73	48
Adult illiteracy rate	4	3	15	5	9	13	0	15
Population below poverty line, (%)	2.0	n.a.	9.0	6.9	12.2		2.0	11.5
Gini index	57.5	n.a.	59.1	45.9	51.9	49.2	31.6	59.3
Gov. spending (% of GDP, 2000)	11	14	16	5	7	7	4	18
Investment (% of GDP, 1990-2000)	22	16	23	17	23	26	27	15
Manuf. exports (% of exports, 1999)	17	32	54	68	85	80	77	55
Hi-tech exports (% of man. exp., 1999)	4	8	13	n.a.	21	59	3	8

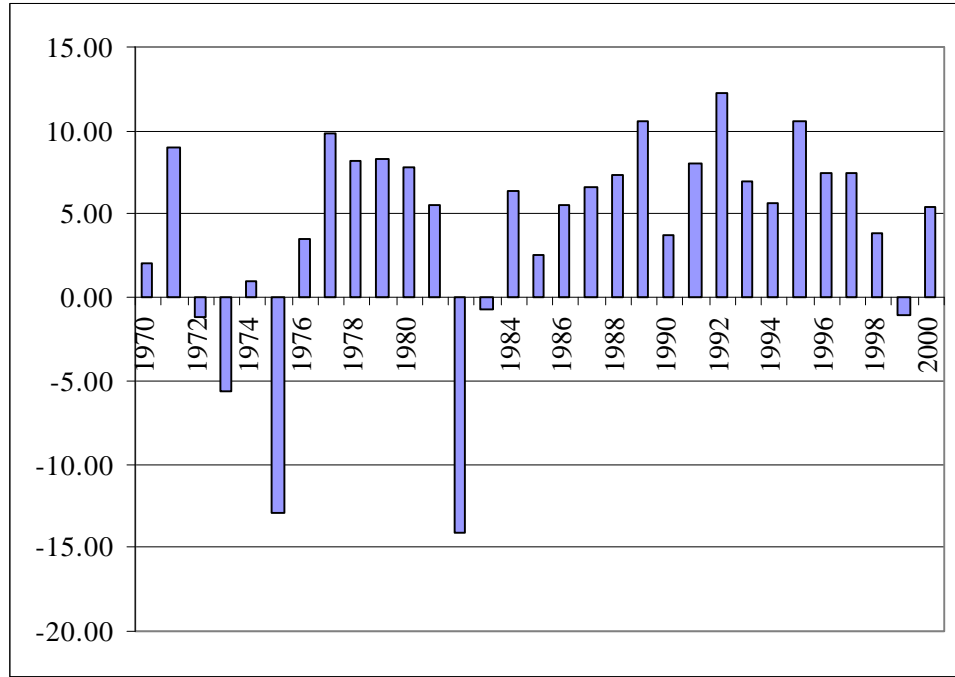
Source: World Bank, World Development Report 2002.

**Exhibit 2**  
*Incentive Package under Costa Rica's Free-zone Status*

1. 100% exemption on taxes on profits for 12 years, 50% reduction for the following six years;
2. 100% exemption on import duties on raw materials and capital goods;
3. 100% exemption on export taxes, local sales and excise taxes, and taxes on repatriated profits;
4. 100% exemption on all municipal taxes and taxes on capital;
5. No restrictions on repatriation of profits of foreign currency management;
6. Fully expedited on-site customs clearance;
7. Possibility of selling products to local exporters;
8. Possibility of selling up to 40% of the production locally, exempt from sales tax;
9. Payroll subsidy for five years at 15% of a base year (chosen by the company) the first year, 13% the second year, 11% the third, 9% the fourth and 7% the fifth;
10. Training subsidy amounting to three months wages for on-site training.

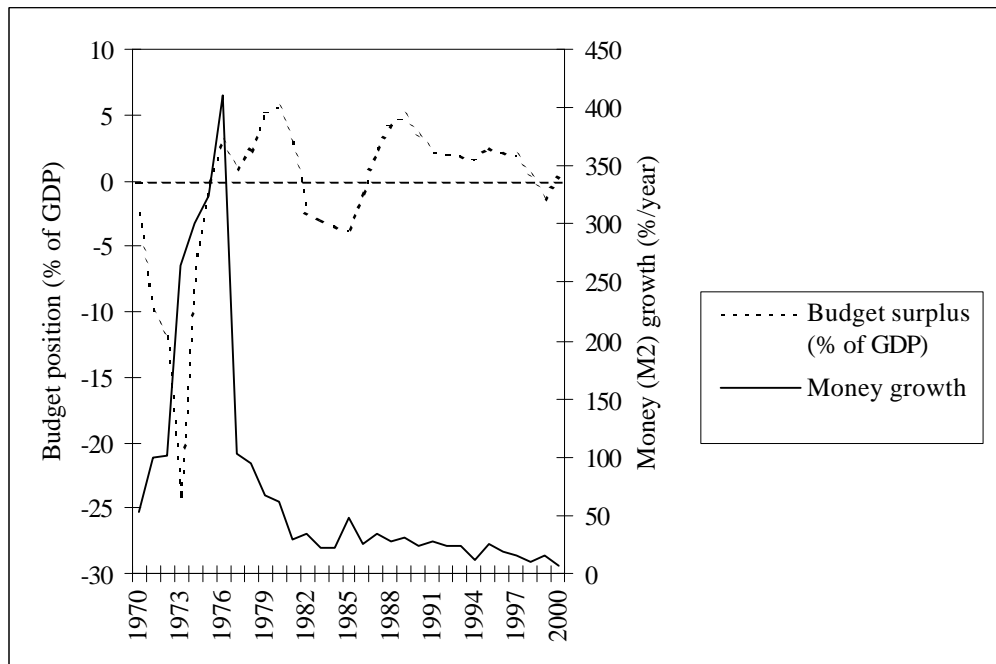
Source: D. Spar, "Attracting High Technology Investment: Intel's Costa Rican Plant"; Foreign Investment Advisory Service Occasional Paper 11, Washington, DC: The World Bank, 1998. Cited in Larrain et al. (2001), op. cit.

**Exhibit 3**  
*Chile's Real GDP Growth, 1970-2000 (% per year)*



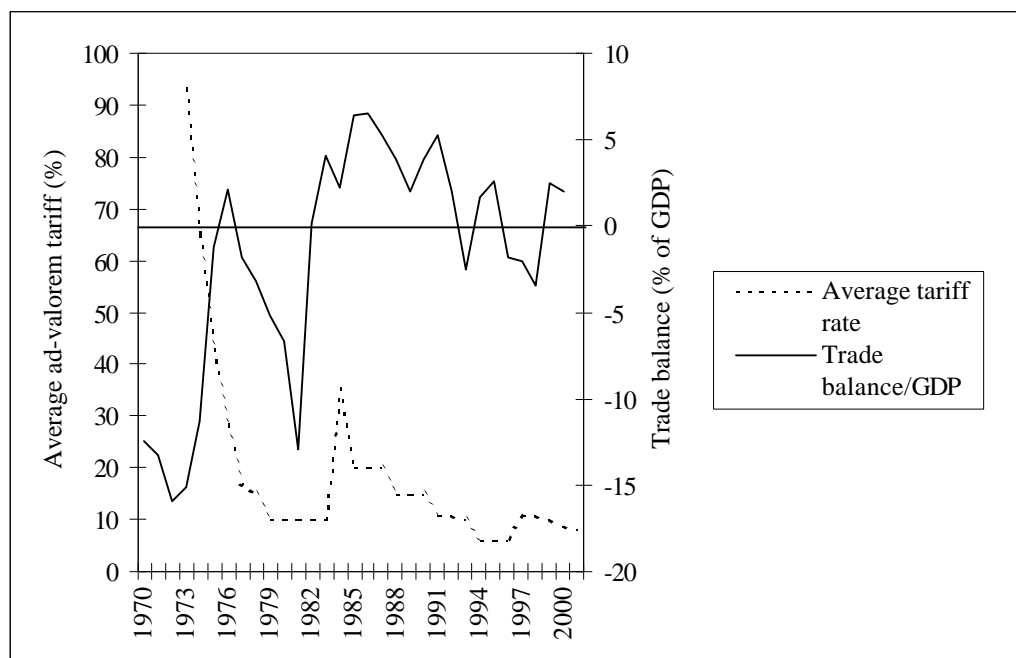
Source: Central Bank of Chile.

**Exhibit 4**  
*Fiscal and Monetary Policy in Chile, 1970-2000*



Source: IMF, International Financial Statistics.

**Exhibit 5**  
Chile's Average Imports Tariff and Trade Balance



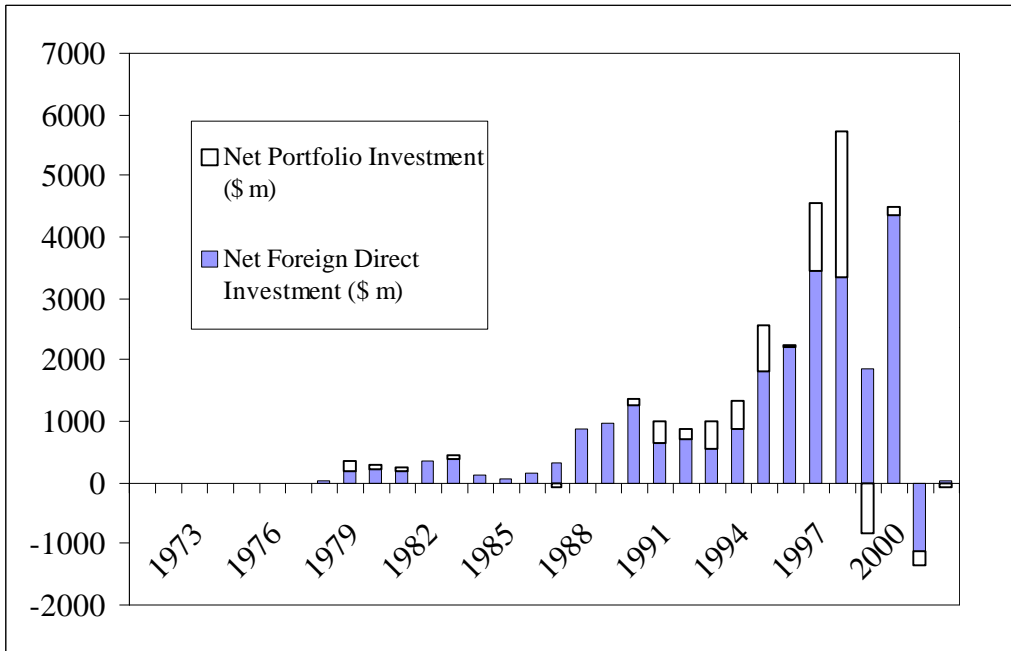
Source: Velasco (1994); IMF, International Financial Statistics.

**Exhibit 6**  
Chile's Export Composition (% of total)

	1975	1985	1995	1998
<b>Primary products</b>	73	65	53	46
Copper	54	47	40	34
Other minerals	18	15	8	n.a.
Timber	1	2	4	n.a.
<b>Semi-finished products</b>	14	24	25	26
Products of the sea	2	8	7	n.a.
Agricultural products	5	11	8	n.a.
Cellulose	4	4	8	n.a.
<b>Manufactured products</b>	12	11	22	27
Wood products	3	3	4	n.a.
Food products	4	5	9	n.a.
Beverage and tobacco	0	1	1	n.a.
Chemical products	3	2	3	n.a.
Other manufactured products	1	1	3	n.a.

Source: Veronica Silva, "E Strategia y agenda comercial chilena en los anos noventa", Comercio internacional #11, CEPAL, 2001.

**Exhibit 7**  
*Net Capital Inflows in Chile, 1970-2001*



Source: Central Bank of Chile.

**Exhibit 8**  
*Costa Rica's GDP Growth with and without Intel*

	Without Intel	With Intel	Differential
1992	9.0	9.0	0.0
1993	6.3	6.3	0.0
1994	4.9	4.9	0.0
1995	4.0	4.0	0.0
1996	0.3	0.3	0.0
1997	5.1	5.8	0.7
1998	5.9	8.0	2.1
1999	3.0	8.0	5.0

Source: Central Bank of Costa Rica, cited in F. Larrain, Luis F. Lopez-Calva, and Andres Rodriguez-Clare, "Intel: A Case Study of Foreign Direct Investment in Central America".

**Exhibit 9**  
*Incentive Packages for Inward FDI in Selected cCountries*

	I			II		III		IV	Applies to domestic firms			
	Corp. tax exemptions	Period (years)	Sectors	VAT exemptions	Items	Import tariff exemptions	Items	EPZ provisions	I	II	III	IV
Argentina	✓ <sup>a</sup>			✓	E	✓	E,R			✓	✓	
Brazil				✓	E,P					✓ <sup>b</sup>		
Mexico	✓ <sup>c</sup>					✓	E					
India	✓	5	All <sup>d</sup>			✓	E	✓			✓	✓
Philippines	✓	3 to 6	All <sup>e</sup>	✓	All	✓	All	✓	✓	✓	✓	✓
Thailand	✓	3 to 8	P			✓ <sup>f</sup>	K,R,E					
South Africa	✓ <sup>g</sup>								✓			
Chile						✓ <sup>i</sup>		✓ <sup>h</sup>				

A: agriculture

E: exported goods

K: capital

M: manufacturing

P: priority companies or industries

R: raw materials

EPZ: Export Processing Zone

**Notes**

a: Tax credit bonds

b: Excise and sales and service tax exemptions are granted to exporters of manufactured goods

c: Tax credits

d: New industrial undertakings satisfying certain conditions established in an EPZ, software/electronic hardware technology park, of 100% export-oriented undertakings are entirely income-tax exempt.

e: Income tax holiday giving full exemption from corporate income tax for 6 years for “pioneer firms” and those locating in less-developed areas, 4 years for non-pioneer firms, 3 years for expanding export-oriented firms.

f: Exemption or reduction, depending on cases.

g: Tax holiday granted at discretion to enterprises with qualifying assets over R3 million, incorporated on or after 1st October 1996, for the sole object of carrying out a qualifying project.

h: Tax benefits and other incentives apply to companies operating in northernmost and southernmost parts of the country and to forestry companies.

i: Reimbursement of duties paid.

Source: Gordon Hanson, op. cit., Tables 4-5.