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Are There Nationalization-Privatization Cycles?

—A Theoretical Survey and First Empirical Evidence—

by

Uwe Siegmund

August 1996

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Abstract

This paper deals with fluctuations over time in the extent of the state-owned firm sector—nationalization-privatization cycles (NPCs). Anecdotal observations of NPCs are supported threefold by systematic empirical evidence: first, for different regions and economic systems, second, for different time periods, and third, for different indicators. In explaining NPCs, the paper provides a history of research on the subject. At the end three hypotheses are distinguished: the ideological preference hypothesis, the political cycle hypothesis, and the efficiency hypothesis. The conclusion is that NPCs existed in the 20th century as a worldwide phenomenon and are worthy of being explained (B25, H11, P51).

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I What Does It Mean and Why to Look for Nationalization-Privatization Cycles?*

In recent economic history, the state has played a dominant role. The state has influenced economic activity not only indirectly by means of taxes and transfers, but also directly by operating a large number of firms. This direct economic activity of the state has varied between countries. The United States has relied much less on state firms than, for example, France. Western and Eastern European countries have had two different economic systems over the last 50 years, one dominated by private firms another by state firms. But, even within the two economic systems there have been differences in the way state firms have been used. For example, Italy has relied relatively more on state firms than Germany. And Poland had a larger private sector, especially in agriculture than, for example, Eastern Germany.

The direct economic activity of the state also has varied over time, and—this is the hypothesis in the paper—as regular swings. Moreover the regular swings often included waves in nationalizing and privatizing state firms. Thus one could see waves of nationalization after World War II, not only in Eastern Europe, but also in Western Europe. And in the 1980–90s one could see waves of privatization in the same countries. Apart from these large observed waves, there seem to have been minor ones, for example, in France, who nationalized many large industrial firms and banks in 1982 and started to privatize them and many more in 1986. That there is more than one wave in a country is also supported by evidence from industrializing and developing countries. A good example is Mexico, who pursued a post-colonial free market system without many state firms until 1910; then in its revolutionary period from 1910–40 it nationalized extensively, mainly foreign-owned private firms, only to privatize and let in more private foreign firms again from 1940 to 1958; this was followed, again, by nationalization, culminating in 1982, when virtually all banks were taken over by the state; and finally Mexico started to privatize again after 1983.

Starting from this anecdotal evidence, this paper deals with fluctuations over time in the size of the state firm sector, fluctuations defined as nationalization-privatization cycles (NPCs). It will focus on ordinary firms that could be, and usually are, operated by private individuals: agricultural, industrial or mining firms, commercial banks, insurances, service firms, etc. Cooperative firms and, of course, family businesses are defined here as private firms, too. In looking at ordinary firms, this allows us to keep to the original meaning of what citizens deem

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to be state-owned firms. It also brings up the very question of why a government owns these firms. There is no natural monopoly or public good argument involved, although natural monopolies (railways, utilities) could be private (as they often historically have been) and many public goods could be privately produced. Therefore, the paper will not deal with the issue of state regulation of private (or, paradoxical, state) firms, although property rights theory sees state regulation as being equal to (at least) partial nationalization of ownership rights, and deregulation of private firms as being equal to (at least more) privatization. Once this is said, it may already explain why there is deregulation in the United States when there is privatization in Western Europe. The paper will not deal with state administration, say courts, armies, parliaments, police, etc, either. That is it will not address the public or merit good issue. And it will not deal with the state social security system, for example, pension funds, labor offices or state health insurances, because it would widen the scope of the survey too much. In principle, state ownership crowds out private ownership. Factors of production used by state owners are not available to private owners. Hence, firms created by the state are in a strict sense nationalized firms. Only in the case where no private firm would use the factors, does the state firm act as a complementary firm. In the empirical part of the paper this "crowding out definition" of state firms is applied, also, because it is difficult to distinguish which firm or part of it had been nationalized, which originally created, and which enlarged by investment after many years in state ownership. Therefore all state firms will be treated as nationalized firms, and all private firms as privatized firms. More state firms or state firm activity means nationalization, fewer state firms privatization.[1]

Business cycle theory offers the technical basis for NPC analysis. In the paper the concepts of long-term trend and short-term fluctuations, of peak and troughs (turning points), and of phases (expansion=nationalization; contraction=privatization) are used. Also different types of cycles classified by their time span are sometimes mentioned.[2] The terms "wave" and "cycle" are used interchangeably in this paper, although "wave" emphasizes massive and large-scale ownership changes. This is different from marginal changes in ownership. Thus "marginal nationalizations" means small-scale acquisition and extension of state firms by the government. As a result, for example, privatizations in West Germany in the 1980s were marginal privatizations and privatizations in Eastern Germany from 1990–95 were a wave of

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1 What causes no methodological difficulties for analyzing NPCs is the form of nationalization or privatization. Whether a firm is bought or sold on the stock market by the government, taken over in bankruptcy bailout or expropriated, granted to the individuals with the help of vouchers or sold to private investors has nothing to do with observing cycles. It may contribute to explaining specific trajectories, patterns or the timing. The method of nationalization or privatization is not the cause although there may be repercussions or interconnections.

2 In business cycle theory and theory of long waves, the following types of cycles are distinguished (for example Giersch, 1977, pp. 20–22): Kondratieff cycle of about 40–50 years (long wave); Kuznets cycle of about 15–20 years; Juglar cycle of about 7–11 years; Kitchin cycle of about 3 years.

privatization; both were (part of) one phase of one cycle. Finally, exogenous and endogenous factors driving cycles are distinguished.

Although fluctuations over time need not constitute a cycle, this paper will look for regular swings because it questions the orthodoxy that the recent privatizations are irreversible, especially in Eastern Europe. If there are factors that cause regular swings of nationalization and privatization, then one could expect nationalizations in the future. Therein lies the relevance of the topic for policy makers.

The first aim of the paper is to collect empirical evidence for NPCs in different regions of the world, at different periods of time, with different methodologies. The second aim of the paper is to survey theoretical approaches to NPCs using a standardized catalogue of criteria so that advances and weaknesses of the approaches are brought forward, and to distinguish basic explanations for NPCs. Conclusions are drawn at the end.

II Are There Really Nationalization-Privatization Cycles?

In this chapter time series of different indicators are produced in order to indicate NPCs. The "natural" indicator for NPCs, the share of the state in GDP, is misleading. For example in Germany, the value added of state firms is counted for in the private firm sector (business sector). The value added of the state sector consists only of the value added of the state administration and of the state-owned social security (firm) sector. Moreover, the value added of the state sector is based on costs, that is on tax-financing, not on revenues from the market. Therefore, in a first approach, different shares of state firms—not of the state sector as counted for in the national income accounts—are considered indicators for NPCs. In a second approach, economic policies toward nationalization or privatization are considered indicators for NPCs because this completely different approach can make the overall empirical evidence more robust. Available data were selected so as to cover a wide range of countries and a long time horizon.

1. Input and Output of State Firms

Analogous to the "natural" indicator for NPCs, the share of state firms in GDP is used as an indicator. This will indicate the importance of state firms in output compared to the rest of the economy. The importance of state firms in input is indicated by share of state firms in total

employment and in gross investment.[3] That not only output or only input data are used is justified by the fact that state firms are special firms compared to private firms. The property rights school (see, for example, Alchian, 1977, Part II) argues that state firms have privileges over private firms, for example, less expensive cost of capital, less likely to go bankrupt, more protection as monopoly, easier access to state orders, etc. The public interest school (especially the German school in the tradition of the "Kathedersozialisten"; see, for example, Lösch, 1987) argues that state firms are more complex in their objectives than private firms, that is, their objective is not just profit and not even only value added. Therefore, the public interest school sometimes argues that state firms have a burden compared to private firms, for example, in hiring or firing workers. The change in the size of the state firms sector (NPCs) will therefore be measured by different indicators. Input and output data are available for several Western European countries from 1971–85 and many developing countries from 1978–91 (Table A.1 in the Appendix), and are reproduced as time series in Figure 1. Regions instead of countries are chosen in order to see nationalizations and privatizations on an international scale.

The rough overall impression from the panels in Figure 1 is that no cycle and no wave is clearly visible. One reason for this may be that the time period is to short, about 15 years for Western European countries or developing countries.

Nevertheless, a closer look at Figure 1 reveals common patterns for each indicator. The share of state firms in employment remained almost constant over time with the exception of African countries (Panel A). Thus for about 15 years there was no significant change in the regional levels in the employment share: African countries are on the 20 percent level, Western European countries are on the 10 percent level, and Asian and Latin American/Carribean countries are below the 5 percent level. But the share of state firms in investment declined in *all* regions starting in the beginning of the 1980s, thus indicating a phase of privatization (Panel B). In 1979, the investment share ranged between 30,3 percent in the African countries (upper bound) and 16.8 percent in the Latin American/Carribean countries (lower bound) and declined to 25.5 percent and 12.6 percent in 1991. Thus, the share of state firms in investment declined by roughly five percent within ten years (see also row 14 in the Table A1 in the Appendix). Moreover, before that time—insofar as data are available—there was an increase of the share of state firms in investment (again with the exception of African countries), thus indicating a phase of nationalization. Somewhat surprisingly, the share of state firms in value added increased in all regions (Panel C), although only slightly by no more than one percent in ten years (please note the different scales on the y-axis in the panels). This may indicate that (remaining) state firms became

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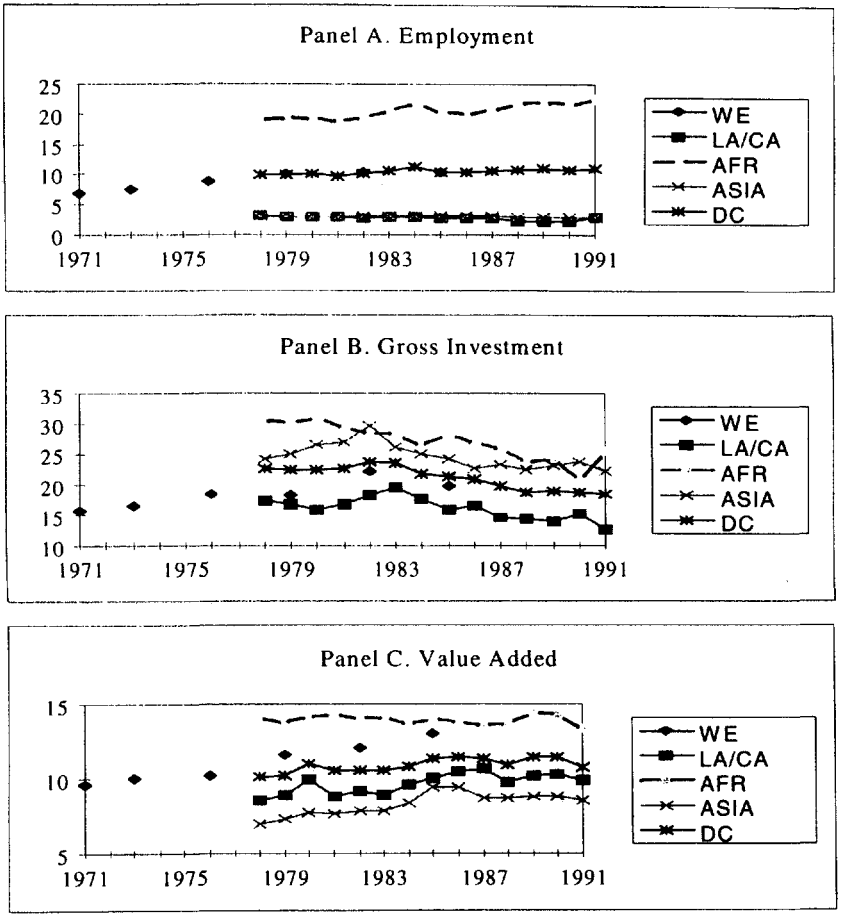
3 But one has to keep in mind that when the share of state firms remains constant over time, but the overall indicator, for example, total employment, grows (shrinks) then there is nationalization (privatization) in absolute terms.

marginally more efficient, because labor input remained constant, capital input declined, and output (measured in value added) slightly increased.

Figure 1 — Share of State Firms in Employment, Gross Investment, and Value Added by Region, 1971–91.



Note: AFR: African countries, ASIA: Asian countries, DC: developing countries, LA/CA: Latin American and Carribean countries, WE: Western European countries. For the countries see Appendix. A region is constructed as an unweighted share of the selected countries in the region.

Sources: Rosa (1993), World Bank (1995).

Another closer look at Figure 1 reveals a clear trend toward nationalization in Western European countries from 1971–83 supported by all indicators. In every other region different indicators show different trends, either toward nationalization, privatization, or neutrality.

At this point, a critique of the data is necessary. There is a systematic, and it seems enormous, understatement of the share of state firms in employment, investment, and value added because many state firms are not counted for (see World Bank, 1995, pp. 316–324, whose data are based on different national statistics and Rosa, 1993, p. 335, footnote 11, whose data are based on CEEP [Centre Europeen des Enterprises Publique], 1987). In the Western European (CEEP) data, small state firms, communal firms, and many mixed firms are missing. In the other (World Bank) data, additionally, financial state firms are missing. Hence, Figure 1 can only roughly depict reality.

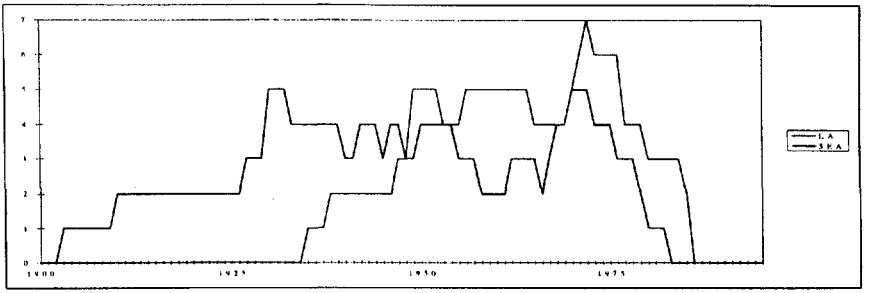
In summary, first, there is some empirical evidence for two phases of an NPC: a nationalization phase before the 1980s and a privatization phase thereafter, as is shown especially in the investment activity of state firms. Second, the two phases are a worldwide phenomenon, as is shown by similar patterns in different regions of the world. Third, the two phases in different regions seem to be highly correlated as is shown in the simultaneous movement of the different indicators.

2. Economic Policy Types

Another approach other than looking at the extent of the state firm sector over time, is to look for economic policies pursued in favor of either privatization or nationalization over time. Thus policy classification becomes the indicator of NPCs. This approach was chosen by Chua (1995), who distinguished pro-privatization and pro-nationalization policies in six Latin American countries (Argentina, Brazil, Chile, Mexico, Peru, Uruguay) and eight Southeast Asian countries (Burma, India, Indonesia, Malaysia, Pakistan, Philippines, Sri Lanka, Thailand) over this century. The data are compiled in Table A2 in the Appendix in a rigorous way, and extended by average calculations of the two regions.

The first result is that there were NPCs, with Latin American countries having had more phases than Southeast Asian countries. Latin American countries had five phases (two cycles), and Southeast Asian countries had three phases (one cycle). This can be shown by counting the countries pursuing pro-nationalization policies (Figure 2).

Figure 2 — Number of Countries with Pro-Nationalization Policies in Selected Latin America and Southeast Asian Countries, 1900–95.



Note: LA: Latin American countries, SEA: Southeast Asian countries. Maximum in LA=6, in SEA=8 countries.

Source: Chua (1995), own compilation and calculation.

The second result worthy mentioning is that the average phase length of first pro-nationalization policies is about the same in Latin American (22 years) as in Southeast Asian countries (25 years) (see rows "Average" in Table A2). In Latin American countries, the second pro-privatization policy phase (columns 7–8, Table A2) and the second pro-nationalization policy phase (columns 9–10, Table A2) did not last half as long, namely 11 and 13 years on average. This may indicate some learning by the governments from failures of previous nationalizations. An idealized view of the two regions would lead to the following history for the countries surveyed: In Latin America, the governments pursued pro-privatization policies until 1924, then they nationalized for 22 years, only to come back to pro-privatization policies in 1946. The new period lasted for 11 years and in 1957, the governments swung back to pro-nationalization policies. In 1970, however, they decided to privatize and return to the beginning of the century—a longer period of free-market, pro-private business and foreign investment, pro-privatization policies. In Southeast Asia, the governments did pursue pro-privatization policies much longer, namely the first half of the century. Only in 1952, did they start to nationalize. The pro-nationalization policy lasted for 25 years to the mid seventies. By then, in 1977, they returned to the pro-privatization policies for the last quarter of the century. It seems that the selected Southeast Asian countries saved one full NPC compared to the selected Latin American countries. Southeast Asian countries had also, on average, fewer years of pro-nationalization policy (columns 17–18, Table A2). While Latin America had around 60 years of pro-privatization policies in this century and 40 years of pro-nationalization policies, the respective numbers for Southeast Asian countries are about 75 and 25.

The third result is that it took much longer for governments to pursue pro-nationalization policies in the first period, than to return to pro-privatization policies at the end. Eight out of 14 countries in the two regions started pro-nationalization policies between 1930–50 (within 20 years) while ten out of 14 countries returned to pro-privatization policies between 1976–86 (within 10 years).

It would be interesting to connect the above results to other observations. For example, when Chua correlated pro-nationalization policies with the struggle for independence, he found no overall pattern, as there were countries with and without pro-nationalization policies after becoming independent (column 2, Table A2). Or, there might be a negative relationship between growth of an economy and length and strength of pro-nationalization policies. Latin American countries grew fast at the end of the 19th/beginning of the 20th century, but, with pro-nationalization policies, growth slowed down. In contrast, Southeast Asian countries, having fewer years of pro-nationalization polices bypassed Latin American countries in growth in this century. But these conjectures have to be left to other studies, mainly because the available data are not yet satisfactory.

Many countries in the two regions have not been included in the analysis; not only the communist countries in Southeast Asia are missing (as Chua mentioned), but also many Middle American countries, too. Furthermore, the classification of policies should be critically examined. Chua (1995, p. 227, footnote 27) tried to choose a narrow definition, but had to broaden it from time to time in order to maintain a cyclical movement. Pro-privatization policies sometimes do not allow for larger privatizations, but instead for more foreign direct investment (for Chua a methodological substitute), as in Mexico between 1940 and 1958. Or pro-nationalization policies can just mean more intervention, but not necessarily nationalization. For example, in Malaysia between 1970 and 1980, the ownership policy was of a more redistributive character among private individual owners (from foreigners to Malaysians) than a nationalization policy. And even within phases, considerably different levels of a policy can be found, as, for example, in Indonesia 1949–65 (see Notes in Table A2). Nevertheless, Chua's classification was pioneering in research on NPCs.

The approach used to classify economic policies will now be extended to former communist countries. It will focus on the Soviet Union and Eastern Europe, as the classic cases. The empirical evidence for proving or disproving the conjecture of NPCs in communist countries is still too weak but some support does exist.

Table 1 — Pro-Privatization and Pro-Nationalization Policy Periods in the Soviet Union and Eastern Europe, 1900–95.

Country	Year of power by the communist party (a)	Years of economic reforms (b) (pro-privatization policy period)	Year of privatization law (c)
Soviet Union (Russia)	1917	1953–64 Khrushev Era 1985–91 Gorbachev Era	1991
Eastern Europe			
Albania	1944	–	–
Yugoslavia	1945	1949–90 Employee ownership	–
Bulgaria	1947	–	1992
Czechoslovakia	1948	1968 Sik reform program	1990
Hungary	1948	1953–54 Nagy reforms 1963–90 New Economic System	1990
Poland	1948	1980–90 Solidarnosc movement	1990
Romania	1949	–	1991
East Germany	1949	–	1990

Notes: (a) Taken from Kornai (1992: 6–7, Table 1.1). — (b) Taken from Kornai (1992:393, Table 16.1). Own short description are interpretations of economic reforms. — (c) Taken from Frydman, Rapaczynski, Earle et al (1993, vol.1): Bulgaria 24–27, Czechoslovakia 71–72, Hungary 126–130, Romania 176–178 and 238–239; (1993 vol. 2): Russia 38–41. Eastern Germany by myself. Year when main privatization law was legislated.

Sources: Kornai (1992), Frydman, Rapaczynski, Earle et al. (1993).

The starting point is to observe two different waves of nationalization and privatization (Table 1). The main wave was in the Soviet Union; it started around 1917–20 and lasted until 1991 for around 70 years. The induced waves were, of course, in Eastern European countries under the influence of the Soviet Union. The induced waves started around 1945–50, lasted for about 40–50 years and then ended quickly in 1989–90. Compared to cycles in Latin American or Southeast Asian countries as shown above, they are by far longer, as can be expected on ideological grounds. But it should not be forgotten that many other countries nationalized after World War II, and privatized in the end 1980s, too. A further initial observation is that at the end of the main wave all induced waves ended simultaneously, even faster than the return to pro-privatization policies observed in Southeast Asian or Latin American countries. The coincidences of nationalization waves all over the world—which were started in the 1920–30s and were reinforced after World War II—and privatizations—since the mid-1970s—may be accidental. But, there may have been underlying forces that worked everywhere. This remains an open field for future research on NPCs.

The starting point was to observe a long-lasting persistence of state firms in former communist countries. But, there was no uniform level of state firm activity over time. There have been periods of pro-privatization policies in former communist countries, too. To support this, one may look at reform efforts as classified by Kornai (1992) (Table 1). In another source, Brus (1986) distinguished between the "Thaw/New Course" period of economic reforms in 1953–56, which started from the center (Soviet Union) and led to immediate imitation in the

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periphery (Eastern Europe), and the "Search for Balanced Development" period of economic reforms in 1957–65, which, with the various forms of "New Economic Systems," seemed to be the aftermath of the first reform period. The reform efforts were mainly directed at the coordination mechanism, the central planning system, but also included changes in ownership. The typical reform socialist idea—market socialism—needs quasi-private firms in order to get managers to make entrepreneurial decisions.[4] In later stages of reform discussions, the private firm sector assured a new role, namely to become the even the competitor of the dominating state firms (Brus and Laski, 1989, pp. 132–149). Thus every reform toward market socialism is at the same time directed toward more private property, but in a theoretical sense never achieves it in market socialism.

This leads to the following conclusion: The growth and decline of the private sector shows that there were NPCs in former communist countries. This is the same as in economies based on private property and market coordination where the growth and decline of the state firm sector shows that there were NPCs. Both are symmetrical cases. For example, Brus (1986, p. 50) observed "What is more, the 'New Course' in this respect either brought some revival of small private activity (particularly in handicrafts and services) or at least checked its decline. These changes were too small to be significantly reflected in national income statistics." Taking into account statistical or more general informational difficulties about the historical record of the former communist countries, it is better to use a very broad definition of what privatization means, and what private firms were. Thus the growth of family businesses or the shadow economy, the emergence of the "cooperative sector," or more foreign investment may all contribute to, at least small, swings within a long nationalization phase.

There is some other evidence to support NPCs in former communist countries. When discussing long waves of economic development, Glisman, Rodemer, and Wolter (1980, p. 16) concluded: "the example of the Soviet Union shows, that also in those countries there can exist the phenomenon of continuous acceleration or deceleration of economic growth." Or, Brus (1986, p. 49) wrote: "the abruptness of the change [the 'New Course' 1953–56]—however much it was needed—had a negative side, in that it introduced a *fluctuating rhythm* into the long-term process of development" (emphasis—U.S.). Swings in economic development may be correlated with NPCs, or vice versa.

Thus if there have been political swings, economic reforms, and swings in economic development in former communist countries, it is very likely that there have been NPCs, too.

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4 One of the most advanced proposals was that by Liska, a Hungarian economist. He wanted to auction off state property repeatedly to private individuals or leaseholders and tenants (cited in Brus and Laski, 1989, p. 146).

III Why There Should Be Nationalization-Privatization Cycles?

In 1976, in the peak time of nationalization, Backhaus (1976b, p. 292) stated that there was no bibliography of nationalization in economics because there were no theories of nationalization. Today, in 1995, one might say there is a large bibliography of privatization in economics but there are not many theories of privatization, either. There are many explanations of *how* privatization is or could be done but only a few theories of *why* privatization should occur (Siegmund, 1996). Thus it seems illogical to have theories of repeated nationalization and privatization.

Nevertheless, there have been attempts to explain NPCs, as the models below will show. These models stress individual preferences and political or cultural factors as causes for ownership change, also for NPCs. They were selected because they explicitly deal with cyclical movements of state ownership. These models are part of a wider range of models which attempt to explain different types of ownership, organization, and institutions.

Thus, another group of models (Anderson and Hill, 1975; Umbeck, 1981; Field, 1989) stresses different costs of different property rights regimes, among them private and state ownership in firms. They are based on the Demsetz hypothesis that "property rights develop to internalize externalities when the gains of internalization become larger than the cost of internalization" (Demsetz, 1967, p. 350). They analyze the definition of property rights, where the costs, efforts and technology of enforcing property rights are the main determinants. In these models state property is seen as a large property unit owned by many individuals who cannot be excluded from enforcing their property rights (or only at very high costs), while private property is seen as a small property unit which is owned by individuals who can enforce their property rights at comparably lower costs. This group of models will not be explored in this paper because both state and private ownership are seen as exclusive delimited ownership (see Demsetz, 1967, p. 354). What matters is the different forms of exclusion for private and state ownership of firms, which in both cases depend on the state. This group of models is best suited to explain why there is property at all: the shift from communal property, that is in a strict sense non-property, to exclusive property, that is state and private property. They help to explain why there are public and private goods, and how they are produced, but they do not explain private or state property. Furthermore, this group of models lacks the cyclical element. The change toward more or less exclusive and smaller or larger property units is not connected to cyclical swings.

1. A History of Research—Four Models

The models presented below are compared with respect to: (a) the intention of the model, (b) the cyclical idea, (c) the description of one complete cycle, (d) the cyclical features: trend, turning points, time period, and why a second cycle is likely to occur, (e) empirical support. They are then evaluated. They are ordered chronologically, thus implicitly providing a short history of NPC analysis.

a. The Hirschman Model (1982)[5]

Intention of the model. Hirschman seems to be the originator of the NPC idea.[6] In his introduction entitled "A Private-Public Cycle?" he raised the question: "whether our societies are in some way predisposed toward oscillations between periods of intense preoccupation with public issues and of almost total concentration on individual improvement and private welfare goals?" (p. 3).

He did not want to explain NPCs, but, instead, he wanted a broad concept of explaining shifts of individuals pursuing either public or private happiness. He looked for an endogenous "theory of cycles of collective behavior" (p. 4). Hirschman drew extensively on previous ideas (1970, 1977) especially on "exit and voice," the economic and political mechanism of an individual to show his dissatisfaction with all types of goods.

Cyclical idea. Hirschman's cyclical idea was based on an individual with two sets of preferences. One set of preferences is for the pursuit of private happiness, another for the pursuit of public happiness (pp. 66–76). The set of preferences for private happiness is used exclusively in private businesses, for example, as businessman or worker, while the set of preferences for public happiness is used exclusively in the (public) political arena, as politician or voter. The individual swings back and forth between these two sets of preferences in order to seek all round satisfaction (a meta-preference is assumed), and, subsequently, the individual swings back and forth between two institutional spheres. The individual himself can change institutional spheres, for example, he can change from a businessman to a politician and back to a businessman, or from a worker to a bureaucrat and back to a businessman. Or, the individual can be more or less involved in politics in order to reveal his preferences. The

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5 Pages in brackets, like (p. 3), refer always to pages of the article indicated in the heading, for example Hirschman (1982).

6 Hirschman's book is based on his 1979 lectures on historical economics given at Princeton University. This was before privatization on a larger scale gained ground in Europe, but deregulation had already begun in the United States.

individual can vote or not, petition legislators or not, go to political demonstrations or not, etc. The cycle comes about because the individual is repeatedly pulled in and pushed out of politics and private businesses.

The cycle. The cyclical mechanism is involvement and disappointment of individuals. Individuals act as private individuals, pursue their self-interests and accumulate material wealth. After a certain time, some individuals become satisfied with their material wealth while other individuals become jealous about the new wealth of the former or dissatisfied with their own wealth, their own way of life. Either way, both types of individuals are disappointed with pursuing only private happiness and at the same time are attracted by the political arena because there seems to be another aim worthwhile pursuing there. They have, then, a new set of aims,-like overall solidarity and serving the public happiness. After a certain time in the political arena, individuals become disappointed again. For example, heavily involved politicians discover that there is no overall solidarity or they feel exhausted; or, voters feel that they have no influence on the political outcome. Now, the individuals feel attracted again by private businesses, where they merely have to pursue their own private happiness.

Cyclical features. The length of his cycle is not specified, but Hirschman conjectured a time period of at least one Kondratieff cycle. This conjecture is necessary to his model because he denied any learning of the individuals from the past or intergenerationally. Individuals constantly err and never become fully satisfied (p. 134).

He did not have an explanation for a trend in his model, for why there should be a mass phenomenon (that is, the distribution of behavior over the entire population), or for turning points. Although he mentioned wars, occupations, repressions, or other exogenous events as possibly influencing the turn-around (p. 5), he basically tried to build an endogenous model of consumer dissatisfaction.

Empirical support. Hirschman provided only some weak anecdotal evidence.

Evaluation. Hirschman's model did not deal with NPCs because it is neither assumed nor necessary that privatization or nationalization of firms takes place. But his two-preference model can be converted to a standard allocative problem of selecting between two arguments in an objective function subject to constraints. Seen from this perspective, Hirschman's merit is not only in having originated the NPC idea but also in saying that the preferences for different ownership modes might shift over time. Unfortunately, he did not say much about costs or constraints. Apart from converting the model, it is difficult to make operational.

b. The Backhaus Model (1989)

Intention of the model. In the 1970s Backhaus worked on the issue of nationalization (1976a) and state firms (1980). He was impressed by the extent and large role state firms played in mixed economies. In the 1980s he observed a turning point for the expansion of the state firm sector in several countries, so in the United Kingdom, Germany and France. Consequently, he thought about a cyclical movement.[7]

Cyclical idea. His cyclical idea is based on a two-party-democracy framework. The two parties struggle for government, and, once in power, use state firms for three purposes: employment (E), state revenues or profit (P), and discretionary policy (D) which is a residual of all other purposes (p. 311). Nationalization and privatization are policy instruments in pursuing these aims constrained by the political value of state firms and their efficiency.

The cycle. Backhaus's basic mechanism for privatization was an overload of political objectives to the firm, thus leading to inefficiency and political depreciation. Consider his example in a somewhat stylized form (pp. 321–323): Party 1 pursues only purpose E and Party 2 only D. P is neglected for simplicity. Party 1 nationalizes a firm (or, alternatively, many firms) and follows E. Over an electoral period the firm becomes overstaffed. Then, Party 2 comes to power pursuing D_a, which puts an additional financial burden on the state firm. It cannot fully replace aim E in the firm because there are administrative, bureaucratic and political obstacles, thus E degenerates to E^1. Then, Party 1 comes to power again, continues its original E thus changing E^1 to E^2, and it neither can nor wants to remove D_a. It uses D_a for its own political purposes, for example, to win votes from the other party. But, Party 2 wins and changes E^2 to E^3, D_a to D_{aa}, and introduces D_b because D_{aa} is not any longer politically fully attractive. Then, Party 1 takes over again, changes E^3 to E^4, which also becomes ever harder to achieve, continues D_{aa}, which might be further tailored to its needs as D_{aaa}, takes over D_b and changes it to D_{bb}. Finally, Party 2 completes the last round, leaving at the end an inefficient state firm that makes operating losses and is difficult to exploit politically. Privatization of the firm emerges as an alternative with new political value. While privatization is explained, nationalization is simply assumed to take place. It can be repeated, again and again, in order to pursue the aims of political parties.

Cyclical features. Backhaus was able to address the problem of a turning point toward privatization. In his model the firm is privatized when it has many—often contradicting and

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7 Backhaus's article is based on a 1987 lecture in Laxenburg (Vienna), Austria, hence after the 1982 nationalization and the 1986 privatization in France, after the Thatcher government's privatizations in the U.K., starting in 1979, and the Kohl government's first privatization efforts in Germany, starting in 1983.

confusing—political objectives, when it shows operating losses, very likely over a longer period, and when its political losses and pecuniary losses add up to an amount that outweigh the gains. Important new gains consist in receiving a profit from the sale of the firm, reducing budgetary pressure in the future, using other policy instruments that are cheaper or attract more voters, and blaming firm failure on the political opposition.

Backhaus gave also a first explanation of why there could be waves of nationalizations and privatizations. This is because there might be political economies of scale (p. 323). Once the party decides to privatize or nationalize the political and administrative effort per (identical) firm decreases with the larger quantity of firms considered.

He did not look for a trend toward more or fewer state firms. He gave one small hint when he abstracted from the aim of profit in his two-party model (pp. 311, 314–316, 325): over the last two hundred years state firms have become less and less a means of obtaining government pecuniary revenues. It may be true that over time taxes and transfers have become more important sources of state revenues and expenses. State firms have been increasingly crowded out as means of redistribution, thus implying a trend toward privatization.[8] Backhaus was reluctant to mention a period for an NPC (pp. 309, 323). His model has a lower bound with an electoral cycle but no upper bound. Nevertheless, what should be operational is the general notion that NPCs seem to be correlated to electoral cycles or policy changes.[9]

Empirical support. He did not provide empirical support. But he saw empirical studies, instead of formalizing his model, as the more fruitful way of enhancing knowledge about NPCs.

Evaluation. The Backhaus two-party model is a good benchmark to start from a political economy point of view to explain NPCs. His mechanism of overloading state firms with political objectives can help to explain turning points toward privatization in democracies. Backhaus does not explain nationalization in his model.

His model has the important advantage of being operational. In explaining NPCs by different policies and electoral cycles, it reminds one of the political business cycle theory. The idea of political economies of scale in ownership changes as reason for waves is innovative. Unfortunately, Backhaus's model is only weakly specified in costs to the parties (for example, how much change in objectives puts how much financial burden on the firm, or, how does the

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8 This view is supported by Lösch's (1987, pp. 13–30) short history of German privatization starting with the Middle Ages.

9 Privatization or nationalization in Backhaus's model must not be correlated to a specific party because both parties can pursue all aims. There is also room for incorporating party coalitions.

objective contribute to the probability of being re-elected). His political cycle is an exogenous factor causing NPCs.

c. The Rosa Model (1993)

Intention of the model. At the same time as Backhaus,[10] Rosa developed "a macroeconomic theory of allocation of financial property rights between public and private agents" (p. 326). He was surely influenced by the French mass nationalization in 1982 and mass privatization starting in 1986. Because all this took place with the help of the stock exchange, the model is appropriately constructed. His public choice model is one where the government rationally chooses between different policy instruments.

Cyclical idea. Rosa's basic idea was that state firms are just one means of public finance. The rational self-interested government uses state firms when budgetary gains become larger than budgetary costs, compared with alternative means, as there are, taxes and transfers, state regulation of private firms, or public debt (p. 318). The government starts from a balanced budgetary equilibrium that is not a balanced budget but any budget structure that is stable over some period of time and is thus an political budget equilibrium. Then, exogenously, the benefit-cost ratio for the government changes. For example, state firms become a comparatively cheaper means of raising taxes or supplying transfers than openly collecting taxes and distributing subsidies, and the government nationalizes. It arrives at a new equilibrium until the benefit-cost ratio changes again. The cyclical movement comes into the model when the cost variables change periodically. Although Rosa did not want to explain cyclicity, in a shorter description of his model he wrote: "since all three explanatory variables fluctuate through time, the decision to privatize (or nationalize) can change from time to time" (Rosa, 1992, p. 94).

The cycle. Before explaining the cycle it is helpful to introduce the formal side of the model. The model is based on the fact that government valuation, Vg, of a firm is differently structured than valuation by private individuals, Vp.[11] To express this, Rosa sets the expected returns, Rp and Rg, equal (p. 325, footnote 10) or in a fixed relationship (for example $Rp=1/2\ Rg$) in the initial equilibrium (p. 325), and uses instead different discount factors. The private shareholders have only one discount factor, that is, one finance instrument, namely the interest rate, i, on the capital market for firms debt and equity. The government has two discount factors because it has two finance instruments available. It can raise public debts, D, on the capital market,

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10 Rosa's article is based on several previous versions; the first dates back to 1986.

11 The Rosa model can be seen as a special case of Sappington and Stiglitz's (1987) Fundamental Privatization Theorem, which posits $Vp=Vg$ as an initial equilibrium.

paying the same interest rate, i, as the private shareholders do. And it can raise taxes, T, with the marginal costs of taxation, c, seen by Rosa as the marginal social cost of allocative distortionary taxes. The marginal costs of taxation can also be interpreted as taxpayers political resistance for paying taxes. With this constellation the two players, the government and the private shareholders, meet on the capital market for firms and bid in an auction. In equilibrium, Equation 1 must be satisfied:

$$Vp = \frac{Rp}{i} = \frac{Rg}{\frac{iD}{D+T} + \frac{cT}{D+T}} = Vg\,. \qquad (1)$$

From Equation 1, one can see that in Rosa's model the cost of capital for the government (RHS) differs in a substantial way from the cost of capital for private shareholders (LHS). The government uses a weighted average of public debts, with the cost i, and taxes, with the cost c.

Now, we can consider the conditions under which the government nationalizes or privatizes (Table 2). These conditions apply to turning points when shocks in the explanatory variables occur or to phases of the NPCs when a gradual change of the explanatory variables occurs.

Table 2 — Conditions for Privatization or Nationalization in the Rosa Model.

The government ... when the	nationalizes (Vp<Vg)....	privatizes (Vp>Vg)....	empirical operationalization
interest rate, i,	increases because the cost for the private shareholders increases relatively more than for the government	decreases	nominal interest rate
social or political marginal cost of taxation, c,	decreases because (only) for the government it becomes relatively cheaper to finance the purchase	increases	tax/GNP ratio (the higher the ratio the higher the marginal cost of taxation)
tax share of the state budget, $T/(D+T)$, under the condition $c>i$,	decreases because the cost of the purchase fall (only) for the government	increases	tax share in the state budget

Source: Rosa (1993).

Cyclical features. The cyclical moment can only enter into the model as a result of pendulum movements of the three explanatory variables: interest rates, social or political costs of taxation, and government composition of public finances. There is no need for a cyclical movement, but no barrier, either. Rosa did not consider a trend. He explicitly rejected ideological preferences as the basic explanation for NPCs (p. 319), and thus a likely factor for

showing any trend. Ideological preferences play the role of a "dampening factor" in his model (p. 328). And, he did not mention any time period for an NPC.

His macroeconomic approach attempts to ensure that nationalization or privatization decisions by the government are mass events. This might be the case, but the new idea he brought for explaining waves is that there might be a ranking of firms by governments vulnerable for ownership change. He argued that a government might want to nationalize or privatize firms with market power first (pp. 325, 327) because this gives the largest redistributional impact either on the government budget or on the budget of private individuals. Firms with market power are especially wanted by both types of owners for their monopoly rent.

Empirical support. Rosa's model is the only econometrically tested NPC model (pp. 329–334). He proceeded as follows: First, he operationalized the explanatory variables (see last column in Table 2). Second, he defined the dependent variable *Vg/Vp* as the public-private frontier and used the following proxies: number of employees, level of investment, and value added of state firms as percentage of the economy as a whole. Thus, in his basic regressions, he had three equations—because he had three dependent variables—and, in every equation, three explanatory variables plus a constant. Third, differentials in the extent of percentages are then defined as nationalization (*Vg/Vp* increases) or privatization (*Vg/Vp* decreases). He followed, therefore, the crowding-out definition of NPCs, where all factors of production are either nationalized or privatized.

Rosa used data from nine Western European countries for seven years (see Table A1 in the Appendix). He pooled the data and ran cross-section and time-series regressions on the following equation:

$$\frac{Vg}{Vp} = \beta_0 + \beta_1 \underset{(-)}{\left(\frac{T}{D+T}\right)} + \underset{(+)}{\beta_2 i} + \underset{(-)}{\beta_3 c} + \varepsilon \,. \qquad (2)$$

The signs in the parentheses are the theoretically expected ones. In a first step, he specified his econometrically testable model in order to improve the fit by using, for example, logarithmic forms of variables. In a further step, he introduced country dummies in order to collect country-specific influences not taken into account by the model. They improve the correlation coefficients somewhat. Furthermore, he conjectured that one such country specific-factor that might explain the public-private frontier is openness of the economy and used the country's import-GNP ratio as a proxy for the openness variable. This explanatory variable

turns out to have a significant negative effect on the public-private frontier; that is, the more open the country, the smaller the share of the state firm sector. And in a last step, Rosa used first differences of the variables in order to look at the movement towards the equilibrium. In one specific regression form of the model, the signs still hold.

The basic result of "this first rough test of the theory" (p. 334)[12] is that the signs are mostly right, although often not statistically significant. Rosa could not reject his theory. As a side result, he conjectured that country differences might be explained by the degree of openness because in an open economy there are fewer firms with market power, so that the state is less interested in nationalizing them (p. 331).

While these empirical results are important in their own right, for the purpose of NPC analysis it would be interesting to look for swings of the *Vg/Vp* public-private frontier (as was done above), and of the explanatory variables.

Evaluation. Rosa's two-bidder model is the most formalized and the most specified model suited for explaining NPCs. His first empirical findings seem to support the predictions of the model. The model explains marginal privatizations or nationalizations in democracies with developed capital markets by exogenous factors. It is a rich model, open for further development and directs attention toward governments' budgetary pressures, which, indeed, seems to be one important explanatory factor in NPCs.

Rosa states that his model is open for incorporating changes in ideology or a lower efficiency of state firms compared to private firms. Both could be captured by the *Rp* and *Rg* variables in the numerator of Equation 1 (p. 328). But once this is done, it is no longer clear whether the different costs of capital for buying or selling a firm is the superior explanatory factor in the government's calculation. Other explanations can become superior, even within his model. Another objection to the Rosa model is related to the substitutability of the three basic redistributive instruments: taxes and transfers, regulation, and state ownership. A first necessary condition in his model is that all are perfect substitutes, which is just assumed (p. 322). A second necessary condition is that government investment in state ownership yields a higher return or is less costly than government the investment in other redistributive instruments. For example, instead of buying a firm, the government could invest in the tax and subsidy system by improving tax collection and tailoring subsidies. Or instead of selling a firm, the government could invest in the firm, improve its efficiency and so increase the taxing or subsidizing power of the state firm. The latter objections are supported by the privatization

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12 Rosa did not test for multicollinearity, heteroscedasticity, autocorrelation, non-stationarity or related econometric problems.

condition of decreasing interest rates or increasing tax shares in the state budget. Thus, the government has to evaluate two conditions at the same time, the comparative advantage to private individuals in being an owner and the comparative advantage of state ownership over other policy instruments.

d. The Chua Model (1995)

Intention of the model. Chua examined the privatization and liberalization movement in Latin America and Southeast Asia in the last two decades. His understanding of the history of the two regions led him doubt whether the movement will last for very long. He convincingly showed the many swings of economic policy in the countries of the two regions, swings between pro-nationalization and pro-privatization policies, so showing that there were NPCs. He argued that "the political ideology" of nationalism explains NPCs (p. 266) (see also next section for Chua's review of NPC models). Nationalism is seen either as an policy instrument of elites or leaders to influence people or just as a preference of the people which elites or leaders have to follow. It aims at creating an ethnically homogenous country.

Cyclical idea.[13] A country is divided into two groups, an ethnic majority that pursues political power or has the potential to do so, and an ethnic minority that has a larger share in ownership of firms and land, and being more wealthy. The ethnic minority has greater economic power and is more successful than the ethnic majority. This "disequilibrium" is equilibrated with the help of an ideological nationalism that results in the ethic majority being politically dominant, and, with the help of nationalization, having a larger share in ownership and wealth. But then, nationalism and economic growth vanish. Giving firms to the ethnic minority (privatization) becomes an alternative but at the same time allows the ethnic minority to gain a larger share in ownership and wealth as a result of their entrepreneurial skills. The cycle can start again. The driving force in his model is nationalism, an ideology claiming that the ethnic majority should be equally matched by their political dominance and dominance in the distribution of ownership and wealth. The matching instrument is the state firms.

The cycle. Chua constructed somewhat different mechanisms for NPCs according to regional differences. Table 3 presents in a stylized form the situation before nationalization, the disequlibrium. The economic power is concentrated in the minority groups because they are

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13 "First, the post-colonial nations of the developing world are deeply divided along ethnic and economic lines. Second, free-market policies in these countries have historically resulted in the disproportionate prosperity of particular, ethnically identifiable groups. Third, on behalf of the disadvantaged majorities, ethnically charged—and therefore extremely potent—nationalist movements have repeatedly succeeded in overturning regimes championing private enterprise. The nationalization-privatization cycle cannot be understood without recognizing this fundamental tension between the forces of the marketplace and the forces of ethnic division" (p. 226).

successful and create relatively more economic growth and thus more wealth.[14] The political power is unevenly distributed according to regional differences. In the model these distributions always emerge when there is a pro-privatization policy, be it initially in colonial times or later during independence.

Table 3 — Conditions before Nationalization in the Chua Model.

	Ethnic Majority Group			Ethnic Minority Groups		
Region	who	economic power	political power	who	economic power	political power
Latin America Southeast Asia	domestic citizen	0	½	foreign investors	1	½
Southeast Asia	main ethnic group	0	1	ethnic minorities	1	0
Latin America	social lower and middle class	0	0	elite, oligarchy, aristocracy	1	1

Notes: Foreign investors are ethnic minorities because they are ethnically identifiable. In Latin American countries socially divided groups are at the same time ethnically divided groups due to differences in skin color and not in kinship.

Source: Adapted from Chua (1995).

Nationalization occurs because the majority wants to gain more economic power, in Latin American countries also simultaneously political power, compared to the minority. The power should at least be equally as strong as their majority status due to ethnicity (which might best be measured in number of persons, a population share). As a result of nationalization, the ethnic minorities lose their economic power, and the ethnic majority gains control of ownership and larger shares in existing wealth with the help of state firms.

Privatization comes about in the model as a result of the mixture of two factors (p. 283).[15] First, the idea of nationalism fades because the ethnic majority is no longer as homogenous as initially assumed. The ethic majority starts to divide internally along minor ethnic differences or along religious differences. Here, Chua relaxes the assumption of two groups in his model. Second, the country runs into economic problems because state firms are managed inefficiently and ethnic minorities are restricted in doing business. Both elements lead to a crisis in which privatization seems a feasible alternative.

Cyclical features. Cyclicity is achieved because after privatization the "old" disequilibrium (see Table 3) emerges again (pp. 283–284) and both ethnic groups have learned nothing from the past (pp. 225, 266, 285–286).

14 This fact was much appreciated by Chua for colonial times and post-colonial times before the first nationalizations. For other periods of pro-privatization policies, he did not pay much attention to economic growth.

15 Chua also mentioned corruption and incompetence of a political leadership open to every pressure of an organized interest group. In general, he was very short on the privatization phase of the NPC.

Chua did not see a trend in the NPCs, only a repeated return to the colonial division of political power and ownership/wealth distribution. He instead looked for approaches to break out of NPCs in the phase of privatization (pp. 226, 284–301). He considered three approaches:

- to do nothing, because learning will enable the ethnic majorities to identify pro-privatization policies as the best alternative.
- to "buy out" or favor the ethnic majority or all types of nationalists by placing restrictions on ethic minority ownership or by using all types of re-regulation.
- to change the political rules and institutional structure of the state in order to enhance ethnic diversification in political and economic fields.

Chua rejected the first approach because the majorities had not learned from the past; he advocated the other two approaches. In the second approach, he did not take into account that restrictions and re-regulations might be a substitute for nationalizations and therefore lead to similar discouraging results. And in the third approach, it will be difficult to find the "third political party" that can change the rules and institutions.

Turning points are connected to a mismatch in the distribution of ideology, political power, and ownership and wealth, and to political as well as economic crises. If one abstracts from ethnicity as a dividing characteristic and emphasizes instead income distribution (as Chua often did with Latin American countries), the model means that the more uneven income distribution is, the more likely nationalization occurs and, vice versa, the more income distribution achieves normal shape, the more likely privatization occurs. Once this is said, NPCs would depend on swings in income distribution brought about by ownership redistribution. To explore NPCs in this direction would be worthwhile, because it would generate a more general model.

Empirical support. Chua collected extensive historical data supporting his model for six Latin American countries and eight Southeast Asian countries (Table A2). The data are poor when describing which industry sector or how many firms are nationalized or privatized, or, when indicating shares of the state firm sector in employment or investment before and after nationalization or privatization. The data are rich when describing the length of an pro-privatization or pro-nationalization policy period.

Evaluation. Chua presented a one-country-two-interest-group model of redistribution with the help of an ideology, here nationalism. The interest groups fight on the political market to equalize three areas: ideology and ethnicity, political power, and economic power, that is, shares in ownership and wealth. The means to achieve equalization is to use political power to gain ownership of the firms, and thus to redistribute wealth. His model is strong in explaining nationalization, but weak in explaining privatization. It is directed toward Latin American and

Southeast Asian countries and supported by extensive episodic evidence. Chua systematically provided measures of how to break out of an NPC, although he did not discuss the drawbacks of the various measures he proposed. And, he gave, for the first time, a classification of NPC models.

In explaining the phase of privatization, he either relaxed his model's assumption of a homogenous group or favored the economic explanation that "as discussed earlier, the economic failures of nationalization in developing countries have surely played a dominant role in bringing about a return to free-market policies" (p. 279), although he rejected this economic explanation as being too narrow. He did not explain why nationalization of state firms is a necessary element of nationalism. The identity more nationalism=nationalization and less nationalism=privatization may be false, because nationalism can be served equally well by other means than state ownership. Property and wealth can be redistributed from ethnic minorities to the ethnic majority without the help of state ownership, as Chua showed in Malaysia. He also did not explain why the distribution of political and economic power always goes back to colonial times. And, he only marginally addressed the crucial assumption of his model of why ethnic minorities are always more successful than ethnic majorities in countries with NPCs.[16] Also, his classification of groups is sometimes difficult to sustain, especially in Latin American countries, where he equated skin color with social status. All these difficulties seem to arise because his model is intended to be a "comprehensive model" (p. 262). Implicitly his model points toward income distributional issues and this seems to be the core that might be worth developing in future investigations of NPCs.

2. Basic Explanations for NPCs—Three Hypotheses

Chua (1995, pp. 256–262) was the first who classified models, and thus hypotheses, suited to explaining NPCs for Latin America and Southeast Asia. He distinguished and rejected the following models:

- "the exogenous event model." In this model NPCs are explained by exogenous events in a region, like the Great Depression, World War II, or the collapse of the Soviet Union. While

[16] He cited two theories: first, a theory emphasizing the initial colonial policy of "divide and rule," which could explain the distribution of ownership in the beginning but not the economic success at all times, and, second, a theory of better "social networking" by the minorities, which means discriminating in business against other ethnic groups, which could explain the later successes (pp. 268–269, footnote 364).

Chua rejects the model, his own empirical data show that this might still be a very good explanation, at least for the selected Latin American and Southeast Asian countries.

- "the idealism-selfishness model," that is, the Hirschman model. Chua again rejects the model, but in his empirical examples there have been many "disappointments and involvements" of individuals in Southeast Asian and Latin American countries. The question is only whether the preferences of individuals have been stable or have changed over time in the two regions.
- "the narrow economic model." Chua subsumed under this model the argument that private firms are always more efficient than state firms; therefore privatizations could be well explained but not nationalizations. In Chua's model it is the other way around, and, logically, he used this economic explanation for his privatization phase.
- "the pessimistic-Marxist immiseration model." In this model nationalization takes place because exploited labor revolts against capitalists, and privatization takes place because nationalization does not produce the expected utopian results. Perversely, the state now exploits labor, and capital flight produces an economic crisis. When one exchanges "exploited labor" for "ethnic majority" in Chua's model, then the similarities between the two models become obvious.

Chua classified models arbitrarily because he did not state the criterion of classification. Furthermore, his own model is a pure mix of the other models. In order to come to clear competing hypotheses the following classification might be helpful.

The common feature of all the models surveyed is that NPCs are by their very nature processes of a political economy type. Nationalization or privatization cannot be modeled without modeling the state or the political market. This leads then to the simple view of a demand for and supply of state firms with the state acting as intermediator. With this criterion—the role of the state in intermediating demand for and supply of state firms—three major hypotheses can be distinguished, which will be called the ideological preference hypothesis, the political cycle hypothesis, and the efficiency hypothesis.

The *ideological preference hypothesis* is the natural explanation for nationalizations. The hypothesis says that NPCs depend on the preferences of the individuals for state firms. The Hirschman two-preference model, and to a certain extent Chua's "political ideology of nationalism" explanation, belong to the hypothesis. Thus, independent of which political system is chosen or how the state is structured, individuals tend to favor one mode of ownership. The ideological preference then shows up in nationalization or privatization. The state is neutral in every point in time or stable over a period of time but the preferences of individuals change.

The state is the pure agent of its citizens. The ideological preference hypothesis supports the observation that nationalizations and privatizations have been a worldwide phenomenon. What is critical in the ideological preference hypothesis is to explain the initial formation and the change of preferences toward ideologies. Hirschman, for example, used the assumption that individuals always have inherent two preferences and are repeatedly attracted and disappointed by either preference. There are two problems with this. First, why do individuals never learn from their disappointments? Second, do individuals really often change their ideologies? What seems plausible is to use the ideological preference hypothesis for long-term trend explanations of NPCs. In beginning of the 20th century, there was a large movement toward a socialist-collectivist ideology favoring state firms over private firms (Hayek, 1944), and at the end of the century there is a swing back toward liberal-individualist ideology favoring private firms. What remains open is to explain why that happened and how the ideological changes are translated into ownership changes.

The *political cycle hypothesis* was used after observing relatively short sequences of nationalization and privatizations in some countries, especially France and the United Kingdom in the 1970s and 1980s. The hypothesis says that NPCs depend on the swings in the political market, on political cycles. The reason for the existence of state firms is political, the main reason is income redistribution. Backhaus's two-party model, Rosa's two-policy instrument model, and, again, to a certain extent Chua's two-interest-group model are based on the hypothesis. With this hypothesis the state is modeled as a political market where legislation, government, bureaucracies, jurisdiction, lobbying groups, political parties, etc., all fight for power and survival. Thus, independent of which preferences the individuals may have, the political market brings about nationalization and privatization. Different political arrangements lead, even with the same ideological preferences of the individuals (citizens), to different NPCs. The specificity of the political system is the very reason for explaining NPCs. The political cycle models support the observation that different countries pursued different policies toward ownership changes. The classical case is where the NPC depends proportionally on the electoral cycle in a democracy with two parties, one favoring nationalization, the other favoring privatization. But Backhaus noted that all major parties in modern democracies (at least in Europe in the past decades) used state firms for their political purposes. He also noted that there have been (changing) coalitions of parties, etc. Therefore, the electoral cycle may just be a starting point for explaining NPCs. The problem with the political cycle hypothesis is explaining why the state (or the interest groups in the political market) uses state firms for their political aims. If, for example, redistribution is the main political objective, then taxation and

subsidization may do the same job as state firms are supposed to do. Or, if consumer protection by monopoly regulation is the main political objective, then state regulation of private monopolies may do the same job as state monopolies are supposed to do. The political cycle hypothesis seems plausible for explaining short-term fluctuation in nationalization or privatization and country specific differences. But it is not yet clear what the *specific* benefits and costs of having a state firm are. What is the comparative advantage of a state firm over other policy instruments?

The *efficiency hypothesis* consists of two subhypotheses. The traditional efficiency hypothesis says that private firms are always more efficient than state firms. This is the natural explanation for privatization, it is used by Backhaus and Chua, and it is mentioned by Rosa. If this is accepted,[17] how can the traditional efficiency hypothesis explain nationalization in the first place? It might not explain cycles (if learning is assumed) but it allows at least for one phase of nationalization because the superiority of private firms may be tested at least once in history. This happened at the beginning of the century when many individuals believed (on whatever grounds) that state firms may be superior to private firms (Mises, 1922). Later, the inefficiency of state firms has led to privatization.

The modern efficiency hypothesis says that under certain conditions state firms are more efficient than private firms—seen from the public interest of the state. The hypothesis emerged with principal-agent theory and positive regulation theory (Sappington and Stiglitz, 1987; Schmidt, 1990; Shapiro and Willig, 1990; their models are not reviewed in the paper). The object of analysis typically is regulation with the help of state ownership versus regulation with the help of a regulatory body, as it is often the case with natural monopolies. The main explanatory variables for having one or the other mode of ownership are transaction costs of ownership, especially information costs, and convergence/divergence of the agent's interest from the principal's. For example, the government might lower its information costs by owning the firm instead of having only a regulatory body that has limited access to a private firm's (private) information. Or, the agents in the firms (say, managers) disagree more and more with the "public" interest set by the government via its regulatory body. In order to reach convergence of interests or more information, the government may want to own the firm so that monitoring costs are reduced, which causes nationalization. Rosa and to a lesser extent

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[17] The inefficiency of state firms is typically seen in the losses they produce. But the losses may just be the costs for pursuing one (or more) political aim(s). Only when this is taken into account and the (hypothetical nonpolitical) state firm produces less profit compared to the private firm can it be said the state firm is inefficient. By the same logic, the efficiency of state firms cannot be seen in higher profit margins. These profit margins may be the result of political support. Again, only when the (hypothetical nonpolitical) state firm produces more profit compared to the private firm can it be said to be more efficient. Both considerations, the political disadvantage and the political advantage of state firms, constitute the methodological difficulty in comparing empirically state and private firms.

Backhaus saw state ownership clearly as only one state instrument, but did not explain the specific benefits or costs. The modern efficiency hypothesis tries to fill this gap but has not yet been explored for explaining NPCs. The hypothesis helps to explain differences in the European and the American way of regulating monopolies, and why in war time and armament industries there are more state firms than in peace time or other industries. But if there are NPCs, the hypothesis would have to explain the shifts in transaction costs or changes in interests of either the principal or the agent. The general notion of the modern efficiency hypothesis seems to be that nationalization occurs in war times and in cases when the government has complex and/or rapidly changing aims. That is, whenever the government wants total control over the firm's information or the individual's interest. Hence, the more totalitarian the state, the more state ownership.

The traditional and the modern efficiency hypothesis see the state as a dictator. Thus independent of the preferences of individuals and independent of the political market, the state chooses between private and state firms according to a "public" interest. While in the traditional efficiency hypothesis the state just wants to test whether it can manage firms better, in the modern efficiency hypothesis the state chooses rationally according to its transaction costs. While in the traditional efficiency hypothesis the state only once in history owns firms, in the modern efficiency hypothesis the state owns firms whenever its transaction costs become lower in pursuing its aims.

These three hypotheses—the ideological preference hypothesis, the political cycle hypothesis, and the efficiency hypothesis—seem to be applications of three important paradigms of theories of institutional change—"ideas matter" (North, 1990); "interest groups matter" (Olson, 1965, 1982); and "transaction costs matter" (Williamson, 1975, 1985).[18] All three hypotheses contribute in different ways to explaining NPCs. They do not compete in every case or every phase of NPCs. But it is not yet clear how much explanatory power each hypothesis has. That is the reason, why it might be a good research strategy, first, to use clear competing hypotheses and only later to put them together in a comprehensive model.

Finally, it should be mentioned that a critical point in analyzing every NPC is to explain why there is a second cycle; that is, why there is a second nationalization, when the first failed. The learning behavior of individuals has to be taken into account. Hirschman and Chua denied that individuals learn, which seems implausible. Also, in Rosa's model, it is hard to believe that governments can switch again and again between taxes/transfers and state firms, and that

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18 An early statement of cyclical behavior of the state based on transaction costs can be found in Davis and North (1971, p. 260): "The ebb and flow of governmental economic activity in our history is only partly explainable within our model."

voters will tolerate nationalization and privatization several times, especially of firms with market power. Or, in Backhaus's model, it is also unlikely that governments never learn not to overload state firms with political objectives. Do NPCs only occur when individuals have ownership illusions of state firms and never learn?

IV Conclusion

Nationalization-privatization cycles (NPCs) existed in the 20th century as a worldwide phenomenon and it is worthwhile to explain them.

There is threefold evidence for NPCs: first, for different regions and economic systems, second, for different time periods, and third, for different indicators. Therefore the empirical results so far are encouraging. In a first empirical approach, input and output shares of state firms to the total economy were used as an indicator of NPCs. Shares of state firms in total employment, gross investment, and GDP suggest that there was a phase of nationalization before the 1980s and a phase of privatization thereafter. This observation is based on data for nine Western European countries from 1971 to 1985 and for about 50 developing countries from 1978 to 1991. In a second empirical approach, economic policy types were used as an indicator of NPCs. Economic policies classified as pro-nationalization or pro-privatization policy suggest that there was an NPC (two waves, or four phases) in selected Latin American countries and one nationalization-privatization wave in selected Southeast Asian countries. This observation is based on data for six Latin American and eight Southeast Asian countries from 1900 to 1995. It was shown that NPCs very likely also occurred in the former communist countries in Eastern Europe and the Soviet Union. Thus, while it was possible to determine nationalization-privatization waves (two phases) several times, it was hard to determine cycles.

Theoretical foundations for NPCs are still sparse. Four models were reviewed in detail, implicitly presenting a short history of thought on the subject. The models reviewed are the two-preference model of Hirschman (1982), the two-party model of Backhaus (1989), the two-policy instrument model of Rosa (1993), and the two-interest-group model of Chua (1995). The conclusions of the review is that there are three competing hypotheses capable of explaining NPCs. The hypotheses are distinguished by the way the state is modeled with respect to supply and demand for state firms:

- The ideological preference hypothesis states that individuals have preferences for state or private ownership of firms. The state is neutral and a pure agent of the citizens.
- The political cycle hypothesis states that political and electoral cycles determine NPCs, mainly, because state firms are a means of redistributing income. The state is a political market subject to pressures from all sorts of interest groups.
- The efficiency hypothesis states (in its traditional form) that private ownership is always or (in its modern form) under certain, transaction cost-based, conditions more efficient than state ownership. In the traditional form, an NPC is allowed only once , in the modern form, the state's transactions costs determine NPCs. The state is seen as a dictator.

It is not yet clear which power each hypothesis has in explaining NPCs or episodes of nationalization or privatization. Furthermore, a very critical point in all models and hypotheses is explaining the second nationalization when the first failed. The learning behavior of individuals either has to be taken into account or to be denied, but always to be explained.

These first empirical findings and explanations for NPCs fit the "Age of Schumpeter" (Giersch, 1984, p. 105), where the scientific paradigm is based—among other things—on the fact that "economic life and history show cycles and discontinuities as normal feature." Repeated nationalizations and privatizations, the swing between state and private ownership, is already becoming a subject of study. Other institutions still have to be analyzed for possible pendulum swings. But before extending the cyclical approach to other institutions, it may be a better research strategy, first, to improve the data basis and the theoretical foundations for NPCs, and, second, to answer the important question: Will there be new waves of nationalization?

References

Alchian, Armen A. 1977. *Economic Forces At Work*: Selected Workes by Armen A. Alchian. Indianapolis: Liberty Fund.

Anderson, Terry L., and Paul J. Hill. 1975. "The Evolution of Property Rights: A Study of the American West." *Journal of Law and Economics* 18(1):163–179.

Backhaus, Jürgen G. 1989. "Privatization and Nationalization: A Suggested Approach." *Annals of Public and Cooperative Economics* 60(3):307–328.

Backhaus, Jürgen. 1976a. "Ökonomik der Sozialisierung: Maßstäbe und ihre Anwendung an Hand eines internationalen Vergleichs." In: Gerd Winter (Hrsg.), *Sozialisierung von Unternehmen: Bedingungen und Begründungen*, pp. 25–118. Frankfurt/M., Köln: Europäische Verlagsanstalt.

Backhaus, Jürgen. 1976b. "Bemerkungen zu einer Bibliographie der Sozialisierungstheorie." In: Gerd Winter (Hrsg.), *Sozialisierung von Unternehmen: Bedingungen und Begründungen*, pp. 292–294. Frankfurt/M., Köln: Europäische Verlagsanstalt.

Backhaus, Jürgen. 1980. *Öffentliche Unternehmen. Zum Wirtschaftsrecht, den Funktionen und Rechtsformen öffentlicher Unternehmen*. 2. durchg. u. erw. Auflage. Frankfurt/M.: Haag und Herchen.

Brus, Wlodzimierz. 1986. "1953 to 1956. The 'Thaw' and the 'New Course'." In: Michael C. Kaser (Ed.), *The Economic History of Eastern Europe 1919–1975*, Volume 3: Institutional Change Within a Planned Economy, pp. 40–71. Oxford: Oxford University Press.

Brus, Wlodzimierz, and Kazimierz Laski. 1989. *From Marx to Market: Socialism in Search of an Economic System*. Oxford: Claredon Press.

CEEP. 1987. *CEEP-Jahrbuch 1987*. Die öffentliche Wirtschaft in der Europäischen Gemeinschaft. Deutsche Ausgabe. Brüssel, Berlin: Europäischer Zentralverband der öffentlichen Wirtschaft.

Chua, Amy L. 1995. "The Privatization-Nationalization Cycle: The Link Between Markets and Ethnicity in Developing Countries." *Columbia Law Review* 95(2):223–303.

Davis, Lance E., and Douglass C. North. 1971. *Institutional Change and American Economic Growth*. Cambridge: Cambridge University Press.

Demsetz, Harold. 1967. "Toward a Theory of Property Rights." *American Economic Review* 57(2):347–359.

Field, Barry C. 1989. "The Evolution of Property Rights." *Kyklos* 42(3):319–345.

Frydman, Roman, Andrzej Rapaczynski, and John S. Earle, et al. 1993. *The Privatization Process in Central Europe,* CEU Privatization Reports, vol.1, and *The Privatization Process in Russia, Ukraine and the Baltic States,* CEU Privatization Reports, vol.2. Budapest, London, New York: Central European University Press:

Giersch, Herbert. 1977. *Konjunktur- und Wachstumspolitik in der offenen Wirtschaft.* Allgemeine Wirtschaftspolitik, zweiter Band. Wiesbaden: Gabler.

Giersch, Herbert. 1984. "The Age of Schumpeter." *American Economic Review* 74:103–109.

Glismann, Hans G., Rodemer, Horst, und Frank Wolter. 1980. "Lange Wellen wirtschaftlichen Wachstums: Replik und Weiterführung." Kiel Working Papers No. 74. Kiel Institute of World Economics.

Hayek, Friedrich A. von. 1944. The Road to Serfdom. London: Routlege and Kegan Paul.

Hirschman, Albert O. 1982. *Shifting Involvements: Private Interest and Public Action.* Princeton: Princeton University Press.

Hirschman, Albert O. 1977. *The Passions and the Interests.* Princeton: Princeton University Press.

Hirschman, Albert O. 1970. *Exit, Voice and Loyalty.* Cambridge, Mass.: Harvard University Press.

Kornai, János. 1992. *The Socialist System. The Political Economy of Communism.* Oxford: Claredon Press.

Lösch, Achim von. 1987. *Privatisierung öffentlicher Unternehmen: Ein Überblick über die Argumente.* Schriftenreihe der Gesellschaft für öffentliche Wirtschaft und Gemeinwirtschaft, Heft 23. Baden-Baden: Nomos.

Mises, Ludwig. 1922. *Die Gemeinwirtschaft.* Jena: Fischer.

North, Douglass C. 1990. *Institutions, Institutional Change and Economic Performance.* Cambridge: Cambridge University Press.

Olson, Mancur. 1965. *The Logic of Collective Action: Public Goods and the Theory of Groups.* Harvard: Harvard University Press.

Olson, Mancur. 1982. *The Rise and Decline of Nations: Economic Growth, Stagflation and Social Rigidities.* New Haven, London: Yale University Press.

Rosa, Jean-Jacques. 1992. "Discussant: 'The Political Economy of Privatization' by Jan Winiecki." In: Horst Siebert (ed.), *Privatization: Symposium in Honor of Herbert Giersch*, pp. 91–96. Tübingen: Mohr.

Rosa, Jean-Jacques. 1993. "Nationalization, Privatization, and the Allocation of Financial Property Rights." *Public Choice* 75:317–337.

Sappington, David E.M., and Joseph Stiglitz. 1987. "Privatization, Information, and Incentices." NBER Working Paper No. 2196. Cambridge, Mass.: NBER.

Schmidt, Klaus M. 1990. "The Costs and Benefits of Privatization: An Incomplete Contracts Approach." *Journal of Law, Economics, and Organization*, 1996 (forthcoming).

Shapiro, Carl, and Robert D. Willig. 1990. "Economic Rationales for the Scope of Privatization." In: E. Suleiman and J. Waterbury (eds.), *The Political Economy of Public Sector Reform and Privatization*, pp. 55–87. Boulder: Westview.

Siegmund, Uwe. 1996. "Warum Privatisierung?—Ein dogmenhistorischer Abriß der Privatisierungstheorie." Kiel Working Papers. Kiel Institute of World Economics (forthcoming).

Umbeck, John. 1981. "Might Makes Rights: A Theory of the Formation and Initial Distribution of Property Rights." *Economic Inquiry* 19(1):38–59.

Williamson, Oliver E. 1975. *Markets and Hierarchies: Analysis and Antitrust Implications*. New York: Free Press.

Williamson, Oliver E. 1985. *The Economic Institutions of Capitalism: Firms, Markets, Relational Contracting*. New York: Free Press.

World Bank. 1995. *Bureaucrats in Business. The Economics and Politics of Government Ownership*. Oxford: Oxford University Press.

Appendix

Table A1 — Share of State Firms in Employment, Gross Investment, and Value Added by Region, 1971–91.

		1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Western Europe																						
1	Employment	6,8	–	7,5	–	–	8,7	–	–	10,2	–	–	10,3	–	–	10,4	–	–	–	–	–	–
2	Investment	15,6	–	16,6	–	–	18,5	–	–	18,2	–	–	22,2	–	–	19,7	–	–	–	–	–	–
3	Value Added	9,5	–	10,0	–	–	10,2	–	–	11,6	–	–	12,0	–	–	13,0	–	–	–	–	–	–
Latin America and the Carribean																						
4	Employment	–	–	–	–	–	–	–	3,0	2,9	2,8	2,8	2,7	2,8	2,8	2,7	2,7	2,7	2,3	2,2	2,2	2,8
5	Investment	–	–	–	–	–	–	–	17,5	16,8	15,9	16,8	18,3	19,6	17,7	15,9	16,6	14,5	14,3	13,9	15,2	12,6
6	Value Added	–	–	–	–	–	–	–	8,5	8,9	9,9	8,8	9,1	8,9	9,6	10,0	10,4	10,6	9,7	10,2	10,3	9,8
Africa																						
7	Employment	–	–	–	–	–	–	–	19,1	19,3	19,5	18,9	19,6	20,7	21,9	20,2	19,9	20,8	21,7	22,2	21,7	22,5
8	Investment	–	–	–	–	–	–	–	30,3	30,3	30,9	29,3	28,4	28,2	26,2	28,3	27,0	25,8	23,6	24,2	20,6	25,5
9	Value Added	–	–	–	–	–	–	–	14,0	13,7	14,1	14,3	14,0	14,1	13,7	14,0	13,8	13,6	13,7	14,4	14,3	13,3
Asia																						
10	Employment	–	–	–	–	–	–	–	2,8	2,8	2,9	2,9	3,0	3,0	3,1	3,1	3,1	3,0	2,9	2,9	2,9	2,8
11	Investment	–	–	–	–	–	–	–	24,1	25,0	26,5	26,9	29,5	26,1	25,1	24,2	22,6	23,2	22,4	23,0	23,6	22,2
12	Value Added	–	–	–	–	–	–	–	6,9	7,3	7,7	7,6	7,8	7,8	8,3	9,4	9,4	8,7	8,7	8,8	8,8	8,5
Developing Countries																						
13	Employment	–	–	–	–	–	–	–	9,8	9,9	10,0	9,7	10,0	10,5	11,1	10,3	10,2	10,5	10,8	11,0	10,8	11,0
14	Investment	–	–	–	–	–	–	–	22,6	22,4	22,5	22,6	23,7	23,5	21,8	21,2	20,9	19,7	18,8	18,9	18,7	18,4
15	Value Added	–	–	–	–	–	–	–	10,1	10,2	11,0	10,5	10,5	10,5	10,8	11,3	11,4	11,3	10,9	11,4	11,4	10,7

Notes: In the row(s) ... regional shares are unweighted averages of ...

1,2,3: Nine countries: Belgium, Denmark, France, Germany, Ireland, Italy, Netherlands, Spain, UK.

4: Six countries: Bolivia, Chile, Colombia, Jamaica, Mexico, Peru.

5: Twenty-seven countries: Argentina, Barbados, Belize, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominica, Dominican Republic, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Panama, Paraguay, Peru, St.Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Uruguay, Venezuela.

6: Eighteen countries: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominica, Ecuador, El Salvador, Grenada, Guatemala, Guyana, Honduras, Mexico, Panama, Paraguay, Peru, Uruguay, Venezuela (one country too much).

7: Nine countries: Burundi, Cote d'Ivoire, Egypt, Ghana, Kenya, Malawi, Senegal, Seychelles, Tanzania.
8: Fifteen countries: Botswana, Cote d'Ivoire, Egypt, Ghana, Kenya, Malawi, Mauritania, Morocco, Namibia, Senegal, South Africa, Tanzania, Tunisia, Zaire (one country missing).
9: Fourteen countries: Botswana, Central African Republic, Congo, Egypt, Ghana, Kenya, Malawi, Mauritius, Morocco, Senegal, South Africa, Tanzania, Tunisia, Zambia.
10: Six countries: India, Korea, Philippines, Taiwan, Thailand, Turkey.
11: Thirteen countries: Fiji, India, Indonesia, Korea, Malaysia, Nepal, Pakistan, Papua New Guinea, Philippines, Sri Lanka, Taiwan, Thailand, Turkey.
12: Eight countries: Bangladesh, India, Indonesia, Korea, Pakistan, Philippines, Taiwan, Turkey.
13: Twenty-one countries: Bolivia, Burundi, Chile, Colombia, Cote d'Ivoire, Egypt, Ghana, India, Jamaica, Kenya, Korea, Malawi, Mexico, Peru, Philippines, Senegal, Seychelles, Tanzania, Thailand, Turkey, Taiwan.
14: Fifty-five countries: Argentina, Barbados, Belize, Bolivia, Botswana, Brazil, Burundi, Chile, Colombia, Congo, Cote d'Ivoire, Dominica, Dominican Republic, Ecuador, Egypt, El Salvador, Fiji, Ghana, Grenada, Guatemala, Guyana, Haiti, Honduras, India, Indonesia, Jamaica, Kenya, Korea, Malawi, Malaysia, Mauritania, Mexico, Morocco, Namibia, Nepal, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Senegal, South Africa, Sri Lanka, St.Kitts and Nevis, St.Lucia, St.Vincent and the Grenadines, Taiwan, Tanzania, Thailand, Tunisia, Turkey, Uruguay, Venezuela, Zaire.
15: Forty countries: Argentina, Bangladesh, Bolivia, Botswana, Brazil, Central African Republic, Chile, Colombia, Congo, Costa Rica, Dominica, Ecuador, Egypt, El Salvador, Ghana, Guatemala, Guyana, Honduras, India, Indonesia, Kenya, Korea, Malawi, Mauritius, Mexico, Morocco, Pakistan, Panama, Paraguay, Peru, Philippines, Senegal, South Africa, Taiwan, Tanzania, Tunisia, Turkey, Uruguay, Venezuela, Zambia.

Source: Rosa (1993: Table 1) for Western Europe, World Bank (1995: Tables A.1, A.3, A.5) for other regions.

Table A2 — Pro-Privatization and Pro-Nationalization Policy Periods in Selected Latin American and Southeast Asian Countries, 1900–95.

Pro-... Policy		Privatization		Nationalization		Privatization		Nationalization		Privatization		Nationalization		Privatization		ΣP	ΣN
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Country (a)	Indep.	Period	Y.	Period	Y.	Period	Y.	Period	Y.	Period	Y.	Period	Y.	Period	Y.	Y.	Y.
Latin America (b)																	
Argentina	-	1900–46	46	1946–55	9	1955–62	7	1962–66	4	1966–70	4	1970–76	6	1976–95	19	76	19
Brazil	1889	1900–30	30	1930–45	15	1945–50	5	1950–64	14	1964–67	3	1967–79	12	1979–95	16	54	41
Chile	- -	1900–27	27	1927–58	31	1958–64	6	1964–73	9	1973–95	22	–	–	–	–	55	40
Mexico	1821/1867	1900–10	10	1910–40	30	1940–58	18	1958–83	25	1983–95	12	–	–	–	–	40	55
Peru	-	1900–30	30	1930–48	18	1948–68	20	1968–80	12	1980–95	15	–	–	–	–	65	30
Uruguay	-	1900–03	3	1903–33	30	1933–42	9	1942–58	16	1958–95	37	–	–	–	–	49	46
Average	-	1900–24	24	1924–46	22	1946–57	11	1957–70	13	–	–	–	–	–	–	57	38
Southeast Asia (c)																	
Burma (d)	1949	1900–49	49	1949–73	24	1973–95	22	–	–	–	–	–	–	–	–	71	24
India	1947	1900–47	47	1947–85	38	1985–95	10	–	–	–	–	–	–	–	–	57	38
Indonesia (e)	1949	1900–49	49	1949–65	16	1965–95	30	–	–	–	–	–	–	–	–	79	16
Malaysia	1957	1900–70	70	1970–80	10	1980–95	15	–	–	–	–	–	–	–	–	85	10
Pakistan	1947	1900–71	71	1971–77	6	1977–95	18	–	–	–	–	–	–	–	–	89	6
Philippines	1898/1935	1900–35	35	1935–53	18	1953–72	19	1972–86	14	1986–95	9	–	–	–	–	63	32
Sri Lanka	-	1900–56	56	1956–77	21	1977–95	18	–	–	–	–	–	–	–	–	74	21
Thailand	-	1900–38	38	1938–86	48	1986–95	9	–	–	–	–	–	–	–	–	47	48
Average	-	1900–52	52	1952–77	25	–	–	–	–	–	–	–	–	–	–	71	24

Notes: (a) Y=years. Indep.=year(s) of independence. Chua (1995): Argentina pp. 228–243, Bolivia p. 277, Brazil pp. 240–241, Burma pp. 253–254, Cambodia/China/Cuba/Laos/Vietnam p. 302, Chile pp. 238–240, India p. 254, Indonesia p. 254, Malaysia pp. 244–250, Mexico pp. 228–238, Pakistan pp. 250–251, Peru pp. 238–240, Philippines pp. 255–256, Singapore pp. 244 and 271, Sri Lanka pp. 254–255, Thailand pp. 251–253, Uruguay p. 243. — (b) Argentina difficult to count from Chua. Bolivia (not in the table) 1952 nationalization wave. — (c) Exceptions (not in the table): Singapore since independence 1965 always pro-privatization policy. Cambodia/China/Cuba/Laos/Vietnam since communist regimes always pro-nationalization policy. — (d) Burma 1963–64 large nationalization wave. — (e) Indonesia 1957–58 and 1964–65 large nationalization waves.

Source: Chua (1995); own compilation and calculation.