The World Bank

Welfare Consequences of Selling Public Enterprises

AN EMPIRICAL ANALYSIS

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A Summary

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Contents

A Note to the Reader

This booklet is the fifth in a series summarizing the main points of full-length World Bank books. *Welfare Consequences of Selling Public Enterprises* assesses the consequences for general well-being of converting state-run ventures into private concerns, by examining twelve case studies—three each in four countries of which one country is industrialized and the other three are developing. The lessons are encouraging as eleven of the twelve case studies were decisively welfare-enhancing.

Welfare Consequences of Selling Public Enterprises

Who won, who lost, and how much? What happened when, why, and how? These are the questions addressed in this summary of the World Bank's examination of the welfare effects of selling three public enterprises in each of four countries: the United Kingdom, Chile, Malaysia, and Mexico. The table below shows the dates when divestiture was completed for each case study and distinguishing features of each operation.

Country/enterprise	*Sector*	*Divestiture*	*Distinguishing features*
United Kingdom			
British Telecom (BT)	telecom	1984	Shows value of relaxing investment constraints and of skilled regulation
British Airways (BA)	transport	1987	Shows benefits of tough, cost-saving management
National Freight (NFC)	transport	1982	Shows good management can coexist with employee ownership
Chile			
CHILGENER	power	1985	Shows ownership improves efficiency of electricity generation
ENERSIS	power	1987	Shows ownership can promote profit maximization; value of regulation
Compañía de Teléfonos de Chile (CTC)	telecom	1987	Shows value of relaxing investment constraints and of skilled regulation
Malaysia			
Malaysian Airline Systems (MAS)	transport	1987	Shows partial divestiture can make government more effective and improve productivity
Kelang Container Terminal	transport	1986	
Sports Toto Malaysia	gambling	1988	Shows profit maximization through product development, advertising
Mexico			
Teléfonos de México	telecom	1990	Shows sale revenue can retire national debt and improve investment climate
Aeroméxico	transport	1988	Shows dramatic increase in labor productivity can be achieved
Mexicana de Aviación	transport	1989	Shows sometimes private firms fail, here from over ambitious investment

From World War II through the 1970s the public-enterprise sector either expanded or remained the same size in almost all countries, but since the 1980s it has either contracted or remained the same size almost everywhere. Notwithstanding the extensive empirical literature on divestiture, its welfare effects remain open to question. We have tried to provide answers.

Questions, Answers, and Methodology

Our basic question is simple. Is a country better or worse off when its government divests itself of a public enterprise? A comprehensive answer is not at all simple, since it requires answers to four subsidiary questions: What happened? Why did it happen? What will happen? What is it worth?

We attempt to answer the basic and subsidiary questions empirically through twelve case studies—three in each of four countries, one industrial (the United Kingdom) and three developing (Chile, Malaysia, and Mexico)—and to draw policy implications. Most of our enterprise case studies are organized according to the subsidiary questions. Our main findings lend credence to the conventional view that divestiture is likely to improve economic welfare. However, the sources and distribution of gains show some surprising patterns. Among the unexpected findings is that partial divestiture can provide gains equal to those of full divestiture.

Our sample is small and nonrandom. We had to modify some of our original intentions in selecting the three developing countries because they were virtually the only ones that had actually divested public enterprises in significant numbers by the mid-1980s. Instead of being stratified at different levels of income, all three are middle-income countries with gross domestic products (GDPs) that were virtually identical, and all were quite well managed in the postdivestiture period. With only three exceptions, the market structures in which the enterprises operated were noncompetitive—though this may not matter because if divestiture works in noncompetitive markets, it ought to work in competitive ones.

We also would have preferred to have examined enterprises within the same three sectors across the four countries discussed to minimize the effect of variations in technology on outcomes. In the end, in each of three of the four countries we were able to select one telecommunications enterprise and one airline (two airlines in Mexico). The remaining cases include two from the power sector, two from shipping and transport, and one from gambling. Dates of divestiture varied, and the Mexican cases were more recent than we would have liked.

The limitations of the sample caution us against applying our findings predictively to low-income countries. However, since many countries and enterprises around the world resemble the cases analyzed, we hope to shed light

on two crucial questions: What can be expected from making the divestiture decision? Under what conditions would such a decision be advantageous to society?

To find the net welfare effect of divestiture for each enterprise, we compare its value under divestiture with what it would have been without divestiture. The welfare gain (or loss) from divestiture that we report is the difference between the social net present values of these two cases. To find social net present values, we identify all groups likely to be affected by divestiture—consumers, the government, any other existing shareholders, buyers, competitors, employees, and the public at large—and sum up their welfare levels under each of the actual and counterfactual cases. Unweighted, this gives us world welfare including the effects on foreigners.

To find the effect of divestiture on domestic welfare, any welfare effects that accrue to foreign buyers or consumers are excluded and assigned a weight of zero. Domestic effects would normally receive a weight of one. However, if an economy is highly distorted, the different domestic components of welfare may require different weights.

Our method for calculating the different components of welfare is to construct a simple model for each of the relevant product markets in which the enterprise operates and then to calculate each of the welfare components in each market. Aggregating the results over the product markets and across time (by discounting) gives us the required estimates for each welfare component.

The actual and counterfactual scenarios to be compared, and the projections for the future, are central to each analysis. To create the actual scenario, we first look at actual performance—in most cases for the five years before and after divestiture. We look for substantial changes in performance in order to identify changes that *may* have been caused by divestiture. This approach differs from the standard approach in that the resulting picture of the enterprise is formed not merely impressionistically but through a detailed and exhaustive study of all the quantitative material we were able to gather. From this, using national income and wealth accounting methodology and an existing software package, we calculate the following economic variables: profit—both public and private; fixed capital; real public profitability and productivity; consumer surplus; and other returns, all at both current and constant prices.

In constructing a counterfactual scenario, our basic approach has been to assume that it will be similar to the actual scenario unless we have strong reasons to believe otherwise. The set of changes that we deem to have been caused by divestiture are then subtracted to yield the counterfactual scenario—the behavior of the enterprise had it not been divested.

Because the benefits and costs of divestiture continue into the future we project and incorporate them into the analysis to allow, among other things, comparison of the sale price with the stream of future returns. In this way we

can examine whether the sale price was at least equal to the discounted net present value of future dividends and taxes had the enterprise not been sold.

Our basic approach, therefore, moves from the actual (what happened before and after), to the counterfactual (whether these developments would have happened in the absence of divestiture), to the projection of their bottom line results.

The remainder of this summary provides the results of the twelve enterprise cases, followed by their syntheses and a policy prescription.

United Kingdom

The U.K. divestiture program is large both in absolute scale (over 6 percent of GDP) and the size of the enterprises divested. These include British Airways, British Gas, British Petroleum, and British Telecom. U.K. divestiture has provided a role model for other countries, although the share of GDP divested is less than in Chile, and far less than that now being attempted in Eastern Europe.

British Telecom

The divestiture of British Telecom (BT) is interesting for the following reasons:

Timing. The enterprise was divested in the winter of 1984, long enough ago to have generated several years of performance data since divestiture but not too long ago to make it impossible to find performance data for the period before divestiture.

Sector. Telecommunications is an industry of prime importance throughout the world. All countries that have not yet done so are confronted with the decision as to whether to divest their telecommunications sectors.

Policy issues. BT's divestiture was accompanied by an interesting set of regulatory policies that other countries may consider adopting in one way or another.

Outcome. The BT divestiture is a celebrated success story that has been criticized and analyzed by others. This allows us to contrast our results with other analyses.

What happened? Our search for quantifiable changes associated with divestiture yields four primary conclusions:

Quantity effects. Global measures of real quantitative or productivity effects (that is, real quasi rents per unit of capital and total factor productivity, or TFP) show a distinct turning point from decline to improvement after 1982. However, the origins of this discontinuity were localized, being largely due to a sharp and continuous increase in output per worker.

Price effects. In 1981 and 1982, improvements in nominal quasi rents were overwhelmingly attributable to favorable relative price movements. Thereafter, price effects were either negative or small and positive. Once again, this global change can be traced to a single primary source—the level and structure of output prices.

Investment effects. Real gross fixed capital formation was stagnant through 1984 and then took off, suggesting release of a constraint on investment.

In short, the quantitative evidence suggests only three clear and significant behavioral changes associated with divestiture: in output pricing, labor productivity, and fixed capital formation. Although these changes are important, so also is the complementary proposition.

Noneffects. For most primary variables, the story is one of continuity before and after divestiture. That is, most things either did not change significantly or changed as a result of factors clearly exogenous to the divestiture exercise.

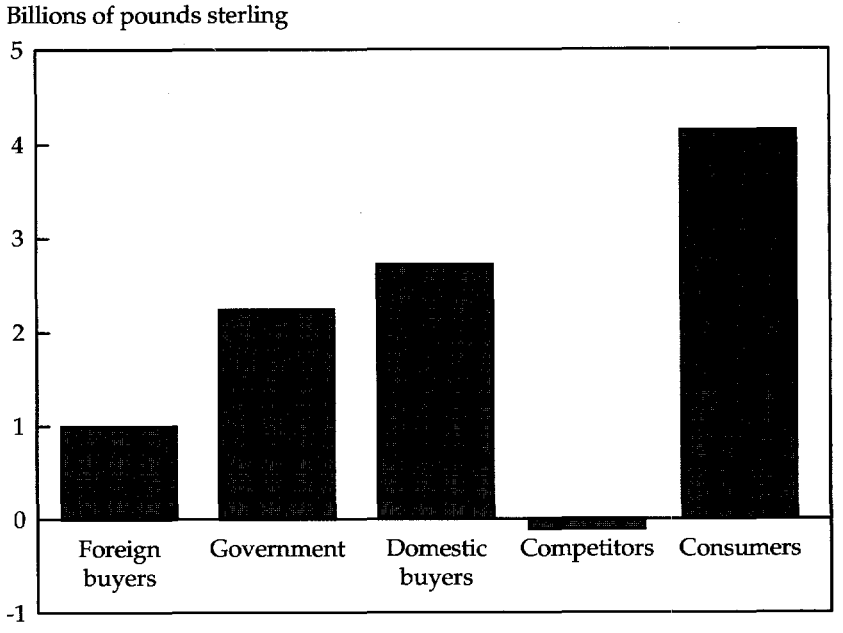
Why did it happen? BT shows a clear improvement in productivity at the time of the announcement of divestiture, although time-series and international comparisons of telecommunications productivity both cast strong doubt on the hypothesis that this improvement was attributable to institutional change. Accordingly we conclude that there is no convincing quantitative evidence that BT's productivity was enhanced by divestiture until after 1990. Hence, in our base counterfactual run we assume no behavioral change in technical coefficients.

In contrast, the divestiture of BT released it from resource constraints imposed by PSBR, leading to greater investment. Moreover, it led to a faster adjustment of the prices for private circuits and the basket of goods regulated by the RPI - X formula.

What will happen? The telecommunications industry is undergoing massive changes in technology and market organization. The only certainty about the future is that dramatic changes will occur, dooming to failure any attempt at accurate prediction. In our projections, therefore, we have not attempted to forecast how markets or technologies are going to change. Instead, we have prepared our projections as if no dramatic changes were going to take place. These projections yield estimates of revenues for the actual (private ownership) and counterfactual (continued public ownership) cases. We also make assumptions about how unit costs will change over time, project costs for the two cases, and summarize the resulting trend in quasi rents.

The revenue and cost projections come together in our projections of quasi rents. Annual quasi rents in the private case are projected to grow from £3.8 billion in 1990 to £21.2 billion in 2015, for an annual nominal growth rate of 7.1 percent. Quasi rents in the public case are projected to grow from £3.4

Figure 1. Distribution of Welfare Gains and Losses from Divestiture, British Telecom



Source: Authors' calculations.

billion in 1990 to £18.3 billion in 2015, for an almost equal nominal growth rate of 7 percent per year.

Projections of all other variables follow from the projections of basic prices and quantities. Thus, for example, the price and quantity projections for outputs give rise to projections of consumer surplus. The profit projections yield projections of direct taxes and dividend payments. Dividend payout rates have been assumed to maintain relatively stable debt-equity ratios.

What is it worth? Although not much changes as a result of divestiture, what does change is sufficient to make the world better off by about £10 billion and the United Kingdom by £9 billion. This is about two-thirds of BT's private value.

Private buyers pay £3,750 million for stock worth about £7,470 million, for a net gain of £3,720 million. Of these total gains, £1 billion goes to foreign shareholders, leaving £2,720 million for U.K. nationals. Government comes out £2,250 million ahead. Consumers are better off by £4,150 million. Although

this is a large number, it is only about 0.8 percent of the total discounted consumer surplus generated by BT's output. BT's erstwhile competitors lose £120 million.

Conclusions. Our review of the quantitative record suggests that, as a result of the divestiture of BT:

- Operating efficiency did not change before 1991. There was an earlier distinct turning point from decline to improvement in BT's productivity after 1982. However, considerations of longer time series and international comparisons make it highly unlikely that this was due to institutional change of any sort, let alone the announcement effect of divestiture. In contrast, downsizing of the labor force, which began in 1991, is making a significant contribution to operating efficiency.
- The level and structure of output prices changed as a result of a change in the regulatory environment.
- The level of fixed capital formation rose sharply in the first three years after divestiture. Real gross fixed capital formation was stagnant through 1984 and then took off because of the release of the external funding limit (EFL), an investment constraint.
- Most other variables either did not change significantly or changed as a result of factors clearly exogenous to the divestiture exercise.
- What did change was sufficient to make the world better off by £10 billion and the United Kingdom better off by £9 billion. This is equivalent to almost £20 billion in 1992 pounds sterling.
- The distribution of the welfare gain comes as close to a Pareto improvement as possible. Only BT's competitors were identified as (minor) losers. Other probable minor losers were some residential and business consumers adversely affected by relative price changes within BT's bundle of outputs.

British Airways

Many state-owned airlines around the world are candidates for divestiture. The case of British Airways (BA) could provide valuable lessons for these airlines and for the divestiture of public enterprises in other oligopolistic industries.

Before divestiture, and especially around 1980, BA had the reputation of being overstaffed, with massive excess capacity and occasional substantial losses. By the time of its divestiture in February 1987—less than six years after recording an operating loss equal to 5 percent of turnover—BA was a flourishing enterprise and still the dominant airline in the United Kingdom.

What Happened? The question "What happened?" has three primary answers in terms of quantifiable changes in BA's behavior and performance around the time of divestiture:

Quantity effects. Productivity measures show a dramatic positive turnaround in 1983. A major productivity slump in 1987 was followed by a recovery in 1988.

Price effects. BA's output prices increased most dramatically during 1980–82, the years with the highest rate of inflation. They decreased across the board only in 1986 and, to some extent, in 1988. In real terms, prices increased in all years from 1980 to 1984 and decreased in all years from 1985 to 1990.

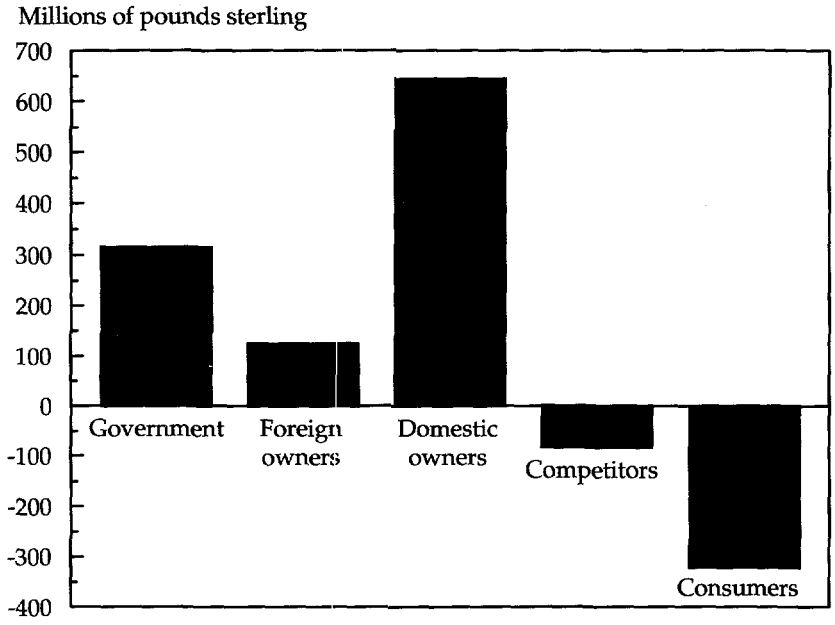
Investment effects. Real gross fixed capital formation declined steadily during 1980–83 (from £400 million to £100 million), had a bumpy increase to about £250 million in 1987, jumped to above £800 million in 1988 and declined to £440 million in 1990. Even if one omits the acquisition of British Caledonian Airways (BCal) in 1988, the jump in that year is still impressive, and the subsequent decline appears minor. Thus, divestiture was clearly followed by growth in fixed capital formation and acquisition.

In sum, the quantitative evidence suggests only two occasions when clear and significant behavioral changes could be associated with divestiture: positive turnarounds for productivity and public profits at constant prices, in 1984, and, in 1988, for fixed capital formation in connection with BA's acquisition of BCal.

Why did it happen? How can we explain the correlations between BA's performance and divestiture? The timing of the two turnarounds in BA's performance makes it particularly difficult to relate them to divestiture. The first turnaround occurred years after plans for BA's divestiture were made public in 1979 but before the actual divestiture took place; the second turnaround coincided as much with divestiture as with the acquisition of BCal. Thus, for the first turnaround we have to show that the phenomenon was not simply caused by the business cycle or some other condition exogenous to BA. If we find that it was caused by some endogenous factor, then we have to relate this factor to the announcement of divestiture. For the second turnaround we also have to be able to exclude external causal factors and to explain that the acquisition of BCal would not have happened under continued public operation of BA.

We have argued that the appointment of a successful top manager in 1981 and the turnaround in 1983–84 would likely have happened without the plan for BA's eventual divestiture. Our base counterfactual therefore ignores any announcement effects and looks only at changes that occurred in direct connection with divestiture.

Figure 2. Distribution of Welfare Gains and Losses from Divestiture, British Airways



Source: Authors' calculations.

The base counterfactual assumes three major differences from what actually happened. First, BCal's assets, liabilities, routes, employees, and so on would not have been added to BA but would instead have been used elsewhere. Second, without the merger BA would have kept prices slightly lower than it actually did. Third, without the merger, BA would have had less incentive and opportunity to increase labor productivity.

What is it worth? Society reaps a net gain of £680 million (in 1987 pounds sterling). Private buyers pay about £875 million (£1.22 per share) for stock worth £1,650 million (£2.29 per share), for a net gain of about £770 million. Of this gain, about £83 million goes to BA employees. The government comes out about £315 million ahead. Consumers are worse off by about £325 million, which, however, is only 0.6 percent of the present value of consumer surplus generated in BA's markets. Foreign consumers lose approximately an additional £190 million (in 1987 pounds sterling) that has not been included in our other calculations.

Although output prices went up, BA's erstwhile competitors lose about L85 million from divestiture. However, we believe that competitors actually gain because the negative number results from quasi rents that would have accrued to the former BCal (or its potential other acquirers) and are now shifted to BA.

Conclusions. The quantitative evidence on BA's performance suggests two clear and significant behavioral changes that could possibly be associated with divestiture: positive turnarounds in 1984 and 1988 for productivity and for fixed capital formation. We believe that the 1984 turnaround can be attributed to cost-cutting and possibly to output-improving measures taken by BA under its new chairman, Sir John King (now Lord King of Wartnaby). Lord King's appointment itself could be related to the announcement of BA's divestiture, but we remain uncertain about this causal link. The 1988 turnaround is closely linked to BA's acquisition of BCal and the synergies realized through this merger. We firmly believe that the merger would not have occurred without BA's divestiture.

Our base counterfactual traces only the consequences of the government's sale transaction and the effects of the acquisition of BCal. In addition, our alternative counterfactual scenario takes into consideration that announcement effects could have occurred during 1982–86.

Our review of the quantitative record suggests that as a result of the divestiture of BA:

- BA acquired BCal in December 1987, resulting in some improvement in operational efficiency and some increase in BA's market power.
- BA improved its performance during 1982–87 through massive layoffs during 1982–84. This improvement could be attributed to the announcement effect of divestiture.
- Changes after 1987 were sufficient to make society better off by £680 million at 1987 prices. If one includes changes made between 1982 and 1987 as an announcement effect of divestiture, the net gain increases to £919 million.

National Freight

NFC plc, formerly the National Freight Consortium plc, is the holding company for a number of transport and other companies. It supplies central direction to its operating companies but delegates most decisions to them. This decentralization (also practiced when NFC was in the public sector) makes the U.K. road transport industry very different from the typical, fairly monolithic, nationalized industry. Road freight transport is a fragmented industry. It is also a major one: turnover in the United Kingdom equaled 8.7 percent of GDP in 1989. The

industry is similarly important in most other countries, so that a major state-owned transport enterprise is a good candidate for divestiture.

NFC is also of great interest because for most of the 1980s, 80 percent of its shares were reserved for past and present employees of the group. NFC's employee buyout in 1982 was almost unique in the history of public-enterprise divestiture and has been celebrated as a surprising success. The company believes strongly that its worker-shareholders have created a much more successful company because they own it, whereas before divestiture NFC's outlook was bleak. Around 1980, in particular, NFC was overstaffed, short on investment, and losing money. After divestiture the company grew in output but continued for some time to shrink in employment.

What happened? Hopes and expectations for NFC's divestiture were not high after the government produced reports saying that it would not be possible to find a willing buyer. Nevertheless, as a financial drain on the government and enterprise operating in a competitive market, NFC was a prime candidate for divestiture. There appears to be wide agreement among economists, politicians, regulators, and financial analysts about NFC's performance since divestiture. First, NFC's financial performance has been extremely good, although this may have been helped by its inheritance of valuable real estate, which could be disposed of in a booming real estate market. Second, NFC has been successful in its output markets and has expanded rapidly. Third, labor ownership has worked: NFC has had peaceful labor relations even as it has reduced its work force and increased productivity. Fourth, the company's new owners have made enormous capital gains (over 10,000 percent in less than ten years).

Our evaluation does not overturn any of these conclusions. However, our quantifications may change the conventional view about the distribution of benefits. We came to four primary conclusions:

Quantity effects. Real quantitative changes (real quasi rents per unit of capital and TFP) show a major turnaround for NFC in the year following divestiture.

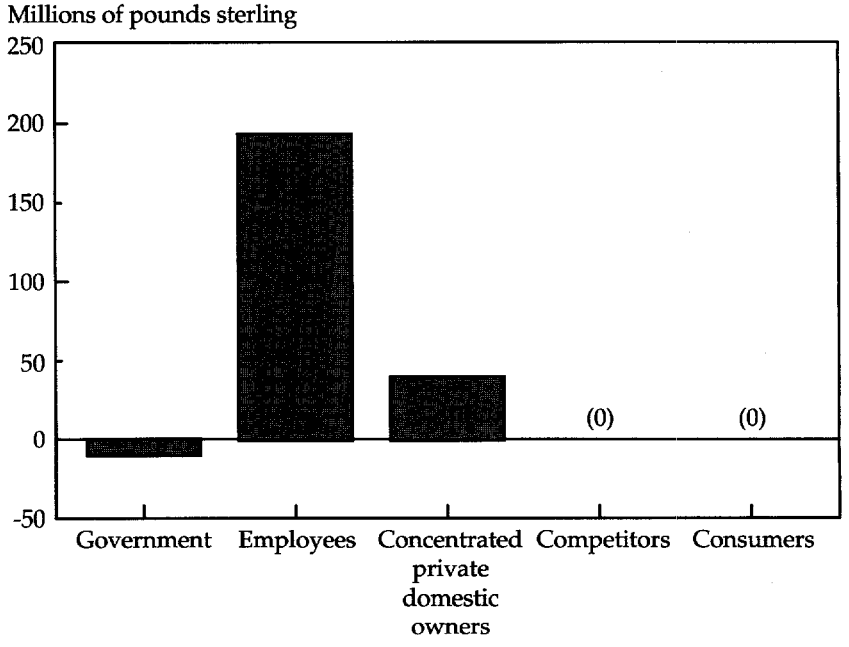
Investment effects. Real gross fixed capital formation was stagnant through 1982 and then took off, suggesting release of an investment constraint. (However, there was a major interruption of this positive trend in 1986).

Fiscal flows. The U.K. government's fiscal flow position vis-à-vis NFC improved vastly after divestiture.

Noneffects. Output price effects are not measurable, since NFC operates in competitive industries and we have no direct way of measuring NFC's quantities of output.

Why Did It Happen? Our base case counterfactual assumes that a publicly owned NFC would have performed similarly before and after divestiture. Hence,

Figure 3. Distribution of Welfare Gains and Losses from Divestiture, National Freight



Source: Authors' calculations.

our base case is characterized by linear trend extrapolation of productivity improvements, whereas the divestiture scenario is characterized by kinks. In particular, we did not assume that NFC would have been broken up and sold piecemeal.

Three major differences from what actually happened are assumed in our base counterfactual story. First, we assume that labor productivity increases in 1983–87 would have followed the 1977–82 trend. This means an improvement of 4 percent a year, substantially below the 7 percent improvement actually achieved. Second, we assume that there would not have been an employee profit-sharing scheme. Profit sharing started in 1986. Hence we assume that in 1986 and 1987 wages would have been 1 percent lower than in the actual case. Third, NFC restructured its balance sheet after divestiture. We assume that under continued public operation this would not have happened.

What is it worth? Although they are smaller than expected, the changes resulting from divestiture leave U.K. society better off by about £225 million (in 1982 pounds sterling).

Private buyers pay £8 million for equity shares worth £242 million, for a net gain of £234 million. This gain is split between employees and their families (£193 million) and other shareholders (£41 million). Purchasers of £46 million worth of NFC debt neither gain nor lose. The government is slightly worse off by £11 million.

Conclusions. Major improvements in NFC's productivity performance started the year after divestiture. This turnaround is more impressive and steadier than the turnaround in private profits for which the NFC divestiture is so well known. Real gross fixed capital formation was stagnant through 1982 and then took off, suggesting release of an investment constraint. There was a partially unexplained major interruption of the positive trend in 1986. Consumer price effects are not measurable, as NFC operates in competitive industries and as we have no direct way of measuring NFC's output quantities.

As a result of the divestiture of NFC, society was made better off by £223 million (in 1982 pounds sterling). Surprisingly, the government came out losing £11 million

Comparisons with NFC's history before divestiture and with the road haulage industry in the United Kingdom as a whole suggest that NFC's performance improvement was indeed caused by divestiture.

United Kingdom: Summary

Welfare gains from our three U.K. divestitures are comparatively small because at the same time performance of the remaining state-owned enterprises improved considerably. Thus, the very fact that we have found consistent gains is remarkable. The U.K. divestiture program has had considerable influence on similar programs throughout the world.

Each of the three cases has peculiarities that make it stand out as a learning experience for others. The BT case shows the benefits of skillful regulation and the beneficial effects of a relaxation of investment constraints. The BA case shows the benefits of tough, cost-saving management. The NFC case shows that good management can go hand-in-hand with employee ownership.

Chile

Divestiture in Chile was part of an overall transformation of the economy. It was pursued as early as 1974 and continued in two major waves through 1990, it covered enterprises in competitive and monopolistic markets, it used almost all the divestiture methods known to date, and it had its successes and pitfalls.

No systematic attempt has hitherto been made to assess the welfare effects of divestiture in Chile at the microeconomic level. With the case studies on Chile, we attempt to fill the gap. The ultimate objectives of the study are, first, to determine whether divestiture made Chile better or worse off, and, second, to identify the conditions that made the outcome positive, so that other countries might attempt to simulate them.

We analyze cases of divestiture in three Chilean industries: electricity generation, electricity distribution, and telecommunications. The three cases are interesting in general because they were relatively well regulated and managed before their divestiture. Thus, the question is: can divestiture still be beneficial to society?

CHILGENER

In most developing countries and in some industrial countries state ownership of electrical enterprises is preferred to private on the grounds that market-based solutions and private electricity companies will produce a suboptimal supply of electricity.

Chilean policies in the electricity sector since the early 1980s contrast totally with this assumption. First the government established the National Commission of Energy (CNE by its Spanish abbreviation) as an autonomous regulatory agency in 1978, assigning the ownership function to the government holding company, the Corporación de Fomento de la Producción (CORFO). Second, it broke up the country's vertically integrated electricity enterprises into separate generation and distribution enterprises. Third, it issued a new regulation in 1982 that based pricing on marginal cost and clarified other rules of the sector's operation. Finally, it crowned these reforms with the divestiture of most of the country's state-owned electric power enterprises. As a result of this experience, it is uniquely qualified to address the general question as to whether market or quasi market solutions are capable of producing satisfactory results in the electricity sector.

What happened? CHILGENER is one of eleven electricity generating enterprises in Chile. In 1989 the company owned 14 percent of the country's installed generating capacity, or 17 percent of that in the Central Interconnected System (SIC), which accounts for about 80 percent of Chile's installed capacity.

The divestiture of CHILGENER began in October 1985. In April 1986 Chilectra was liquidated and the ownership of CHILGENER transferred to CORFO. Since CORFO already owned 99 percent of Chilectra, this transaction did not entail any financial transfers. Thereafter, CORFO continued the divestiture of CHILGENER by offering shares on the stock market. By January 1988 the

company was 100 percent privately owned. The government neither offered nor agreed to any tax exemptions or debt relief, nor did it undertake any physical, financial, or labor restructuring prior to the sale. CHILGENER continued to operate under the same regulatory scheme after divestiture.

After-tax private profit increased dramatically following the divestiture of CHILGENER. Similarly, public profit (quasi rent or producer surplus) also increased. Starting from Ch$5.1 billion in 1986, public profit more than tripled in 1990, reaching Ch$16.5 billion.

Divestiture was associated with a higher rate of return on revalued capital, nearing 10 percent in 1990. This rate of return compares favorably with a real interest rate of 7 percent on three-month deposits in Chile. Hence the fear of underinvestment, often expressed by skeptics of divestiture, may not be well founded.

Divestiture was also associated with improved efficiency, which, if due to divestiture, lends support to the hypothesis that change of ownership increases productivity.

Finally, divestiture was associated with a surge in investment, which, again, if attributable to divestiture, is consistent with the hypothesis that divestiture can relax resource constraints.

Why did it happen? Although divestiture correlated with higher profitability (at current and at constant prices), with improved productivity, and increased investment, the improved profitability was due in part to marginal cost pricing and in part to increased capacity utilization. Neither factor is divestiture-specific. Both are determined by the regulatory setup in Chile. Nevertheless, part of the productivity improvement was due to behavioral changes caused by divestiture. There was no increase in investment due to divestiture. The only project under way was initiated under public ownership. Moreover, the divestiture of CHILGENER has had no significant effect on consumers, largely because the company is a price (and, in fact, a quantity) taker.

What is it worth? Nothing else has changed. However, the gains in productivity induced by divestiture were large enough to make the divestiture of CHILGENER welfare-improving by Ch$4.0 billion, the equivalent of 21 percent of the private value of the enterprise. Private shareholders made Ch$6.6 billion, of which foreigners made Ch$2.7 billion. The Chilean government came out Ch$2.7 billion poorer, making the fiscal effect of divesting CHILGENER negative by 22 percent of the sale price.

Conclusions. The analysis of CHILGENER lends support to the hypothesis that divesting electricity generating enterprises is advantageous to society. This is true even where public enterprises in the power sector operate as if they were

private firms, including abiding by the regulatory rules; those rules are based on marginal cost pricing, competition, and coordination of operation and investment; and regulation is enforced by an independent regulatory body equally across enterprises, irrespective of ownership.

The analysis also suggests that the welfare gains from divestiture may accrue at a fiscal cost, even where the sale involves no concessions to sweeten the deal.

ENERSIS

ENERSIS S.A. has a concession to distribute electricity in the metropolitan area of Santiago, Chile. The enterprise is a natural monopoly because electricity distribution is characterized by economies of scale. Despite this monopoly position, the government sold 62 percent of its ownership to the private sector in 1986, after having introduced a regulatory regime in 1982. ENERSIS is an intriguing case study for the following reasons:

- As a regulated private monopoly, it allows an examination of the effect of changing ownership under a theoretically unpredictable outcome.
- Prior to divestiture the enterprise operated as if it were privately owned. In keeping with a Chilean policy that is unique in the developing world, ENERSIS then had to abide by the same regulatory rules applied to other distribution enterprises, whether public or private. Under such conditions, the question is whether private ownership can still make a difference.
- The combination of these two features allows us to address a dilemma often encountered by policymakers—whether to allow a public enterprise to operate as a regulated private monopoly or to operate it as a reformed and regulated public monopoly.

ENERSIS operates under the General Law of Electric Power, enacted in 1982. The law aims at giving producers adequate incentives to expand and operate efficiently, protecting consumers from monopoly exploitation, and rationalizing electricity consumption.

Private sector participation in the ownership of ENERSIS first appeared in 1983, following the 1982 regulation. ENERSIS took advantage of the provision that authorized electricity enterprises to request reimbursable financial contributions from consumers. It reimbursed some customers with shares at book value, and thereafter the shares began to be traded on the Santiago stock exchange.

The divestiture of the enterprise gained momentum in 1985, when Chilectra decided to sell 30 percent of its shares. In 1986 the process intensified, and in August 1987 the company became 100 percent privately owned.

What happened? The analysis of current profit shows that divestiture was associated with a significant improvement in public and private profit. The turning point (1989) occurred two years after divestiture. Divestiture was also associated with reduced losses of electricity and diversification of output; continued improvement in efficiency; increased returns from nonoperating assets, mainly from investing in ENDESA.

Divestiture was finally associated with a decline in consumer surplus especially for users of electricity free of charge.

Why did It happen? Except for the gain in productive efficiency, which we attribute to the business cycle, we conclude that ENERSIS's changes in performance are the product of divestiture. Therefore, for the counterfactual scenario we hypothesize that losses from theft would have been higher, and thus tariffs would have been higher; output diversification would have been lower; nonoperating investment, and thus revenue, would have been lower; and other things would have continued more or less the same as before.

What Is It worth? ENERSIS's shareholders, domestic and foreign, realized gains of Ch$42.9 billion—the difference between the price they paid for the enterprise (Ch$17.3 billion) and their maximum willingness to pay (Ch$60.3 billion). Of this amount, employees, in their capacity as shareholders, gain Ch$13.9 billion—their share in total equity (32 percent). Foreign shareholders gain Ch$2.2 billion. Reduction in electricity losses was translated into lower prices, making ordinary (paying) consumers better off by Ch$7.7 billion (Ch$17.5 billion less the corresponding loss to nonpaying customers of Ch$9.8 billion). The Chilean treasury and the government development corporation (CORFO) come out Ch$5.6 billion worse off, since, on a net basis, the government traded ENERSIS for 85 percent of its total receipts from the enterprise had public ownership continued. Chilean citizens are worse off by Ch$26.3 billion—the returns on nonoperating assets (capital gains and dividends) they could have acquired had they invested in ENDESA.

Conclusions. The divestiture of ENERSIS correlated with a surge in profitability, a significant decline in losses of electricity due to theft, improved productivity, diversification of output, and escalation of nonoperating investment. Of these changes, the reduction in losses, output diversification, and the increased returns from nonoperating investment were directly attributable to divestiture. The combined effect of these changes on welfare was positive, representing 31 percent of the private value of the enterprise, or, as the annual component of the perpetuity equivalent, 5.0 percent of 1986 sales. The gains in welfare accrued mostly to private shareholders and workers, and the government and Chilean citizens as a group were worse off.

The examination of ENERSIS's divestiture lends support to the following hypotheses:

- Divestiture promotes profit-maximizing behavior.
- Divesting monopolies in well-regulated markets limits their ability to exercise their market power and improves resource allocation. However, the loss in consumer surplus resulting from reducing electricity losses is not the typical story of a private monopolist exploiting market power. Rather, it is a story of resource reallocation, the outcome of which is a positive welfare gain (not a deadweight loss) to society.
- Reforming and regulating public enterprises improves efficiency.
- The net benefits of divestiture accompanied by effective regulation can outweigh the net benefits from reforming and regulating public enterprises. Therefore the policymaker's dilemma is resolved in this case in favor of divestiture and regulation.

Coupled with the analysis of CHILGENER, the analysis of ENERSIS lends support to the general propositon that market-based solutions and private ownership in electricity are capable of producing even better results than the alternative policy of public ownership and vertical integration.

Compañía de Teléfonos de Chile (CTC)

CTC's economic, technological, and institutional characteristics differ from those of the other Chilean enterprises we examined. CTC operates in an industry characterized by rapid technological progress, economies of scale and scope in production, and externalities in consumption. There is also a large unmet demand. Institutionally, the ownership of CTC has changed from private (prior to 1970) to public (through 1987) to private once again (since 1987). Under private ownership the controlling shareholders have always been foreigners. Finally, when the government of Chile sold CTC, which dominates the market for local network services, it also divested the Empresa Nacional de Telecomunicaciones (ENTEL), which dominates the market for long distance services. The divestiture of both companies led to costly disputes because each company stands to gain from penetrating each other's markets. These features make the study of the divestiture of CTC interesting.

What happened? Under public ownership, profits after tax fluctuated, becoming negative in 1982 and 1985. In contrast, divestiture paralleled a significant improvement in after-tax profit and producer surplus. These improvements were due in part to favorable relative prices. For the most part, however, they originated in a surge in investment, output diversification into

nonregulated value added services, and improved productivity. In turn, the surge in investment was caused by the infusion of fresh capital in the course of selling CTC to the private sector.

Why did it happen? Without divestiture, we conclude the following: investment would have been limited to CTC's ability to generate funds internally, to borrow within the limits of a debt-equity ratio of 1.25, and to request reimbursable financial contributions from customers requiring new connections. The enterprise would not have invested in long distance services, leaving such investment to its sister enterprise ENTEL. Lacking sufficient resources to meet pending demand, the enterprise would not have expanded as much as it did into nonregulated value added services. Productivity would have been lower, largely because expansion would have been slower. Tariffs (and other variables) would have been the same, given that regulation was initiated long before divestiture.

What is it worth? The divestiture of CTC provides an instance where divestiture with regulation is superior to public ownership with regulation. It also offers an example of foreign participation creating a positive-sum game in which both nationals and foreigners can benefit.

Consumers gain Ch$516 billion, or 90 percent of the total improvement in domestic welfare. CTC's domestic shareholders are expected to come out Ch$8 billion ahead; within this group, CTC's employees realize Ch$5 billion. ENTEL, the provider of long distance services, gains Ch$16 billion. The Chilean government is expected to come out Ch$33 billion ahead, equivalent to 28 percent of our estimate of the private value of the company.

Conclusions. The divestiture of CTC is Pareto-improving, making everybody better off without making anyone else worse off. Divestiture brought about a massive infusion of foreign and domestic capital, and it increased the room for borrowing. As a result, the company will more than double its capacity between 1988 and 1996, further expand into a variety of value added services, and enhance labor productivity. These are dramatic changes, that will enhance domestic welfare by Ch$574 billion, or about five times our estimate of the private value of the company. Given tariff regulation and expansion, consumers will benefit the most from divestiture; their gains alone account for 84 percent of the total change in welfare. But domestic and foreign shareholders, competitors, employees, and the government also benefit.

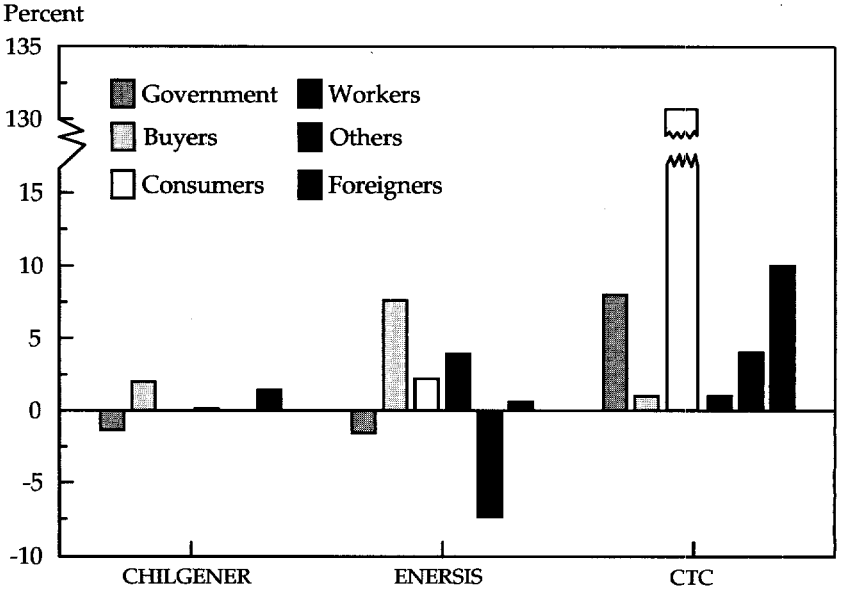
The case study lends support to the following hypotheses:

- Divestiture releases resource constraints, especially at times of fiscal stringency.

- As a result, divestiture alleviates excess demand in basic infrastructure services, such as telecommunications, which are vital to economic development.
- Foreign participation can be rewarding to the foreign investors as well as to the host country, provided effective regulation is in place.
- In the absence of effective regulation, private ownership in and of itself is insufficient to meet excess demand.
- Divestiture promotes profit-maximizing behavior.
- Finally, divestiture does not necessarily hurt workers. On the contrary, in the case of CTC they came out winners.

Selling public telecommunications monopolies, even to foreigners, can create a positive-sum game in which all parties can benefit. However, the CTC case suggests that if the transaction is to be mutually beneficial, governments are well advised to insist during the sale negotiation that the new owners undertake an investment program to meet excess demand. In return the

Figure 4. Summary of Winners and Losers from Divestiture, Chile



Note: Gains and losses are the annual component of the perpetuity equivalent of the welfare change, expressed as a percentage of annual sales in the last predivestiture year.
Source: Authors' calculations.

government should be willing to commit itself to maintaining an appropriate and stable regulatory regime, particularly regarding tariffs.

Chile: Summary

The divestiture of CHILGENER, ENERSIS, and CTC improved domestic and world welfare. This conclusion holds despite the differences in structure of the markets in which the three enterprises operate, and despite the fact that all three were relatively well run public enterprises. However, the magnitudes of the gains vary from case to case.

Only in CTC did all parties gain and none lose. At CHILGENER and ENERSIS, although most actors benefited, others lost.

The origin of the gains varied from one enterprise to another but came primarily from investment, improved productivity, and product diversification and, secondarily, from more appropriate pricing and thus better resource allocation.

These results may be explained in general by market conditions, institutional factors, and the way in which the companies were sold. The positive results at CHILGENER support the proposition that divesting public enterprises in competitive markets can be beneficial. Moreover, the positive results at CTC and ENERSIS suggest that effective regulation can prevent monopoly exploitation of consumers and that divestiture can produce substantial gains through expansion.

Malaysia

Divestiture is well suited to an economy in which growth and profit maximization are paramount. But what if the country is equally concerned with social goals, including the redistribution of wealth? Can divestiture be carried out in such a country? What changes, if any, must be introduced to the exercise? Do the changes amount to watering down the original objectives and effects of divestiture? If so, is divestiture really necessary for such a country?

The experience of Malaysia offers answers to the above questions. Its most important public policy between 1971 and 1990 was the New Economic Policy (NEP), which stressed both growth and equity distribution in an attempt to redress the balance of economic power among ethnic Malays (or Bumiputra), the majority of the Malaysian population. In addition, Malaysia has implemented a policy of divesting government entities since 1983—in the face of criticism and concern that divestiture might slow down the restructuring programs of the NEP.

By international standards, the divestiture program was a remarkable achievement, but it raises certain questions. First, in most cases divestiture was

carried out with little or no change in management or work force. Can improvements in performance be attributed to divestiture? Second, most divested entities were already in Bumiputra hands, since state-administered Bumiputra trust agencies owned them. What was the net gain in Bumiputra holdings? Third, the character of cases involving monopolistic activities has not changed. Did the divested enterprises exploit their position at the expense of consumers? Fourth, in major monopolistic cases, ultimate control remains in government hands. Does such partial divestiture really make a difference in performance?

Malaysian Airline Systems

Malaysian Airline Systems Berhad (MAS) has a virtual monopoly in scheduled domestic service in Malaysia and is also a major player in international service in the region. In 1985 and 1986 domestic and foreign share placements reduced the central government's status from dominant to minority shareholder. However, government agencies retained a majority holding, and the federal government also retained a specially privileged "golden share."

In comparison with other divestitures worldwide, the case of MAS has three major distinguishing features. First, institutionally it is a case of partial financial divestiture—financial because the government traded shares with diversified private buyers for cash; partial because only about a third of the shares left the public sector. Second, economically the firm's domestic and international operations have different commercial opportunities, regulatory constraints, political importance, and welfare effect. Third, foreigners are affected by the divestiture in three distinct roles: as buyers, consumers, and competitors on international routes. Accordingly the distinction between domestic and world welfare changes is critical.

MAS operates in two distinct spheres: a monopolistic domestic market and an oligopolistic international market. In 1985 the domestic market accounted for almost half of passenger trips but only a quarter of revenue. The tension between the competing needs of these two markets was manifest in both the 1972 split from Singapore Airlines and the objectives set for MAS under public ownership.

Divestiture had several effects. The government's share of MAS stock decreased from 90 to 42 percent by November 1986. The sale of 35 million existing ordinary shares generated gross revenues of M$63 million for the government, while the sale of 70 million new ordinary shares yielded gross proceeds of M$126 million for MAS. The second sale to foreigners, at a considerably higher price than the first, yielded an estimated M$283 million. The institutional relationship between MAS and the government remained essentially unchanged. The special shareholder provision was a clear demon-

stration of the government's intention to retain control over MAS. There was, however, one important exception: the government would stop guaranteeing MAS loans and credit facilities.

What happened? Current profit, both public and private, and its distribution shows only minor discontinuities accompanying divestiture. However, public profit and its derivation at constant market prices show a completely different trend. Performance as measured by public profit improved dramatically from 1981 through 1983 and then leveled off. The early improvement was caused by output rising more rapidly than in later years.

In contrast to the changes in profit, fixed capital formation at both current and constant prices declined precipitously from 1982 through 1984, was then stable at a low level just before and just after divestiture, and finally took off dramatically.

Why did it happen? Three major changes coincided with divestiture: increased investment, declining productivity, and changing relative prices. We look at the extent to which these changes were caused by divestiture.

We accept the hypothesis that investment constraint would not have been relaxed without divestiture at the time it occurred. However, it is reasonable to assume that, even without divestiture, the government would have eventually released the investment constraint as macroeconomic conditions improved.

To what extent can the decline in productivity following divestiture be attributed to divestiture? One part of the decline was caused by a rise in capital relative to output, and four parts were caused by a rise in nonfuel intermediate inputs, largely passenger services and advertising. Neither change was attributable to divestiture.

The changes in relative prices can be interpreted in two ways. However, without much evidence to support either, we can only speculate how low earnings must fall before triggering a domestic price increase, in either a public or private regime.

In conclusion, not much changed at the time of divestiture, and much of what did change was not attributable to divestiture but rather to the regulatory environment and was therefore not internal to the firm. Nevertheless, although not much changed internally, a good deal changed externally, in the form of relaxed investment and pricing constraints.

What is it worth? Consumers (domestic and foreign) gained a total of M$2,606 million from divestiture, equivalent to roughly a quarter of one year's total sales. However, these gains all accrue to foreigners—domestic consumers actually lose M$590 million. Buyers of MAS stock (foreign and domestic, including employees) paid a total of M$406 million for shares worth M$1,037

Table 1. Distribution of Gains and Losses from Divestiture, Malaysian Airline Systems
(millions of ringgit, 1985 present values)

Economic actor	*Private operation*	*Public operation*	*Gains from divestiture*
Domestic			
Consumers	22,269	22,859	–590
Government			
Taxes	2,163	1,705	458
Net quasi rents	1,011	834	177
Share sales (less transaction cost)	401	0	401
Debt subsidy or takeover	0	0	0
Others	0	0	0
Total	3,575	2,539	1,036
Shareholders			
Diversified	397	0	397
Concentrated	0	0	0
Employees	79	0	79
Total	476	0	476
Miscellaneous			
Employees (as inputs)	0	0	0
Competitors	0	0	0
Providers	0	0	0
Citizens	0	0	0
Total domestic	26,320	25,398	922
Foreign			
Consumers	19,128	15,932	3,196
Shareholders	155	0	155
Competitors	1,219	1,050	169
Others	0	0	0
Total foreign	20,502	16,982	3,519
Total	46,821	42,380	4,442

Source: Authors' calculations.

million, for a gain of M$631 million, or 155 percent. Approximately one-quarter of this accrued to foreigners. Foreign competitors—primarily Singapore Airlines and Thai International—gained the equivalent of M$169 million.

Overall, the bulk of the gains (nearly 80 percent) accrue to foreigners.

Conclusions. Divestiture is Pareto efficient in the aggregate in that everybody wins and nobody loses. That there is a net gain is unsurprising. That no functional group loses is surprising but is attributable to the offsetting effects of the two different changes. Although pricing reform makes consumers a lot worse off, they are more than compensated by the expansion of capacity from the investment reform. Shareholders, in contrast, are made a little worse off by the investment change, but they are more than compensated by the pricing change.

The consequences of the MAS divestiture are as follows: absolutely nothing discernible changed within the enterprise. Outside the enterprise, absolutely nothing changed in the government's power to intervene in MAS's decisions. What did change was the way in which the government chose to exercise this discretion.

In particular, the government got both investment and prices "righter" in that economic factors played a larger and political factors a smaller (although still far from negligible) role in deciding outcomes. As a result of the new investment decisions, consumers gained at the expense of capitalists (the government and private shareholders), while the change in pricing had the opposite effect. The net effect was positive for both groups, however. Competitors also gained, so world welfare increased. A considerable portion of the gains leaked to foreign shareholders, consumers, and competitors, so that domestic welfare gains were only about a fifth of the total. In particular, domestic consumers were net losers, as they paid all the costs of the higher prices but received only a fraction of the benefits of the expanded investment.

Kelang Container Terminal

Kelang is Malaysia's principal port, serving the capital region. The case of the container terminal is an unusual example of divestiture by horizontal disintegration, in which the government breaks up a multiproduct enterprise prior to sale. This is widely recommended as a means of fostering competition when some of the product markets are potentially competitive and thus clearly belong in the private sector, and others are not and therefore require public ownership or regulation. The Kelang case is unusual because the most lucrative, not the most competitive, port activity was sold. The analytical question is: how much did the government receive compared with what it gave up?

In this case only about 10 percent of the shares were sold to the private sector. The remainder went to other public enterprises, so the government only relinquished a small fraction of the revenues from the larger entity. This is not necessarily a mere cosmetic change. Indirectly held public enterprises are often accorded considerably greater autonomy than those directly controlled.

What happened and why? Coincident with divestiture in March 1986, KCT's performance improved markedly. Public profitability at current market prices grew at an annual average compound rate of only 1.9 percent from 1981 to 1986 but at a rate of 11.6 percent from 1986 to 1990. These improvements occurred despite unfavorable price movements in both periods. Taking away these price effects, therefore, further enhances the performance story: at constant market prices, public profitability grew at an annual average compound rate of 4.7 percent in the period before divestiture and at 17.7 percent after divestiture.

Public profit clearly tracks output, with labor and intermediate inputs rising far less rapidly than output. This is equally true before and after divestiture, with the 1983 and 1984 output surges yielding substantial gains in profits.

What is it worth? World welfare is enhanced considerably by a net present value of M$505 million.The single largest winner is the government, which comes out M$357 million ahead. It gives up a profit stream worth M$378 million in return for a modest sale worth M$57 million and a substantial tax gain of M$193 million. Buyers (domestic and foreign) pay M$57 million for a stream worth M$193 million, for a net gain of M$136 million. Employees gain from higher wages, by an amount estimated at M$66 million. Consumers gain from improved service, by an estimated M$88 million.

As usual, there are losers: competitors lose M$141 million. However, the bulk of this (M$113 million) is incurred by conventional operations at KPA (Kelang Port Authority). Since this is more than made up for by KPA's share in the enhanced profits and the lease rental payments, even KPA comes out well ahead. As a result, the only net losers identified are foreign competitors (principally the Singapore Port Authority), which lose business worth an estimated M$28 million.

In sum, the divestiture of KCT is an unqualified success, whether from a domestic or a world welfare perspective. A critical consequence of divestiture at Kelang was rising wages *and* labor productivity, but one would not have got the efficiency gains without the enhanced wage policy.

Conclusions. If the government sold a gold mine, then divestiture made it into a diamond mine. This alchemy was accomplished not primarily through external changes in pricing and investment constraints, as at Malaysian Airline Systems, but through internal management changes.

The most striking manifestation of the internal changes was in the use of labor. The new management provided incentives, training, and participative decisionmaking. Workers responded by working a little longer, a lot harder, and considerably smarter. The results were manifest not in an accelerated rate of growth of output per worker but in lower costs for administration and for repairs and maintenance: The workers were more than compensated by increased

Table 2. Distribution of Gains and Losses from Divestiture, Kelang Container Terminal
(millions of ringgit)

Economic actor	*Private operation*	*Public operation*	*Gains from divestiture*
Domestic			
Consumers	1,539	1,481	58
Government			
Taxes	1,650	967	683
Net quasi rents	185	563	–378
Share sales (less transaction costs)	52	0	52
Debt subsidy or takeover	0	0	0
Other	0	0	0
Total	1,887	1,530	357
Shareholders			
Diversified	0	0	0
Concentrated	109	0	109
Employees	0	0	0
Total	109	0	109
Miscellaneous			
Employees (as inputs)	66	0	66
Competitors	217	330	–113
Providers	0	0	0
Citizens	0	0	0
Total	284	330	–47
Total domestic	3,818	3,341	477
Foreign			
Consumers	770	740	29
Shareholders	27	0	27
Competitors	54	83	–28
Others	0	0	0
Total foreign	851	823	28
Total	4,669	4,164	505

Note: All figures are 1985 present values.
Source: Authors' calculations.

wages, and unions at both KCT and KPA have become advocates of divestiture. They are now urging the divestiture of KPA itself and advising a Thai port union to support the sale of its own organization.

The other major indication of improved management was accelerated output growth, as improved efficiency lowered costs (especially turnaround time), increasing the quality of service and raising output. Although the resulting gains were impressive for KCT, the bulk of the gains came at the expense of competing modes of transport especially conventional operations at KPA, so the welfare was considerably less.

Only a small portion of the gains leaked to foreign shareholders, consumers, and competitors, so that domestic welfare gains were more than 90 percent of the total. In particular, foreign buyers netted only about 6 percent of the gains, but their management know-how made a substantial (although unquantified) contribution to improved performance. KCT is a clear case of successful use of foreign buyers.

The government itself received the bulk of the gains, not from the sale price but through three profit-sharing mechanisms. In addition to the usual corporate tax mechanism, the government retained a 49 percent share in the company through KPA, and—most important—imposed a variable lease rental scheme that captured a substantial share of marginal efficiency gains.

Finally, the KCT divestiture came close to being Pareto-improving, with no losers except for competitors. Of these, the main loser was KPA, which gained as a shareholder more than it lost as a competitor. These results tend to support the following hypotheses:

- Divestiture can dramatically improve welfare by initiating a shift toward efficiency-oriented goals and incentives.
- The short-run potential for such gains in welfare (in percentage terms) is much larger in small organizations.
- In sum, the KCT model of divestiture deserves the attention of proponents and opponents alike.

Sports Toto Malaysia

The best place to raise a given amount of revenue with minimum welfare loss is in markets where demand is unresponsive to price so opium, alcohol, tobacco, and gambling are good sources of funds for government coffers. Such markets are traditionally chosen as revenue monopolies, so our quantitative focus in the case of Sports Toto Malaysia Berhad will be on the effect of divestiture on government revenues, with consumer surplus of, at best, tertiary importance.

Sports Toto is also the only case of complete divestiture among our Malaysian cases, raising the question of whether 100 percent divestiture created a more dramatic behavioral change than in the other cases.

The divested enterprise is so private that absolutely no data are available other than those required for any publicly listed company. The shortage of

facts meant that we could not conduct a full case study. Nonetheless, the case's unique features make it important enough to present a brief discussion.

Who wins and who loses? Divestiture was beneficial, with society gaining M$121 million (at 1985 present values). This is roughly 10 times 1985 profits and 1.5 times 1985 sales. The private buyers net M$112 million, or more than double the opportunity cost of the capital invested. The government nets about M$147 million. The losers are the formal and informal gambling sectors, which together are about M$138 million (M$69 million each) worse off.

Conclusions. Divestiture correlated with a lagged but dramatic surge in nominal sales and public profits, which tripled and quadrupled, respectively.

Even after allowing for the effects of inflation and recession, there was at minimum a one-time surge, brought about by innovative marketing, that nearly doubled sales. On the debit side, there is evidence of a small negative announcement effect, with public management dispirited by the expected transfer of ownership.

Consumer surplus can be ignored because the industry is competitive, changes due to advertising are ambiguous, and gambling is as likely to be a "bad" as a "good."

It is particularly difficult to ascertain where Sports Toto's gains came from. We assume that equal thirds came from formal gambling, informal gambling, and general consumption. Our best estimate is that, as a result of the divestiture, Malaysia is M$127 million better off, with the government gaining M$147 million, the private buyer gaining M$112 million, and other gambling operations losing M$138 million.

In sum, divestiture led to dramatic change at Sports Toto, and that change had major benefits for Malaysian society. The international implication is that these characteritics might make other revenue monopolies particularly attractive candidates for divestiture.

Malaysia: Summary

Malaysia was included in this study because—apart from Chile and Mexico—it had one of the widest selections of divestitures in the developing world in the 1980s. However, like Chile and Mexico, it is among the wealthier developing countries, so one cannot necessarily extrapolate from its success to success in less well-endowed countries.

As with the other countries dealt with in this book, welfare gains occurred in all cases studied, in both absolute and relative terms. As a percentage of predivestiture sales, gains were 22 percent at Malaysian Airlines Systems

(MAS), 53 percent at Kelang Container Terminal (KCT), and 11 percent at Sports Toto Malaysia.

Although the gains are all substantial and positive, their sources are quite different although, somewhat surprisingly, they were all achieved by partial financial divestiture. At Sports Toto the government initially ceded a controlling interest but retained a substantial 30 percent minority financial interest for two more years and then sold it for seven times as much per share as the first tranche.

At KCT the government did not relinquish the right to control the enterprise but substantially altered the way in which it chose to exercise that right. It did this by converting its direct holding to an indirectly held one in which it owned or controlled the companies that held 90 percent of the shares.

MAS is an example of an even more partial form of divestiture in which the company retained its status as a directly government-held enterprise. The Malaysian federal government retained 42 percent of the shares itself, and state governments held another 10 percent. In addition, a golden share insured control by allowing the government to appoint the chairman, the managing director, and six members of the eleven-member board of directors.

Is the success of partial financial divestiture in Malaysia an anomaly? Not necessarily. If the United Kingdom provides the model for full divestiture, Japan provides the model for partial financial divestiture. To take a broader perspective, the use of mixed enterprises is consistent with an East Asian mode of government-business relationships characterized by sometimes intimate government involvement in business affairs, as opposed to the arm's-length relationship often espoused in the West.

In sum, divestiture in Malaysia has been largely partial, but also largely successful in generating welfare gains. The same results could probably have been achieved without any divestiture whatsoever but probably would not have been undertaken.

Mexico

The Mexican divestiture program began in 1983 as part of the macroeconomic stabilization program of that period, when the Mexican government adopted a package of policies sponsored by the International Monetary Fund. The stabilization program contained several elements designed to reduce the budget deficit, and these included divestitures.

In 1985 the economy was showing signs of improvement, but inflation took off again in 1986 after the Mexico City earthquake in September 1985 and the plunge in oil prices in 1986 to less than half those of the previous year. The government's response to the latest crisis was to embark on a complete transformation of the Mexican economy. The divestiture program began to tackle

the largest enterprises of the public sector, having initially concentrated on small, relatively insignificant enterprises.

The Mexican government did not rely primarily on stock market sales to divest its public enterprises, partly because most enterprises were not already quoted on the stock exchange and therefore did not have established prices. In addition it was perceived that the management of the enterprises needed to be changed, which would not normally be achieved through a stock market placement. Most important of all, perhaps, offers to well-identified investors were likely to yield the highest price.

An important feature of the Mexican divestiture program has been the absence of any serious opposition from labor, since it allowed the divestiture program to proceed smoothly and quickly. Labor's interests were protected throughout the program by giving the unions legal right of first refusal at each sale, by giving labor assurances that there would be no layoffs, and by selling shares to employees. Labor may also have been influenced by the government's drastic decision to declare Aeroméxico bankrupt in response to a strike in 1988.

The Mexican divestiture program has been a great success, first, because of its magnitude and second, for the substantial revenues it generated for the government, thereby fulfilling a key role in the economic stabilization program.

Teléfonos de México

Teléfonos de México (Telmex) is the principal supplier of telecommunications services in Mexico. It has a monopoly on the provision of local and long distance services. Private networks, cellular communications, and equipment sales and rentals are subject to competition. Long distance and international services are slated to be opened to competition in 1996. In three years, between 1989 and 1991, the company's sales increased four times in value and its stock price went up thirtyfold. It is regarded as one of the great success stories of the privatization revolution.

It is tempting to assume that the big runup in the stock price reflects the market's estimate of anticipated huge productivity and other efficiency improvements that the new (private) management of the company might possibly generate. We argue, however, that much of the jump in stock prices stems from the large price increases granted to Telmex by the Mexican government as part of its divestiture concession and that the rise in the stock market value of the company has therefore come largely at the expense of the consumer. At the same time we believe that the divestiture of Telmex has played a crucial role in the overall stabilization of the Mexican economy—in the "Mexican economic miracle."

It is unclear what motivated the divestiture of Telmex, which, although not dynamic, had not been in any financial trouble. We speculate that it was chosen partly for its symbolic importance as the largest company on the Mexican stock exchange and partly as a potential source of considerable revenue; as the country's telephone monopoly, it could be expected to command a high sale price.

Because divestiture is so recent, we cannot meaningfully compare performance before and after divestiture. However, we can study whether there was an announcement effect on performance and whether there was a substantial "cleaning up" of the company to prepare it for sale.

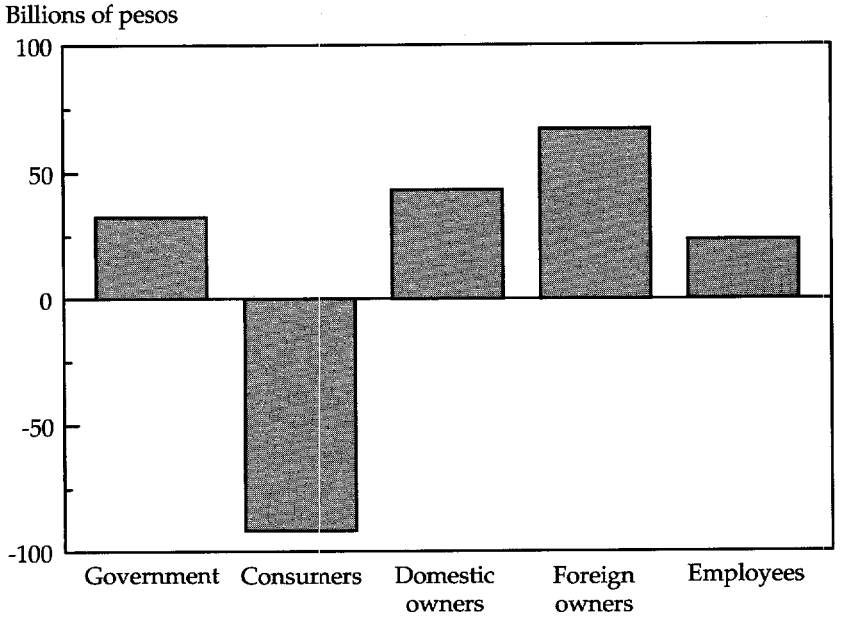
What happened? Telmex was a moribund, poorly performing public enterprise until 1987. Both private profitability and productivity were on a declining trend. But there seems to have been a turnaround over the past few years. Private profits and profitability have been growing rapidly since 1987. TFP was declining but has been rising since 1988, with a notable 15 percent improvement in 1991, the first postdivestiture year. Labor productivity, after stagnating from 1981 to 1988, rose rapidly over the next three years. Real fiscal revenues were fairly stable during 1981–87 but then jumped in 1988 and 1989 to reach a new plateau at approximately double the previous level. Consumers enjoyed falling real prices during 1981–87 but have faced steep price increases since then.

Why did it happen? We believe a key element in explaining what was happening at Telmex through the 1980s was change in the price and tax regime. We argue that the price increases of 1988 were not attributable to divestiture but that the price and tax changes of 1990 were.

In 1988 most prices were raised significantly. It seems reasonable to suppose that this price increase was induced by the rapid inflation of the previous two years and the need for investment capital, and hence is unrelated to divestiture. The price and tax reforms of January 1990, however, were different. The key change was the elimination of the telephone tax at the same time as a new telephone services tax was introduced. The new tax is applied only on certain selected revenues so that its proportion of total revenue will now be lower than that of the old tax. In addition, the government has permitted Telmex to offset 65 percent of the tax against investment and to deduct all of the notional tax (including the investment subsidy) for corporate income tax purposes.

Was the 1990 price-cum-tax reform, coming as it did eleven and a half months before divestiture, "due" to divestiture? Or was it simply a continuation of the process begun in 1988? We believe that the two reforms were quite distinct and that the 1990 reforms were very much a part of the divestiture process. In summmary, it is our contention that the 1990 price reforms were

Figure 5. Distribution of Welfare Gains and Losses from Divestiture, Teléfonos de México



Source: Authors' calculations.

largely (if not solely) motivated by the forthcoming divestiture and would not have occurred otherwise.

What is it worth? *(N.B. All figures are in old Mexican pesos of 1989. One new Mex$=1,000 Mex$.)* Mexico's welfare will rise by Mex$7,844 billion. This is equivalent to approximately 10 percent of the present market value of Telmex. Consumers lose Mex$92 trillion (US$33 billion). The government gains an extra Mex$16 trillion in revenues. Domestic shareholders (the new buyers and those holding shares prior to divestiture) gain Mex$43 trillion. Telmex's employees are better off by Mex$23.5 trillion. World welfare improves by Mex$75 trillion because foreign shareholders gain Mex$67 trillion.

Perhaps the most dramatic change brought about by the divestiture of Telmex is in its stock market value, which is the capital market's assessment of the private value of the firm. Why was the market valuing the enterprise at much lower levels prior to divestiture? We suspect the reason was the market's perception that the government had been using the enterprise as a cash cow

throughout the 1970s and 1980s, extracting surplus through indirect taxes and keeping dividends at a token level.

The 1990 price reform, which allowed the firm substantial price increases, signaled government's commitment to permit Telmex to be profitable. Our calculations show that there was a net rise in social welfare of Mex$17 trillion, as a result of the price-tax reform, so this was a welfare improving reform. But the summary figure masks a very large distributive effect of the reform, which cost consumers Mex$92 trillion in present value while raising the value of the firm by Mex$96 trillion.

A negative aspect of the Telmex sale is that, because such a high proportion of the ownership is foreign, a large fraction of the total benefits have leaked abroad. By our estimate, the foreign shareholders have gained Mex$67 trillion out of the total welfare gain of Mex$75 trillion, which is nearly 90 percent. Even if we think our estimates of the private value of the firm are too high, the size of the leakage abroad is substantial. At current prices, the market value of Telmex is around US$30 billion. The foreign shareholding is now 55.7 percent, which is therefore valued at US$16.6 billion. The new foreign buyers have paid a total of US$4.6 billion, plus there was pre-existing foreign ownership of some 22.8 percent of the company. Thus foreign owners have unquestionably realized a gain of US$12 billion (approximately Mex$37 trillion at the current exchange rate—compared with our estimate of Mex$67 billion based on a higher valuation of the firm).

Our analysis suggests that the decision by the government to sell Telmex cheaply and largely to foreign investors can be seen as confirming to the market its commitment to an independent, private, and profitable Telmex. This has helped to encourage the inflow of foreign capital. Further, the sale revenues themselves were used to reduce the national debt, thereby reducing interest rates and helping create a more positive investment climate. Our estimate is that a lower bound on the value of this to Mexico is Mex$17 trillion, nearly US$6 billion, and it could be much higher.

It is in this larger context that, ultimately, the divestiture of Telmex must be seen and where its true success lies.

Aeroméxico

Aeroméxico is one of two major airlines in Mexico, which has a medium-sized transport market where the sustainability of two major airlines may be questionable. The enterprise has a long history of losses, and the government chose a radically different method to divest the enterprise, first placing it into bankruptcy, thereby quelling the principal labor union and making possible the liquidation of the enterprise. Other unusual features of the case study follow:

The sale price was essentially zero. A unique feature of the liquidation process was the preannouncement of a minimum price. The government obtained and accepted a bid at the minimum price but subsequently agreed to renegotiate the price downward.

Partners in the buying consortium had major disagreements among themselves after divestiture, creating fears that the firm was heading for bad times. Nevertheless, the divested enterprise is now regarded as a major success. The government has meanwhile deregulated the airline industry and has also divested Aeroméxico's major competitor, Mexicana de Aviación.

An analysis of its profitability shows that Aeroméxico was a consistent money loser throughout its predivestiture history, 1959–87, except between 1979 and 1981. In the first two years after divestiture the airline was marginally profitable (less than 1 percent of sales); it then returned to unprofitablity in 1991, although the loss was considerably smaller in real terms than those suffered in 1985–87.

Public profit stayed negative throughout the period of the study and was particularly so in 1991, a bad year for the airline industry worldwide because of the sharp drop in demand during and after the Persian Gulf War.

Assets in 1991 were well below half their 1987 level at constant prices. Thus, unlike other cases in our sample, Aeroméxico's capital stock shrank dramatically after divestiture. This was because divestiture was accompanied by a dramatic reduction in fixed operating assets—achieved through a reduction in inventories and a new strategy of leasing rather than owning most operating flight equipment.

The government will receive no revenue from the sale of Aeroméxico, but there is a discernible effect of the divestiture on annual flows. Aeroméxico received substantial transfers from the government in the predivestiture period 1982–87 and paid no taxes. But since divestiture, some small tax payments have been made. Thus, from being a large drain on the treasury, Aeroméxico, after divestiture, has become a small contributor.

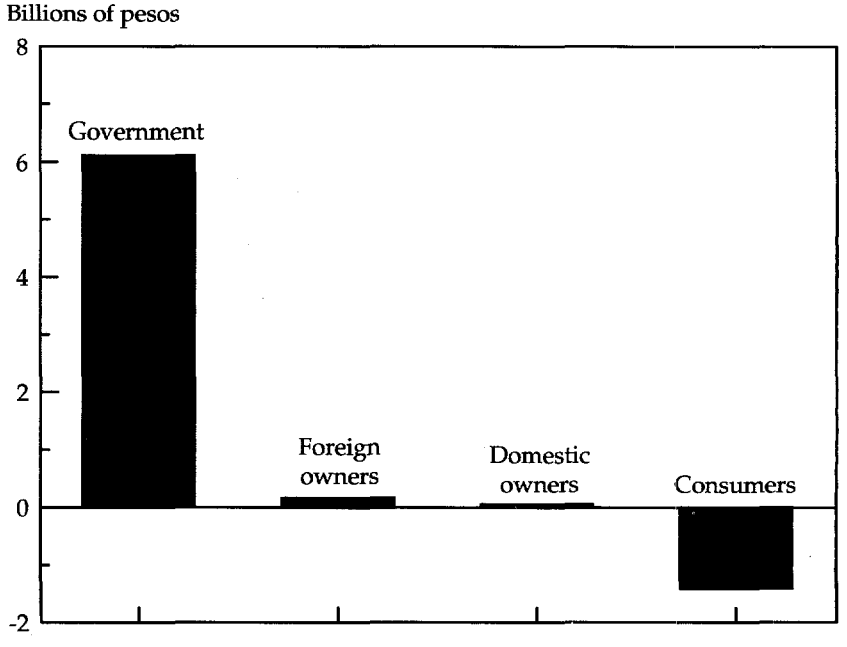
The most obvious change following divestiture was that the company broke even for two years. There were several underlying key changes in behavior. First, the fixed assets of the company fell dramatically (see above). Correspondingly, the rental cost per unit of output doubled in real terms. Second, there was a sharp reduction in labor cost per unit of output; correspondingly, labor productivity doubled. As a consequence, total factor productivity (TFP) rose by over 20 percent. Output fell dramatically, as a corollary of the airline's bankruptcy but then recovered steadily so that by 1991 it was close to the predivestiture level.

In effect, the sale price of Aeroméxico was zero, because the government will probably not receive anything after repayment of the airline's creditors. Thus

the "sale" was equivalent to handing over the enterprise gratis. The buyers then took the liquid assets of the enterprise and most of the fixed assets, combined with about Mex$188 billion of their own money, to discharge substantially all the enterprise's liabilities. In the process the airline's creditors were forced to absorb a substantial loss. Subsequently, the buyers made equity infusions of Mex$72 billion in 1988 and Mex$95 billion in 1989 to provide operating funds. Finally, in 1991, the buyers sold 23 percent of the company for Mex$191 billion, thereby getting substantially all of their investment back, and the company raised additional equity capital of about Mex$169 billion through a dilutive stock offering. As a result, some 33.5 percent of the company is now owned by foreigners.

How far can the changes discussed above be attributed to divestiture? The dramatic cut in fixed assets and the related doubling of rental cost per unit of output was clearly a consequence, reflecting the buying group's strategy of relying on leased aircraft. The approximate doubling of labor productivity was

Figure 6. Distribution of Welfare Gains and Losses from Divestiture, Aeroméxico



Source: Authors' calculations.

clearly caused by divestiture. Immediately following divestiture, employment was only one-third of its previous level, although output was also significantly lower. In 1991 Aeroméxico was still somewhat short of its peak output, but employment was only a little more than half its peak. Thus, output per employee was considerably higher.

These two changes by themselves can explain the bulk of the productivity improvement.

What is it worth? Mexico's welfare rises in present value terms by Mex$5,195 billion (at 1988 prices, equivalent to US$2.28 billion) with the divestiture of Aeroméxico. World welfare rises by Mex$4,761 billion (US$2.09 billion)—a very substantial gain. Foreigners, because they consume a large proportion of Aeroméxico's services, are made worse off by the rise in prices. Foreign consumers are worse off by Mex $613 billion, but foreign shareholders gain Mex$178 billion. Domestic consumers are also worse off to the tune of Mex$1,429 billion. Domestic shareholders gain Mex$449 billion; the bulk of these gains go to the controlling de Prevoisin group. The big winner is the government, even though we estimate that it received nothing from the sale itself. It got rid of a money-losing enterprise that would have cost it nearly Mex$3,500 billion in losses and converted it to a tax-paying company that will contribute over Mex$2,600 billion (in present value terms) in tax revenues. The net gain to the government, then, is Mex$6,115 billion, or US$2.12 billion. Providers—in this case, the creditors of the bankrupt Aeronaves—are estimated to lose Mex$165 billion. "Workers" (here the pilots, as part owners of the firm) gain Mex$235 billion.

Conclusions. The divestiture of Aeroméxico has been highly successful, resulting in a substantial welfare improvement. We estimate an annual flow of 48.5 percent of 1989 sales as the welfare gain. The Mexican government is the big winner: its annualized gain is 62 percent of 1989 sales. The buyers experience a more moderate gain (8.7 percent), while consumers lose. The primary source of the government's gain is elimination of the deficit caused by Aeroméxico.

The overall welfare improvement is driven largely by the dramatic increase in labor productivity, which in turn stems from the massive labor force reductions following the airline's bankruptcy. The welfare gains will be more substantial if demand grows more rapidly than we postulated.

Mexicana de Aviación

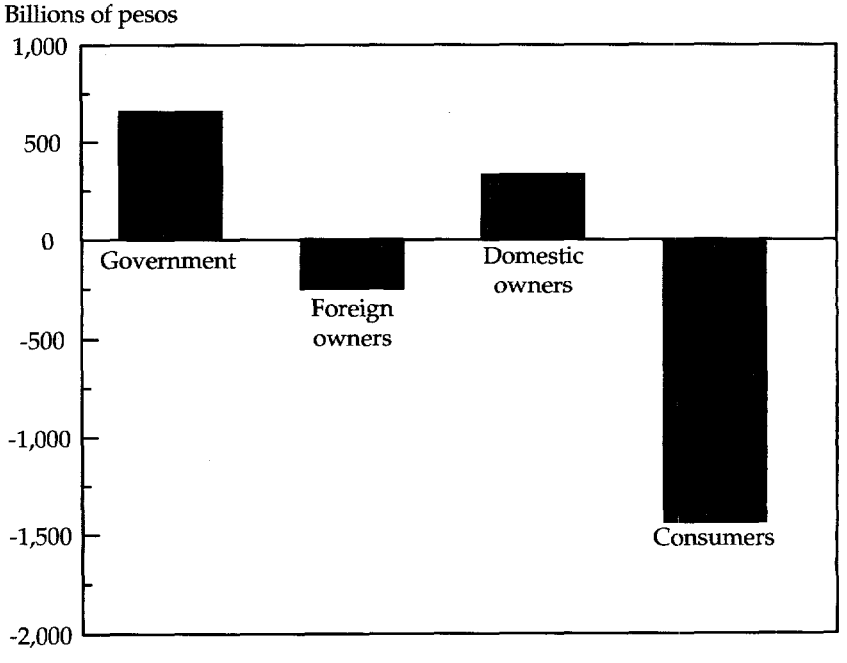
Mexicana de Aviación was the first sale of a major public enterprise in the term of President Carlos Salinas de Gortari. It marked a major change in that the

buying group was 49 percent foreign owned. The new management promised an ambitious US$3 billion investment program that would capitalize on the expected boom in the Mexican tourism industry. So far at least, that rosy future has failed to materialize. Indeed, the stock price is one-third the level at which the divestiture took place—a reminder that not all divestitures are successful, that sometimes private firms fail.

Mexicana had a short tenure as a parastatal, starting in 1982, during the Mexican debt crisis, when the company had a debt crisis of its own and turned to the government for help. The government elected to acquire a 51 percent shareholding but in October 1986 decided to divest it. After two failed attempts at a sale in 1987 and 1988, the government was successful in 1989 with a search for an equity infusion allowing the new controlling group to be up to 49 percent foreign-owned.

What happened? From roughly breaking even in every year of the predivestiture period, Mexicana became highly unprofitable in its first two years as a

Figure 7. Distribution of Welfare Gains and Losses, Mexicana de Aviación



Source: Authors' calculations.

private airline. Capital formation, which had stagnated through much of the period, suddenly took off in 1991. Productivity improved slightly over the period, in a trend that started around 1985; it peaked in 1988 and has stayed only slightly below that peak in subsequent years.

The first and obvious factor underlying the postdivestiture changes at Mexicana is the massive investment program upon which the company has embarked. The strategic decision of its new managers to concentrate on tourist traffic proved a costly mistake. This decision and other management problems at Mexicana are clearly attributable to divestiture.

The improvement in labor productivity from 1986 to 1989 occurred at a slightly lower rate than the rate of growth after divestiture. We think this difference is attributable to divestiture.

What is it worth? Mexico's welfare falls by Mex$450 billion at 1989 prices. World welfare falls by Mex$1,319 billion (about US$500 million), equivalent to an annual flow of 7 percent of Mexicana's 1989 sales. Government comes out ahead by Mex$657 billion, mainly by avoiding losses it would otherwise have suffered as the majority shareholder of the airline. Foreigners lose Mex$868 billion, of which the buyers lose Mex$251 billion and consumers Mex$617 billion. Domestic consumers are worse off by Mex$1,440 billion because of the rise in real domestic airfares. Domestic shareholders of Mexicana gain by reducing their losses to the tune of Mex$333 billion.

The divestiture of Mexicana has been unsuccessful, in the sense that social welfare (whether of Mexico or the world) has fallen from where it would have been had the airline not been divested. The main factor behind the welfare loss is the adoption by the company of an overambitious investment program. The welfare loss would be considerably greater if we projected a continuation of the mismanagement that has been characteristic of the two and a half years since divestiture. The government has, nevertheless, managed to come out ahead through reducing its exposure in the money-losing enterprise.

Mexicana has been unable to realize the productivity improvements achieved by Aeroméxico. Nevertheless, if the divestitures of Aeroméxico and Mexicana are considered as a single package, airline divestiture-cum-deregulation has been highly successful.

Conclusions. We are left with the following possible conclusions:

- A divested enterprise cannot realize labor productivity gains as great as it might if labor restructuring took place prior to divestiture.
- Sometimes divested enterprises will not perform well, just as some firms that were in the private sector from the beginning do not perform well.

- The ability of the capital market to play its watchdog role is hampered if the management of a divested enterprise has voting control, thereby precluding the possibility of a hostile takeover.

Mexico: Summary

Mexico is widely regarded as one of the great success stories of the privatization wave. In a period of ten years over 80 percent of Mexico's public enterprises were liquidated, sold, or otherwise disposed of.

From the point of view of our research, however, the most important aspect of Mexico's divestiture program was its part in a much wider, comprehensive economic reform program covering a tremendous liberalization of the trade regime, relaxation of rules governing foreign and domestic investment, and deregulation. This linkage of the divestiture program with other economic reforms contributed greatly to its success but also made it difficult for us to separate the effect of divestiture per se from the effect of the related liberalization measures. We have therefore reported the joint effect of the entire policy package.

The Mexican experience in general, and our case studies in particular, suggest that seemingly unattractive, money-losing, or marginally profitable public enterprises can be sold, often for large sums of money; that even if they do not sell for large sums, they can still make a substantial positive contribution to the fiscal situation; and that the aggregate sums can be large enough to make a real difference at the macroeconomic level.

A second broad theme is the relationship between divestiture policy and the need for regulatory regimes. Our results show that consumers have been hit hard by the changes in Telmex's price-tax regime but that the price changes were welfare-improving, indicating that the previous prices were uneconomically low.

A key element in Mexico's success has been the skillful coordination of divestiture with other policies conducive to developing the private sector. In this it is clear that Mexico provides an example of outstanding success to other countries considering or carrying out programs of divestiture.

Synthesis of Cases Across Countries

Did divestiture make the world a better place or not? The net world welfare change was positive in eleven of twelve cases; only Mexicana de Aviación shows a net loss. Furthermore, the magnitudes of the gains were substantial: the annual component of the perpetuity equivalent of the gains averaged 30 percent of predivestiture annual sales; in more than half the cases the gain in

welfare exceeded 10 percent; in the single negative case the loss was only 7 percent.

Winners and Losers

Here we look at the results in more detail to see who were winners and losers, what were the sources of such changes in welfare, and what determines the degree of success in divestiture.

Workers. The big surprise was to find workers as a class not losing from divestiture, probably because they had sufficient power to negotiate predivestiture agreements that made them no worse off. In ten cases they gained—either from share appreciation or from higher wages. There were cases of individual layoffs, but all were accompanied by substantial severance pay and in a context of reasonably full employment. In other words, divestiture can be managed to make workers no worse off.

Consumers. Consumers lost in five cases, but in only three—all in Mexico—were the losses substantial. However, consumer loss was not necessarily a bad thing if it occurred because prices rose to an economically efficient level. In the three Mexican cases, that seems to be what happened.

Government and buyers. Overall, the immediate fiscal effect was positive in nine of twelve cases.

Foreigners versus nationals. When foreigners are involved, they generally do quite well, but nationals do even better. There are only three cases where foreigners lose on balance.

Competitors. Since most of the enterprises studied were virtual monopolies, competitors had little scope to gain or lose, except in the case of Sports Toto Malaysia and of CTC, whose dramatic domestic expansion benefited the competing company that provides long-distance services.

Two very important and surprising patterns emerge from our investigations. First, the bulk of the gains followed from divestiture-induced changes that were external to the enterprise rather than internal to it. Roughly three-quarters of the welfare improvements from divestiture came from just three sources: revised output prices, increased flexibility in hiring, and increased flexibility in investment decisions. Second, the origin and distribution of the welfare effects of divestiture vary substantially across cases. As will be explained below, these variations reflect the initial conditions of

each enterprise, its sector and policy characteristics, and the nature of the sale transaction.

Market Determinants of Success

Our findings suggest that market factors can influence divestiture outcomes in several ways. If the divested enterprise operated in a competitive industry, welfare gains are likely to be positive but small. In monopoly industries welfare gains are more variable, with large gains possible. Effective regulation plays a crucial role in ensuring positive (and preventing large negative) outcomes. Divestiture can induce changes in market structures, and the effects of these can be positive or negative.

An efficient capital market can increase government revenues from the sale of enterprises, and it may improve divestiture outcomes through the resale mechanism. Furthermore, while the inflow of foreign capital can expand the set of large enterprises for which divestiture is feasible, some of the gains may leak abroad.

Institutional Determinants of Success

On the institutional front, our findings also suggest that divestiture generally reduces political and bureaucratic intervention, promotes profit-maximizing behavior, enhances managerial autonomy, and improves motivation through incentives. Combined with effective and credible regulatory institutions, divestiture can improve welfare even in noncompetitive markets. Where divestiture leads to the first but not the second, its welfare effect can be negative.

Country Determinants of Success

In general, country characteristics exhibit little variance in our sample and hence play a limited role in our verbal regression. However, divestiture is associated with positive changes in welfare in the one industrial country (the United Kingdom) and the three developing countries (Mexico, Malaysia, and Chile) in our sample, which suggests that gains are possible across countries at different levels of development. The gains are relatively modest in the United Kingdom and Chilean cases (when CTC is excluded). This suggests that the potential gains from divestiture can be more substantial in developing economies with unreformed public enterprises, but the question remains open. Divestiture outcomes in the U.K. cases varied less than those of Chile, Mexico, and Malaysia. This suggests that countries at earlier stages of development can influence divestiture outcomes significantly.

Finally, caution must be exercised in extrapolating our results to very poor countries, which lack some of the institutions and markets our sample countries possess. The same caution applies to the former socialist countries, which do have levels of living comparable to our sample but almost completely lack private sector institutions and the kind of market mechanisms taken for granted in mixed economies. In both instances, divestiture outcomes may differ from those found here.

Sale Structure

Should the government relinquish ownership or control? Should it invest in enterprises prior to selling them? How should the government sell the enterprise? To whom should it sell it? How long should the process take? On the basis of our analysis, we note the following: no correlation seems to exist between the method of sale and the distribution of welfare gains between nationals and foreigners. For example, public bids were used in selling both Telmex in Mexico and CTC in Chile, but domestic welfare improved more in Chile than in Mexico. Nor does selling the shares in the stock market seem to guarantee that the fiscal effect of divestiture will be positive. The two electricity enterprises in Chile (CHILGENER and ENERSIS) are examples. Finally, no correlation seems to exist between the change in welfare and the nature of the buyers. In fact, in the two cases (National Freight and ENERSIS) where workers gained significant shares, welfare also improved.

It seems that sale structure can enhance welfare under several circumstances: if the government relinquishes control to the private sector—which is not necessarily equivalent to selling more than 50 percent of the shares; if the government retains control but exercises it better (for example, regarding pricing and investment), which could follow from partial divestiture; if the government agrees with the buyers to invest to meet an existing demand gap, provided it has established a reasonable regulatory framework if the enterprise is a monopoly; or if the sale is concluded, irrespective of the method, given that the latter depends on the size of the enterprise relative to domestic capital market and on the state of development of the capital market.

Prediction Versus Prescription

The most important conclusion from this discussion of case results and their causation is that ownership matters. The second main conclusion involves bad news and good news. The bad news is that although our cases were on balance overwhelmingly successful, we are not in a position to predict comparable success elsewhere. The good news is that considerable gains are possible when

accompanied by good policy. This means that the case experiences can be used to prescribe measures for attaining equivalent or superior success elsewhere.

Policy Summary

How can our knowledge of divestiture generated by our investigations be integrated into concrete policy recommendations? Let us take the case of a mixed-economy developing country considering public enterprise divestitures to enhance domestic economic welfare as part of an economic reform package.

How dramatic are the gains that might reasonably be expected? This depends in large part on how much room there is for improvement. For a typical developing country, international experience suggests that (a) divestiture is capable of producing annual welfare gains of around 5 to 10 percent of predivestiture annual sales; (b) if half the public-enterprise sector were to be divested, the annual gains would be about 1 percent of GDP—a small percentage but of a large absolute number; and (c) additional benefits might follow from such indirect effects as unleashed private enterpreneurial activity and accelerated capital market development.

The details of what should be done to achieve these gains will vary from country to country and are further constrained by sociopolitical circumstances such as the prevailing attitude toward capitalism in the society. We identify a series of decisions that have to be made in all cases and factors that will influence them.

What is to be sold? Divestiture of enterprises whose presence in the public sector has no economic justification at all should be virtually automatic. These include competitive enterprises that are small relative to both their product and their factor market. This was the strategy initially followed in Mexico. However, the scope for taking the easy way out is limited, as the aggregate contribution to GDP will necessarily be small. Many governments may wish to include some larger noncompetitive enterprises in the initial set to establish the credibility of the program. However, it is not so much what one divests as how that makes a difference; it is the policies that accompany divestiture that matter.

Competition policy. These policies include divesting enterprises where competition can be induced. This can be done in a number of ways. For tradable goods, the government can announce a strict timetable for phased reduction and eventual elimination of import restrictions on competing goods.

For nontradables, such as telecommunications and electricity, it is less easy to introduce competition because monopoly is rooted in technology rather than policy.

Regulation. Competition cannot do it all. It will remain necessary to regulate the prices of some large divested enterprises for two quite different purposes:

To set prices low enough to preclude exploitation of consumers yet high enough to allow a fair return on capital.

To motivate producers to keep costs as low as possible.

Foreign participation. A decision needs to be made early on whether to permit foreign buyers. If foreign buyers are allowed to participate, then it is also necessary to decide whether to permit direct investment (including participation in management) or to allow only indirect (portfolio) investment. The advantages of foreign participation are largely economic; the disadvantages are both economic and political. However, if the government can handle the political flak, it should certainly use foreign participation to enhance the net domestic benefits of divestiture.

Partial versus full divestiture. Full divestiture is the transfer of 100 percent of ownership and control to the private buyer or buyers; partial divestiture is anything less. Partial divestiture is often derided as a merely cosmetic transaction, but there are strong economic and political reasons why partial divestiture may often be superior as a first step. Selling part of the shares initially, letting the market set a price over time, and later selling the rest can increase government revenues. The political argument for partial divestiture is that, in the presence of contending political forces, the alternative to the compromise of partial divestiture may be no divestiture, at least for the time being.

Internal restructuring. Any one of the options for preparing an enterprise for sale by internal restructuring, except taking debt off the books, may be more costly than selling the enterprise as is and letting the private buyer make the changes. However, there are some legitimate reasons for restructuring by the government, including the fact that it may be desirable because it is supported by foreign aid or low-interest loans that would not otherwise be available.

How should the enterprise be sold? To ensure sustainability and maximize welfare benefits, be sure the buyer puts up sufficient equity; be sure that the political opposition cannot support a charge that "the government sold the national patrimony for a song"; select the buyer through competitive bidding where possible, but do not necessarily take the highest bidder.

To minimize waste and corruption, *centralize policy.*

To maximize speed and take advantage of self-interest and competition, *decentralize execution.*

To make divestiture a success, sell only when the necessary accompanying policies are in place.

The fact that substantial gains from divestiture are possible, but by no means guaranteed, means that policy can make a difference. In government there is no magic wand. *Policy matters.*

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This booklet presents a summary of *Welfare Consequences of Selling Public Enterprises*, the first comprehensive empirical study to measure the effects of divestiture on sellers, buyers, consumers, workers, and competitors. The study measures changes in producer and consumer surplus and answers questions about who won, who lost, by how much, and why. It compares the pre- and postdivestiture performance of enterprises and what the latter would have been under continued public ownership.

The sample includes case studies of twelve enterprises in four countries: one developed (the United Kingdom) and three middle-income (Chile, Malaysia, and Mexico). The enterprises analyzed are in the fields of aviation, energy, telecommunications, transport, and gambling. Eleven of the twelve ventures succeeded in benefiting most economic actors and their countries. This overwhelming success followed from the fact that the countries here described did most things right, although details of the right things were not always the same for each country or each case.

Because the sample is small and not random, the results of the study cannot be used for prediction, especially in very poor countries or in the former centrally planned economies. However, because these results are the first to provide evidence of what works and what does not, they can be used prescriptively, as they are in the last chapter, as a basis for policy recommendations.

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