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Some Theoretical Reasons and Performance Measures**

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# **Privatization in Austria: Some Theoretical Reasons and Performance Measures\***

by

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## **Abstract**

The issues of privatization (and sometimes deregulation) have been reviewed in a large literature on the various aspects of privatization, that has emphasized the potential efficiency gains. Hence, we provide some theoretical reasoning why privatization is useful as well as profitable for an economy and empirically present the extent of privatization in Austria and other European Union countries. In order to assess the impact of privatization in Austria on economic performance, we observe cash flows, the employment performance, and the stock-exchange ratings of the privatized formerly state-owned enterprises.

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## 1. Introduction

Privatization has been a key element of structural policy reforms in most European Union countries including Austria during the last decade. Governments undertaking privatization have pursued a variety of objectives: achieving gains in economic efficiency, given the extensive prevalence of poor economic performance of public enterprises in many countries and limited success with their reform; and improving the fiscal position, particularly in cases where governments have been unwilling or unable to continue to finance deficits in the public enterprise sector. In addition, budgetary-constrained governments facing fiscal pressures have sometimes privatized mainly for the reason to finance fiscal deficits with the privatization proceeds.

The issues of privatization (and sometimes deregulation) have been reviewed in a large literature on the various aspects of privatization that has emphasized the potential efficiency gains.<sup>1</sup> Hence, we provide some theoretical reasoning why privatization is useful as well as profitable for an economy in section 2, and empirically present the extent of privatization in Austria and other European Union countries in section 3. In order to assess the impact of privatization in Austria on economic performance, we observe cash flows, the employment performance and the stock-exchange ratings of the privatized formerly state-owned enterprises in section 4. Section 5 concludes.<sup>2</sup>

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<sup>1</sup> Surveys of the privatization literature are provided in Megginson and Netter (2001), Boes and Schneider (1996), Bartel and Schneider (1991), and a summary for the earlier discussion is given in Borchering, Pommerehne and Schneider (1982).

<sup>2</sup> Since politico-economic aspects relating to income distribution and ideology play an important role in explaining the way, the extent, the speed and the economic effects of privatization, they have to be considered as well. See extensively Belke and Schneider (2004).

## **2. Reasons for privatizing public enterprises**

For at least the last century, economists have employed a positive economic theory to explore the implications of profit maximization by private firms operating in private property contexts. Only since the late 1960's empirical studies have been undertaken dealing with the behavior of publicly operated firms.<sup>3</sup> Since then a large number of studies of a variety of activities of public or private enterprises came up and their main focus is the question of how public firms differ from their private equivalents.

Basically two approaches are employed. The first is the property rights approach. It concentrates on the differences in the ease of capturing the economic surplus of a resource and the rights to direct an asset's use, alter its claims from or transfer its claims among existent and potential owners. In short, this approach explores the differences in incentives between public and private agencies caused by variation in the ability of owners to monitor management and the problems that emerge when the goals of "owners" and their agents, "managers", diverge.<sup>4</sup> Numerous studies have been undertaken, which have tested this proposition and the results that public enterprises are less efficient than private ones, is confirmed in most of them.<sup>5</sup> The second one is called "Public Choice approach" and concentrates on political coalitions and their effect on input usage and reward and/or product characteristics. The Public Choice approach also includes the theory of bureaucracy (Niskanen, 1971, 1975). The public choice approach appears to provide a broader analysis than the property rights one. The public choice approach assumes that

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<sup>3</sup> See, for instance, Borchering, Pommerehne and Schneider (1982), and Boes and Schneider (1996).

<sup>4</sup> The first approach has been developed by Alchian (1961, 1965) and more recently Baron and Myerson (1982), Grossman and Hart (1983) and MasColell, Winston and Green (1995).

<sup>5</sup> Compare the study by Boes and Schneider (1996), Schneider (1997, 2002), Schneider and Hofreither (1990). As these results are so well known, they are not reported here.

politicians, bureaucrats, managers of public enterprises are selfish utility maximizers subject to constraints.<sup>6</sup> In this approach it is assumed, e.g., for a politician that he acts selfish in order to reach his ideological or personal goals under the constraint not to lose the next election. Since to stay in power is the most important constraint (or even sometimes a goal) for a politician, he will also use public utilities for his own selfish goals.

### **3. The amount of privatization in Austria**

#### **3.1 Privatization in small open economies**

If one considers first eleven small open economies in Europe among one is Austria, the results presented in Table 3.1 and in Figure 3.1 emerge.

Table 3.1 shows that the amount of privatization was quite moderate at the beginning of the 90s with the exception of Belgium. The Belgium government privatized public utilities in the year 1993 and got proceeds of 956 millions USD, which are roughly 30% of all privatization proceeds of the small open economies in Table 3.1 and Figure 3.1. The second highest privatization proceeds in this year arise from the Netherlands with 780 millions USD, followed by Portugal, which had a quite ambitious privatization program over the years 1993-1998, with privatization proceeds over 12 billions USD within 1993-1998. A lot of well known public utilities in Portugal have been privatized like the power plant EDP, the highway system BRISA, and cement factories ZINPOR. Also in Austria the privatization proceeds have been quite large. In the year 1998 the Austrian government privatized firms with proceeds of 2.94 billions USD. In Austria the selling of a 25% share of the public telecom was the biggest deal, where proceeds of 2.33 billions USD have been achieved. Starting with rank 7 in 1993, Austria improved its performance in percent of total privatization proceeds in small open economies steadily with a

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<sup>6</sup> Compare Schneider and Frey (1988), Bartel and Schneider (1991) and Pardo and Schneider (1996) and Schneider (2002).

peak in 1997 and at the end of the sample ranges at number three out of eleven small open economies. However, one should not overemphasize this pattern, since also in general the amount of privatization proceeds in small open economies increased over 1993-1998. In the year 1993 it reached the amount of 3.26 billions USD and in the year 1998 20.246 billions USD.

In Figure 3.1, the privatization proceeds of small open economies are shown in relation to GNP. One clearly realizes the dominant position of Portugal over time, followed by the Netherlands and Belgium, which display enormous privatization proceeds in the years 1993 and 1995. In Austria, we have privatization proceeds in percent of GDP over the years which amount to the average of the small open economies under consideration. However, we cannot detect any systematic correlation between the degree of openness of an economy and its privatization intensity. In general, this makes external impacts on the speed and intensity of privatization less plausible.

However, we will show in section 4 that this was not the case for Austria. At most, the (announcement of) the launch of the euro seems to have speeded up the privatization wave in Europe. In general, one realizes that the privatization issue and the proceeds from privatization have been a considerable and policy relevant issue in the 90s also for the small open economies.

### **3.2. Privatization in Austria**

Among those industrialized countries now awaiting further privatization, Austria is a special one characterized by historically strong interventions of government. Large parts of the manufacturing and the electricity sector had been nationalized after World War II, in part to safeguard the country's economic independence after German occupation, and in part in order to finance the resurrection of destroyed large-scale industries. Jointly with public

ownership in telecommunication, transport, and banking this generated one of the largest public sectors in Europe.<sup>7</sup>

Seen on the whole, Austria's economy has been characterized by a relative important state-owned industry, a lack of own capital funds due to the comparatively small company size, and a predominantly bank-based investment system. In 1998, Austria was characterized by 17 percent market capitalization relative to GDP, i.e. an even lower valuation ratio than Italy (30 percent) and Germany (39 percent) (Boutchkova and Megginson, 2000, p. 9, Table III). The globalization and Austria's accession to the EU have revealed the structural problems of this system. Those sectors of the Austrian economy which have been protected from international competition like, above all, telecommunication, energy supply, and food industries had to be integrated in the internal market. As a consequence, restructuring programs have recently been launched focusing on liberalization and privatization of Austria's economy. In addition, joining the European Union represented a structural break for Austria with respect to the incentives to delay necessary deregulation and privatization because it was now much less attractive to use public utilities and industries for re-election purposes.<sup>8</sup>

The Austro-Keynesian era of stabilization policy which lasted from the beginning of 70s to the mid 80s can be viewed as an attempt of "direct employment policy" in the public utilities and the public industrial sector, mainly in the basic (e.g. steel) machinery and chemical industry. In a sense, relatively large budget deficits and a continuously increasing debt-to-GDP ratio have in the past often been excused by pointing at the fight against unemployment. The primary goal of this type of short-term policy in private

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<sup>7</sup> See among others Aiginger (1999). Nowotny (1998), pp. 39 ff., discusses different meanings of 'privatization' more deeply in the context of Austria.

<sup>8</sup> See Clemenz (1999) and Nowotny (1998), pp. 37 ff., on Austrian public enterprises as instruments of economic and social policy as a means of avoiding labor market hysteresis (Theory of Co-operative Economics or "Gemeinwirtschaft").

goods markets was to stabilize employment and real income in the nationalized industry and, by means of the Austria specific inter-industrial relations and the multiplier process, in the private sector as well. To achieve this political target various steps were taken by the public management: the maintenance of the greatest possible level of production in the face of diminishing prices and demand; the greatest possible hoarding of employees even in situations when rationalization measures (dismissals) were required (resulting in unemployment on the job); an over-dimensioned propensity to invest (primarily with regard to the income effect of investment); an expansionist wage and fringe benefits policy with respect to buying power (causing high labor costs); and the financing of the firms' deficits out of the federal budget.

With regard to the social and re-election problems arising from unemployment and low incomes, the direct employment policy in public industrial firms intended to smooth the inevitable adjustment process to the rising requirements of global competitiveness in the long run. Naturally the pursued type of stabilization policy immediately caused substantial effects on the public industrial firms' productivity, thriftiness and profitability, thus reducing international competitiveness and augmenting deficits in the short run (Nowotny, 1982). Nonetheless, production and employment could not be maintained permanently at a high level, because the rationalization measures could not be postponed any longer. Since the mid 80s, the Austro-Keynesian stabilization policy has been increasingly criticized for what concerns its long-term efficacy. Finally, the troubling rise of the financial losses of the state-owned firms in the iron and steel, chemical, machinery, and vehicle industry caused a turn in public opinion and economic policy. The amount of subsidies to public industrial firms covering the deficits and financing investment was limited to a fixed total and to the period until 1989. This change of policy emerged when the government realized that, due to the critique of the opposition, mass media and private entrepreneurs as well as to the people's



fear of tax increases, a majority of voters would not tolerate any longer further subsidies to public industrial firms. In this sense, the repercussion from the voter to the government worked quite well in Austria. Prior to this change of mind politicians had formed coalitions with the management of the relatively big and locally concentrated public firms in order to secure the subsidies which rendered inefficiencies possible and served the local constituency. Moreover there have been powerful shop stewards who were at the same time members of the legislating National Council and therefore succeeded in financing the expansionist enterprise policy out of the federal budget.

From the end of the 80s there was a turn around in the Austrian policy with respect to the public industrial sector and public utilities. Not only quite a considerable privatization took place in the 90s but also these enterprises were much less used for re-election purposes partly due to the fact that - as stressed already above - after joining the European Union and the deregulation of former monopolies into competitive markets it was much less attractive to use the public utilities and industries for re-election purposes. In the 90s the privatization of Austrian state owned industrial firms and state owned utilities has reached over 6 billions USD within the period 1993-1998 (see Belke and Schneider, 2004). These dramatic changes in Austrian policies which gained momentum at the midst of the nineties let some authors even speak of "New Austrian Public Policies" (see, e.g., Clemenz, 1999, p. 1). Although a substantial privatization took place, the privatization potential in Austria is still quite large. In most cases, the Austrian government kept substantial shares of partly privatized enterprises. Considering the federal, the state, and community level and including all public utilities, there is a privatization potential of 45 billion Euro from which the federal government owns 62%, the city or state of Vienna 13%, all other states (e.g. Upper and Lower Austria) 14%, and the communes (without Vienna) 11%. The latest privatization proceeds of the federal government over the years 1999 up to 2001 are presented in Table 3.2.

In the year 1999 a part of the Austrian tobacco (9.4%) has been privatized, which brought 6.8 billions Euro. On 28 February 2000, the Austrian Federal Government authorized the Minister of Finance to issue the privatization mandate to the "Österreichische Industrieholding AG" (OeIAG), the Republic of Austria's holding and privatization agency at the annual general meeting on 17 May 2000. In accordance with the mandate, OeIAG was required to transfer 100% of the following companies or interests in companies to completely new shareholders, strategic partners or the general public: Österreichische Staatsdruckerei GmbH, Dorotheum GmbH, Print Media Austria AG, Flughafen Wien AG, Österreichische Postsparkasse AG, Telekom Austria AG, and Austria Tabak AG.

In carrying out this privatization mandate in the interests of the Austrian people, the OeIAG had to "... obtain the maximum revenue possible, taking into consideration the companies' and Austria's interests" (OeIAG, 2003). It is important to note that the OeIAG depends on the instructions issued by the Republic of Austria. A second phase was envisaged at that time which involves examining the possibility of even further privatization. In the meantime, the OeIAG has already privatized further companies or parts of companies like Österreichische Staatsdruckerei GmbH, Dorotheum GmbH, Flughafen Wien AG (17.4%), Österreichische Postsparkasse AG, Austria Tabak AG, Print Media Austria AG, and Telekom Austria in compliance with the privatization mandate of the Federal Government. In the year 2000 100% of the postal bank has been privatized and the proceeds were 970 million Euros. Also 24% of the state owned Telecom utility has been privatized with the proceeds of 763 million Euros via an initial public offering. In sum in the year 2000 1.742 million Euros of privatization proceeds have been achieved. In the year 2001 41.1% of the Austrian tobacco state owned utility has been privatized, which brought privatization proceeds of 582.2 million Euros. In sum, over the years

1999-2001 2.455 billion Euros privatization proceeds have been achieved. This is quite sizeable and helped the Austrian government to reduce the federal debt. However, some Austria-specific features deserve significantly more attention.<sup>9</sup>

### **3.3 Backlogs of privatization and their elimination by the recent centre-right coalition**

Observers often claim significant backlogs of privatization in Austria. One very intuitive example in this respect is the privatization of the two largest Austrian Banks which became a long-lasting and cumbersome process, if not a tragedy, from 1987 on. The latter was mainly due to political quarrels and arguments of the usual ‘too-big-to-fail’ kind and would by itself justify a separate public choice analysis (Aiginger 1999, pp. 14 ff., Belke 2000a, EIRO 2002).<sup>10</sup> However, privatization gained momentum under Austria's centre-right coalition government which came into power in February 2000, and was mainly intended to help to balance the budget (the so-called Austrian “Nulldefizit” target). We take this episode as evidence in favor of the hypothesis that the democratic repercussions from the voter who fear tax increases if privatization would have been postponed any longer to the government functions in Austria today as well as in the past. Hence, one necessary condition for the emergence of politically motivated ‘privatization’ cycles, as we would like to call it, is still given – especially in this country. Obviously, the new government including the FPÖ has initiated a comprehensive reform process, including extensive privatization. It claims that Austria has successfully privatized the majority of its large manufacturing firms and will continue privatization in order to consolidate the budget. Following the successful sales of the postal savings bank, Oesterreichische

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<sup>9</sup> A further comprehensive and informative source of the history of privatization in Austria is Clemenz (1999), pp. 5ff.

<sup>10</sup> Astonishingly and perhaps due to the specific Austrian phenomenon of politically motivated decision making even in business affairs, neither the unions nor the works council of the Bank Austria opposed to the takeover of the Bank Austria by the Bavarian HypoVereinsbank. See EIRO (2002).

Postsparkasse AG (PSK) to the banking group BAWAG, and of stakes in Vienna airport, Vienna's famous auction house, the Dorotheum, and cigarette manufacturer Austria Tabak to Gallagher Group of the UK, and the privatization of all hospitals in Upper Austria in 2001, further privatization in 2002 was hoped to be successful. The biggest Austrian privatization in history was the sale of Telekom Austria to Telecom Italia for €1.979 billion for a 25% minority holding. A fourth mobile license was recently sold to Germany's Telekom Service GmbH & Co. KG for €98 million.

The correctness of our diagnosis of *significant backlogs* in the Austrian process of privatization is underlined by a recent study which confirms that the German civil law tradition negatively affects the probability of privatization. Bortolotti, Fantini and Siniscalco (2001, p. 30ff.) cannot reject empirically the hypothesis that countries like Austria seem particularly reluctant to privatize as opposed to common law countries. Moreover, Austria was not able to maintain its position in the top group in the current International Employment Ranking by the Bertelsmann Foundation. This gives some additional support to the main hypothesis of this contribution, namely that governments always time privatizations with an eye on their impacts on the performance of the labor market and thus on re-election probabilities. It states that the Austrian economy and the labor market are burdened in particular by high state intervention manifesting itself in abundant government outlays and a still high degree of regulation. However, the new government is endeavoring an extensive trim-down of the state and the administration (Bertelsmann Foundation 2002). In the same vein, the Austrian reform commission ("Ausgabenreformkommission") has tested the performance of the government institutions and has recommended that the state confines itself to certain central tasks.

Finally, the importance of headquarters with high-value services, R&D with higher incomes in their surroundings is emphasized quite often (see, e.g.,

Aiginger in Austrian Parliament, 2000). According to his reasoning, Austria up to now has too few headquarters. With an eye on this deficiency, one of the objectives of the privatization of Voestalpine AG declared during the extraordinary general meeting of the OeIAG on 7 April 2003 has been that the decision-making headquarters of privatized former SOEs are maintained in Austria. Most strikingly and in strict accordance with the partisan view of privatization described later on, the decision-making headquarters of the company to be privatized shall be maintained in Austria if possible through the creation of Austrian core shareholders (OeIAG, 2003).

#### **4. Economic consequences of privatization in Austria**

For Austria, aggregate productivity gains have not primarily come from inter-sectoral resource shifts. The contribution of these shifts between 2-digit SIC sectors to aggregate productivity change is quite small for Austria.<sup>11</sup> Hence, a further promising candidate of explaining movements in the Austrian productivity time series is ownership respectively privatization. Both, the microeconomic and case study data are supportive of the positive effects of privatization over time on growth and employment (see, e.g., Davis et al. 2000, Megginson and Netter, 2001). These results reflect geographical diversity and are representative of a range of privatization experience in developing and transition economies. They hold for the European Union countries, but are less pronounced for transition and developing countries. The microeconomic evidence indicates that private firms are operationally more efficient than those, held by the state, particularly in competitive industries.<sup>12</sup> A strong correlation is also found for European Union countries between privatization and growth. However, and consistent with the growth literature, privatization is

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<sup>11</sup> Carlin et al. (2001), pp. 2ff. document for the case of Austria that between-sector movements accounted for 6.5% of the total between 1991 and 1996, i.e. 1.1 percentage points out of a total increase of 17.4 percentage points. In this sense, Austria is entirely typical of market economies.

<sup>12</sup> This was especially the case in Austria.

likely surveying as a proxy in the regressions for one or more missing variables that may proudly be characterized as a favorable regime change. Public enterprises often seek to maintain employment, and benefit from staff budget constraints. Consequently, there is a concern that privatization may lead to increased unemployment.<sup>13</sup> Also empirical evidence suggests that aggregate unemployment tends to downsize following privatization (although an identification problem might arise with respect to Austria due to the fact that the country's period of main privatization efforts is superimposed by its EU entry).<sup>14</sup> However, particular groups of workers may still be adversely affected. In general, there are good theoretical reasons for privatization and that the proceeds from privatization, if used in a clever fashion in the areas of education, technology, and infrastructure, can increase the welfare of such countries. The main reason is that the classical public good argument still applies for these areas. However, is this generally positive picture also applicable to the Austrian case? What are the economic consequences from the privatization program for the Austrian Economy from 1990 on?

It should first be mentioned that in the same period, i.e. together with the privatization a considerable amount of EU deregulation and liberalization (telecom-, gas-, electricity- and other service (...) markets) initiatives took place. Due to the upcoming of competitive markets in these areas and due to the gained efficiency of the privatized enterprises first considerable price reductions could be observed and second an additional growth of 0.1 – 0.32% per year took place over the period 1996 to 2001.<sup>15</sup> The origin of this additional

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<sup>13</sup> However, employment losses often appear to be widely exaggerated. For instance, the Communist Party of Austria (2003) argues that the number of employed in the Austrian electricity sector since the start of the „liberalization efforts“ has already shrunk from 33 thousands to 22 thousands. If one uses the EU as a benchmark this number will probably be further reduced to 16 thousands.

<sup>14</sup> See extensively Belke and Schneider (2004) on the relationship between the institutional environment of the Austrian economy, e.g., its EU and the EMU entry - and the speed of privatization in Austria.

<sup>15</sup> Own calculations based on an econometrically estimated simulation model.

growth was due to price reductions in the telecom(-25%), gas(-12%), electricity- (-13%)<sup>16</sup> sector resulting in cheaper input factors for the users and increased purchasing power for the consumers. In case of the partly privatized Austrian Telekom, solely the stifled competition and the EU directive to the observed effects on prices and the quality of output. Such an analysis is only to a limited extent possible for the now totally privatized VOEST, a steel mill, which today works in a totally different surrounding, compared to 1985, when it was a 100% public enterprise. Here it does not make much sense to show the figures (e.g. turn over, profit, etc.) of this firm, which in former times disposed of totally different products and a production technology than today. Hence, we refrain from giving current realizations of performance measures and only feel legitimized to convey a rough indicator of performance of Voestalpine Stahl AG for the time span 1993-1997. The operating income rose from a 71 million ATS deficit to 3.2 billion ATS profits in 1997. However, even this impressive increase in performance cannot be attributed to a change in ownership rights in the sense of a statistically corroborated causality relationship (Nowotny, 1998, p. 43).

However, there are additional reasons why one should be very careful and not over-emphasize the above results. One reason is that the choice of firms for privatization has been far from random which might lead to an upward bias, i.e. to better than average performance results from privatization (Carlin et al., 2001, p. 3). Second, the effect of an ownership change might be quite different for different performance measures. Third, there might be additional influences behind the suspected impact of privatization on Austrian economic performance. For instance, reforms of the legal framework with respect to anti-trust laws and competition policy and the abandonment of price regulations took place in Austria within the same period. In Austria, privatization came as a self-enforcing package with more prudent fiscal policies, liberalization and

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<sup>16</sup> Average price reduction period 1996-2001.

deregulation.<sup>17</sup> Hence, the following analysis of the macroeconomic growth and employment contribution of privatization and its impacts on profitability of firms in general has to be conducted with these caveats in mind.

#### **4.1 Labor market impacts**

We start with the discussion of the *(un-) employment impacts* of privatization in Austria, because this seems to be the politically most highlighted aspect of privatization in Austria. For OECD countries, among them Austria, current privatization receipts cannot be rejected empirically to have a significant diminishing effect on the current unemployment rate (implementation, new entry in the market), but a positive effect on the previous period's unemployment rate (announcement, restructuring). A potential explanation for this time pattern might be that when privatization and, thus, restructuring is announced firms feel inclined to operate more efficiently. If, as a next step, privatization is implemented, there is new market entry which increases labor demand and lowers unemployment (Katsoulakos and Likoyanni, 2002). Similar results can be found for instance in Megginson and Netter (2001) and some other studies for developing countries not to be cited here. However we would not like to push our interpretation of the Austrian case much further in view of the fact that the studies cited above do not give, for instance, fixed effects estimations of the idiosyncratic privatization impact in Austria. If the analysis is limited to the employment performance of Austrian firms after privatization, the general picture changes and one cannot reject the hypothesis of no change in employment after privatization. This is at least valid for Austria's early privatizations of Austria Microsystems, Austrian Airlines, Böhler-Uddeholm,

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<sup>17</sup> Nowotny 1998, pp. 41 ff., describes the "Austrian experiment" of privatization more deeply, differentiating with respect to the character and form of privatization in terms of change in ownership, change in regulation, corporatization, liberalization to activities promoting efficiency and competition within the government, and change in competition. Privatization does not necessarily imply a withdrawal of the state from economic policy. The government still has to define the conditions for an efficient activity of enterprises and to meet precautionary measures against market failure, namely measures in the area of competition policy and antitrust law as well as in environmental policy. See Nowotny (1998), p. 46.



Energieversorgung Niederösterreich, Flughafen Wien Schwechat, Flender, Immotrust, OMV, Voestalpine Eisenbahntechnik, Voestalpine Technologie, Voestalpine Stahl and Voith which took place from 1987 to 1995 (Schaffhauser-Linzatti 2003). Moreover, in some cases production capacities were shifted towards foreign countries in the wake of privatization, in the case of Austria especially to Central and Eastern European countries (see e.g., the Semperit AG) which might overlap with the otherwise positive employment impact in Austria and create some empirical identification problems.

However, we should not only focus on the employment and growth impacts of privatization in Austria but also care about the effect of privatization on the development of capital markets. New share listings on the Vienna stock exchange can directly create some net new wealth and a limited number of additional high-skilled jobs, but the main economic benefit from more efficient and liquid capital markets arises from the financing opportunities and monitoring possibilities these markets deliver. Moreover, efficient capital markets foster economic growth and grant individual firms to fund investment opportunities they otherwise would have to forgo (see, e.g., Belke, Fehn and Foster, 2003). Hence, privatization appears valuable in view of whatever direct role it has played in promoting the highly underdeveloped stock market development in Austria (through new share offerings), and for the indirect role it might have had also in Austrian bond market development (Megginson and Netter, 2001, p. 44).

#### **4.2 Impacts on corporate performance**

However, evidence is more ambiguous with respect to the impacts of privatizations *on corporate performance* in general. Some studies point towards the absence of a clear and unambiguous effect of changes in ownership on the economic performance of the affected firms and of the economy in general. Evidence that privatization enhances performance has not in all cases

emerged from the Austrian data. For instance, Schaffhauser-Linzatti (2003) studies the change in operating and financial performance of Austrian firms Austria Microsystems, Austrian Airlines, Böhler-Uddeholm, Energieversorgung Niederösterreich, Flughafen Wien Schwechat, Flender, ImmoTrust, OMV, Voestalpine Eisenbahntechnik, Voestalpine Technologie, Voestalpine Stahl and Voith that were either partly or fully privatized during the period of 1987-1995. Using accounting data prior to and after the privatization, she measures the change in efficiency, profitability, capital structure, investment behavior, and employment (number of employees) for inflation- and business cycle-adjusted data. While *profitability* (i.e., the return on turnover, the return on equity and the return on total capital) and *efficiency* (alternatively measured as sales per employee, return per employee and staff costs per employee) displays a significant change between the period of state ownership and privatization the other measures exhibit no significant change. Hence, she concludes that the Austrian privatization program was not that successful as compared to other international experience. Reasons for these quite unexpected results are the small sample included in this study, the partial instead of total privatization of most of the enterprises and the structure of the management. Here, the number and the persons of the board of directors nearly was kept constant, so there were only few possibilities to install new management techniques and a new leadership of the privatized Austrian firms. Moreover, after privatization there was on average a decrease in salaries of board members by 2.6 percent indicating either a lack of incentives after privatization or too high salaries before privatization.<sup>18</sup> Gugler (1998) aims to add to the knowledge about the effects of privatization on the economic performance of former state-owned enterprises (SOEs) in Austria. He assesses ownership structure (e.g., concentration) and the relative importance of the

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<sup>18</sup> However, Schaffhauser-Linzatti and Dockner (1999) conclude that there was no significant change between the period of state ownership and privatization with respect to efficiency, leverage, investment behavior and output. Instead, they are able to identify a significant change for profitability and employment. See also Clemenz (1999), p. 21.

investor categories banks, the state, families, and domestic and foreign firms on the basis of a sample of 600 of the largest non-financial corporations. Balance sheet data, internal rates of return calculations and regression estimates show that not only ownership concentration, but also the identity of the large controlling shareholder is relevant to efficient governance of corporations. While foreign control increases profitability, particularly state control is detrimental to shareholder wealth maximization (see also Clemenz, 1999, p. 21).

With respect to the *capital market*, it must not be forgotten that the “New Austrian” privatization policy significantly enhanced the role of the Vienna stock exchange itself.<sup>19</sup> This can be highlighted by two measures. First, during the period 1992 to 1997, around 45 percent of the total volume of new issues on the Vienna stock exchange consisted of issues by the OeIAG. Second, shares of privatized enterprises were responsible for 34.5 percent of the turnover on this stock exchange in the year 1997 (Nowotny, 1998, p. 43). Another important question is whether there has been a significant impact of privatization on the performance of the shares. In the years 1993 to 1997, the performance of shares of privatized enterprises was significantly better than the trend increase of the Vienna stock exchange as a whole (Nowotny, 1998, p. 43). The relative importance of share issue privatizations (SIPs) in Austria can be read off from their relative position among Austrian firms in terms of the single firm’s market capitalization as a percentage of the entire national market’s year-end 1999. In Austria, privatized companies are the second most valuable firms (Megginson and Netter 2001, p. 43). Worldwide, large SIPs played a key role in the growth of capital markets almost everywhere, especially because they are generally among the largest firms in national markets. Davidson (1998) investigates 1, 3, 5, and 10-year market adjusted

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<sup>19</sup> See Nowotny (1998), p. 43. Nevertheless, the role of the Vienna stock exchange was still limited until Eastern enlargement of the EU.

returns for these SIPs from five European countries (Austria, France, Italy, Spain, and the UK) through March 1997. After a long period of under-performance, averaging 1-1.5% per year, he concludes that SIPs out-performed European market averages during the previous 12 months.

### **4.3 Impacts on the performance of ATX stocks**

Just for illustration purposes, we now start by focusing on two recent individual examples of Austrian privatization, namely the Vienna Airport and Telekom Austria. At this stage of analysis we dispense with using benchmarks (e.g., the trend of the Vienna stock exchange or the ATX as a whole) and also neglect potentially missing third factors (e.g., an overlap with speculative bubbles). The main question we tackle is whether we are able to observe an increasing profitability of privatized firms, i.e. an increased value of the shares, after privatization at the Vienna stock exchange? This view is certainly not corroborated with respect to Vienna Airport, but it cannot be excluded for Austrian Telekom (see Figures 4.1 and 4.2). Note that the date of complete privatization of Vienna Airport was March 2001. Its starting price at the Vienna stock exchange (closing) was 37.9 Euros, its price in April 2001 rose to 39.1 Euros. In the last two thirds of the sample the trend development of the airport shares was significantly negative. However, a totally different picture emerged from trade in Telekom shares which started in Vienna and New York on November 21, 2000. At the beginning, the 75 percent shareholder OeAIG announced a share price of 123.8 ATS respectively around 9 Euros. However, the price of Telekom shares (closing) fell immediately after the first privatization issue to a price of 6 euros in order to recover again and increase with a positive trend.

In order to arrive at a more systematic picture and to build our conclusions on a more solid basis, we finally compare the change of performance of the 11 (partly) privatized Austrian firms to the change of performance of their

international competitors with in the same industrial sector from December 30, 1994, to November 22, 2000.<sup>20</sup> The performance of Austria's early privatizations (see section 4.1) is measured as a first step as the development of share prices and as a second step as the dividend yield, each time vis-à-vis a benchmark. The results for share prices are displayed in Table 4.1.

Within the sample and expressed in dollars, 7 out of 11 Austrian stocks underperformed the Morgan Stanley international sectoral indices (MSCI). However, this has to be traced back to a significant extent to the strong dollar vis-à-vis the euro. Only 4 out of 11 shares, namely those of Austria Tabak AG, Böhler-Uddeholm AG, VA Stahl AG and the Verbundgesellschaft displayed a better performance than their international counterparts, although in the cases of Austria Tabak and Böhler-Uddeholm only marginally (1 and 7 percent, respectively).<sup>21</sup> The only Austrian stock which experienced a significantly better performance than the index of the metal and steel sector is VA Stahl. Moreover, in only 3 out of the 11 cases of privatized Austrian firms did the shares increase their initial values and, hence, improved their performance (AMS AG, Austria Tabak AG, Verbundgesellschaft).

If one looks at the sectoral disaggregation of the performance revenues from privatization, it becomes obvious that both shares of the steel sector (Böhler-Uddeholm and VA Stahl AG) clearly outperformed the international sectoral index for metals and steel. Just the opposite is valid with respect to the transportation and airlines sector. Here, the AUA and the Vienna Airport AG underperformed their international competitors. In this sense, our results from Figure 4.1 for the Vienna Airport shares are corroborated again.

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<sup>20</sup> However, if quotation starts later than on December 30, 1994, we refer to the first trading day. Telekom Austria is not included in the sample because it was privatized not earlier than after the end of the sample considered here.

<sup>21</sup> The result for Austria Tabak becomes even more ambiguous, if one takes into account that there were rumors of a takeover of the OeIAG shares of Austria Tabak by the German Reemtsma group during the days after November 22<sup>nd</sup>, 2000.

With respect to the utilities and the electrical & gas sector, the picture is mixed for Austria. On the one hand, the international index outperformed the EVN share. On the other hand, the price of the Verbundgesellschaft share experienced the highest price growth (+49 percent) of all 11 Austrian ATX shares considered here and performed better than the international electrical & gas sector benchmark. Hence, privatization in the Austrian metals and steel sector appears to be more efficient than privatization in the transportation and airlines sector. The result with respect to the utilities and the electrical & gas sector is ambiguous.

However, our assessment of the benefits of privatization in Austria changes significantly if the dividend yield is investigated instead of share prices as a measure of profitability of privatization. Table 4.2 summarizes the pattern of dividend yields of early privatized Austrian firms in the first year after going public (or if shares were issued after June 30, in the following year). This table reveals that in the first year of comparison, only 2 out of 11 Austrian firms really gain a higher dividend yield than their European competitors.<sup>22</sup> Only the Austrian Tabak AG (+3.83 percent) and the VA Tech AG (+2.18 percent) earned higher dividend yields than their most important European counterparts. In the following, we show that the pessimistic result change if we focus on a more recent business year. Here, the profitability gains of privatization seem to have materialized to a larger extent. Hence, we would conclude that there is a time-to-build effect at work. Table 4.3 displays a systematic comparison of the Austrian dividend yields from the business year 1999 with those of their international competitors. According to this analysis, the dividend yields of 6 out of 11 Austrian firms (Austria Tabak AG, Bank Austria AG, Böhler-Uddeholm AG, OMV AG, VA Stahl AG, VA Tech AG) outperformed those of

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<sup>22</sup> In the year 1994, ST Microelectronics SA did not exist and the Scottish Power PLC was not founded earlier than 1991. Hence, we do not attach too much importance to the results for AMS AG and the Verbundgesellschaft in Table 4.2.

their international competitors. This extraordinary performance made Austrian shares of privatized firms of course more attractive to investors.

For four Austrian companies (Bank Austria AG, Böhler-Uddeholm AG, OMV AG, and VA Stahl AG), a clear time trend towards higher dividend yields emerges. As it was already the case in our comparison of the relative share price performances of Austrian firms (Table 4.1), a clear sectoral pattern again emerges. While dividend yields both shares of the Austrian metals and steel sector (Böhler-Uddeholm and VA Stahl AG) were lower in the first year of comparison and higher in 1999 than the yields of their international competitors. In contrast to this, the firms from the Austrian transportation and airlines sector gained lower dividend yields in both cases (AUA and the Vienna Airport AG). With respect to the utilities and the electrical & gas sector, the picture is again mixed for Austria. While the Verbundgesellschaft reaches a higher dividend yield at least in the first year of comparison than its main UK competitor, the dividend yield of EVN AG was in both years of comparison lower than that of the German RWE AG.

Seen on the whole, we would cautiously conclude that both the performance and also the dividend yield measures point to the same result. Especially the Austrian metals and steel industry gained profitability by privatization, while this seems not to be the case for the Austrian transportation and airlines sector. According to Figure 4.2, the same positive assessment might be valid with respect to Telekom Austria. With respect to the Austrian utilities and the electrical and gas sector, evidence is ambiguous. Since the dividend yields of the 11 privatized Austrian firms in 1999 outperformed those of their international competitors, the underperformance of the shares of these 11 ATX quotations cannot be explained by lower dividend yields. What else might be the reason for the observed underperformance of privatized Austrian firms? First, the Austrian capital market seems to be quite weak due to the fact that the

Vienna stock exchange is still small. Second, state ownership of (partly) privatized Austrian firms is still rather high. Third, one further important stylized fact about Austria is that the role of this country's financial market has remained marginalized up to now. Hence, the varieties of possibilities to sale public assets as a constitutional element of privatization are severely limited (EIRO 2002). Finally, by selling under-priced shares in the domestic retail market the Austrian government might intend to attract the median voter, shape a constituency interested in the maximization of the value of financial assets and averse to redistribution policies to the left (Perotti (1995) and Biais and Perotti (2002)).<sup>23</sup> In fact, for Austria there is first evidence that the mean underpricing of initial public offerings of former SOEs is 6.5 percent for the period 1984 to 1999 which was dominated by government participation of the ÖVP and a sample of 76 cases (Aussenegg, 1997).

From this point of view, especially in Austria there is clear evidence of strategic privatization as a rational strategy to raise the probability of success of market-oriented coalitions at future elections.<sup>24</sup> Let us now finally turn briefly to potential impacts of privatization on the public sector fiscal stance.

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<sup>23</sup> Biais and Perotti (2002) show that privatizing governments that cannot commit to absentism are still able to reduce investors' perceived probability of future interference by allocating underpriced shares to median class voters. Hence, the number of shares of the SOE initially sold and the associated underpricing will increase with the degree of income inequality of the privatizing country.

<sup>24</sup> However, also left-wing governments embark on privatization but mostly when fiscal conditions deteriorate (see, e.g., Italy). See Bortolotti and Pinotti (2003) and Jones et al. (1999). Aussenegg (2000) compares the characteristics and the price behavior of case-by-case privatization initial public offerings and private sector initial public offerings in Poland over the first nine years after the reopening of the Warsaw Stock Exchange in April 1991. He finds evidence that the Polish government is market-oriented, trying to build up reputation for its privatization policy over time by underpricing, selling a high fraction at the initial offer and underpricing more when selling to domestic retail investors.



#### **4.4 Impacts on the public sector fiscal stance**

Although the redemption of public debt itself is no sensible purpose of privatization<sup>25</sup>, we finally address the fiscal effects/impacts of privatization on public budget deficits and on public debt. The reason is that exactly the budgetary impacts seem to be important incentives for Austria's more recent strive for privatization. Katsoulakos and Likoyanni (2002) conduct an econometric analysis applying country level panel data of 23 OECD countries, among them Austria, for the period 1990 to 2000, analyzing the impact of privatization on the public deficit and the impact on public debt. They are able to show that privatization receipts are not significantly correlated with budget deficits for the whole OECD sample, Austria included. They also identify a statistically significant and negative relation between privatization receipts and public debt for the whole OECD sample which again includes Austria. However, any sound assessment of budget impacts of privatization in Austria should consider that especially in this country a higher number of sales is not at all correlated with higher proceeds (Bortolotti, Fantini and Siniscalco, 2001, p 21, see also Belke and Schneider, 2004, section 4).

### **5. Summary and conclusions**

Privatization has certainly been a key-element of structural reform in the European Union countries including Austria and proceeds from privatization have been substantial in most of these countries. Gross receipts that can be transferred to the budget are affected by actions prior to sale, the sales process and the post-privatization regime. An evaluation of the potential uses of privatization receipts or proceeds should reflect the implications for government net worth and their macroeconomic impact. In so far as government net worth is concerned, proceeds from privatization do not often themselves indicate that the government is better off. Privatization has longer

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<sup>25</sup> See Clemenz in Austrian Parliament (2000).

term implications in terms of revenues forgone and/or expenditures that will not be made in the future and government decisions on the use of proceeds should reflect this inter-temporal effect. Government net worth will rise to the extent that private sector ownership leads to an increase in efficiency and the government shares in this gain.

The macroeconomic effects of privatization depend, in part, on whether receipts/proceeds are from domestic or foreign sources, the degree of capital mobility and the exchange regime. Broadly the effects of a decrease in the deficit financed by privatization receipts would be similar to those resulting from a debt financed fiscal expansion. Both the economic recovery and privatizations lead to receipts which can be used to lower the deficit. The use of proceeds to reduce external debt provides for an automatic sterilization of what may be substantial capital inflows associated with privatization. The reduction of domestic debt may impact domestic stability. Redemption and interest payments become lower by collecting privatization receipts. Hence, privatization takes some of the strain off the budget and the capital market by lower interest rates. This in turn increases efficiency which tends to improve prospects for the labor market as well after some restructuring period.

Seen on the whole, this contribution has shown that there are good reasons for privatization in general although this strategy raises some opportunity costs and that the privatization proceeds are able under certain circumstances to enhance the welfare of these countries. With regard to Austria we are skeptical about whether Austria's privatization potential has been exploited up to now and whether the speed of privatization, although quite sizeable, has really been sufficient. However, future prospects for quick and full privatization in Austria are rather gloomy although economic theory (Alchian and others) and also empirical evidence suggest that only full privatization as opposed to an only partial one is successful with respect to a better economic performance in the

long run (Boardman and Vining, 1989, 1991). However, as long as politicians interfere with this process, there will be no straight development towards full privatization. This assessment is all the more valid with an eye on the Austrian habit to appoint former members of the Austrian government as CEOs at the Austrian privatization agency OEIAG and the state is still determined to keep a strategic stake in the latter. According to the statute of the Österreichische Industrieholding AG, “ ... Austrian interests must be protected as follows: ... the creation and maintenance of secure jobs in Austria, ... maintenance of the decision-making headquarters of the company to be privatized in Austria...” (Österreichische Industrieholding AG, 2003). However, one glimmer of hope currently is that Austrian Finance Minister Karl-Heinz Grasser did not stop to reiterate in December 2003 that the state will sell its entire remaining stake in Telekom Austria, despite some calls to keep a blocking minority. The state privatization agency OeIAG, charged by the government with selling off most of Austria's industrial holdings, holds 47 percent of Telekom and is now charged by the centre-right government with selling it by late 2006. This seems to be extremely important since otherwise a continued holding would only slow down Telekom Austria in adapting to a fast moving telecoms market.

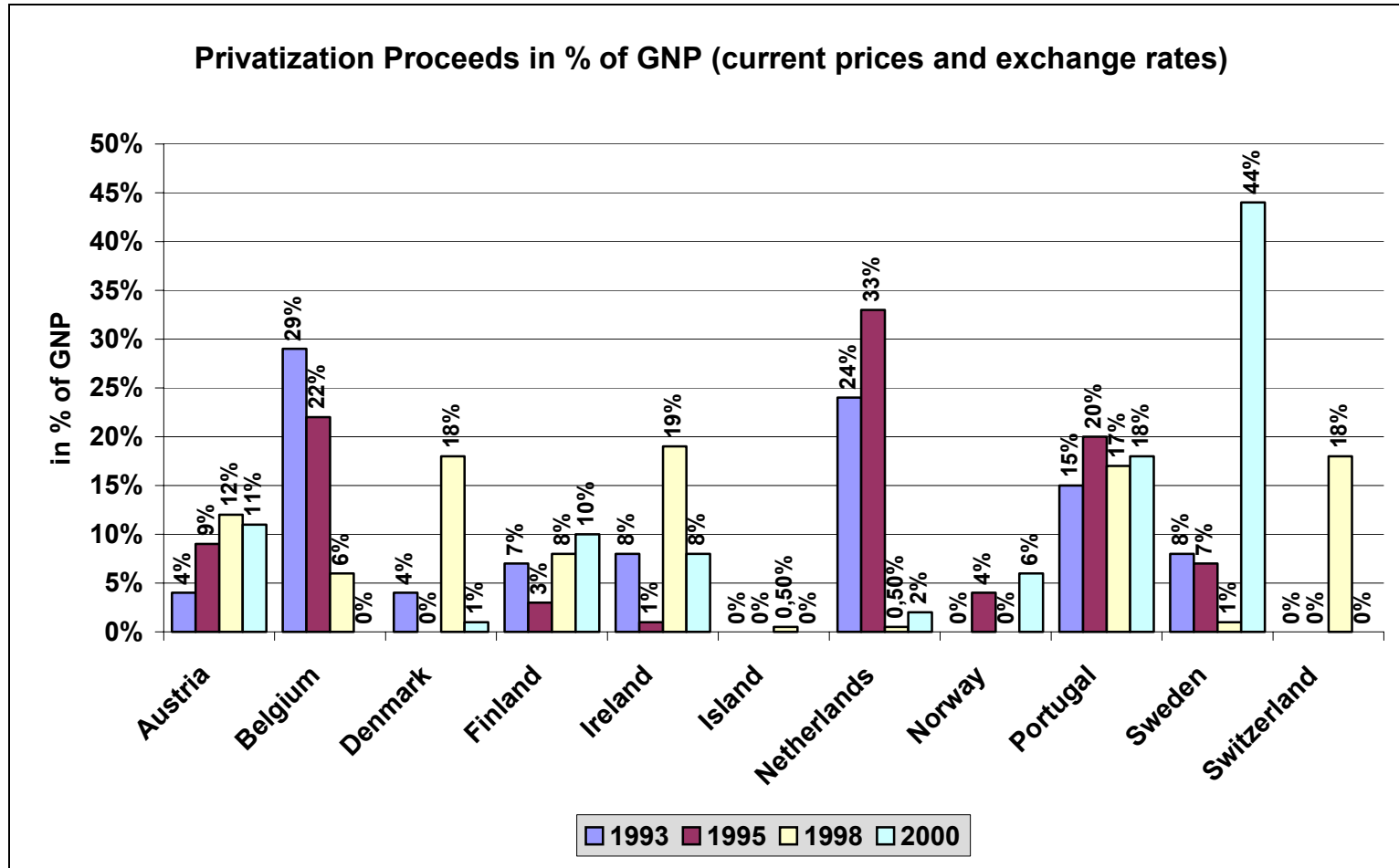
**Table 3.1: Privatization proceeds in small open economies in the years 1993, 1995, 1997, 1998 and 2000**

Country	Privatization proceeds in small open economies														
	1993			1995			1997			1998			2000		
	\$ Million	in % of Total	Rank	\$ Million	in % of Total	Rank	\$ Million	in % of Total	Rank	\$ Million	in % of Total	Rank	\$ Million	in % of Total	Rank
Austria	142	4%	7	1.035	9%	4	2.020	17%	2	2.935	12%	5	2.083	11%	3
Belgium	956	29%	1	2.681	22%	2	1.562	13%	3	1.467	6%	7	-	-	-
Denmark	122	4%	8	10	0%	9	45	0,5%	8	4.502	18%	2	111	1%	8
Finland	229	7%	6	363	3%	7	835	7%	5	1.999	8%	6	1.827	10%	4
Ireland	274	8%	4	157	1%	8	293	3%	7	4.864	19%	1	1.458	8%	5
Island	10	0%	9	6	0%	10	4	0%	10	129	0,5%	10	-	-	-
Netherlands	780	24%	2	3.993	33%	1	831	7%	6	335	0,5%	9	310	2%	7
Norway	-	-	-	521	4%	6	35	0,5%	9	28	0%	11	1.039	6%	6
Portugal	500	15%	3	2.425	20%	3	4.968	43%	1	4.271	17%	4	3.256	18%	2
Sweden	252	8%	5	852	7%	5	1.055	9%	4	172	1%	8	8.082	44%	1
Switzerland	-	-	-	-	-	-	-	-	-	4.426	18%	3	-	-	-
<b>Total</b>	<b>3,265</b>	<b>100%</b>		<b>12,043</b>	<b>100%</b>		<b>11,648</b>	<b>100%</b>		<b>25,128</b>	<b>100%</b>		<b>18,166</b>	<b>100%</b>	

- = Null or insignificant

Source: Own calculations with the help of Belke and Schneider (2004), Table 3.2.

Figure 3.1: Privatization proceeds in percent of GNP in small open economies in the years 1993, 1995, 1998 and 2000

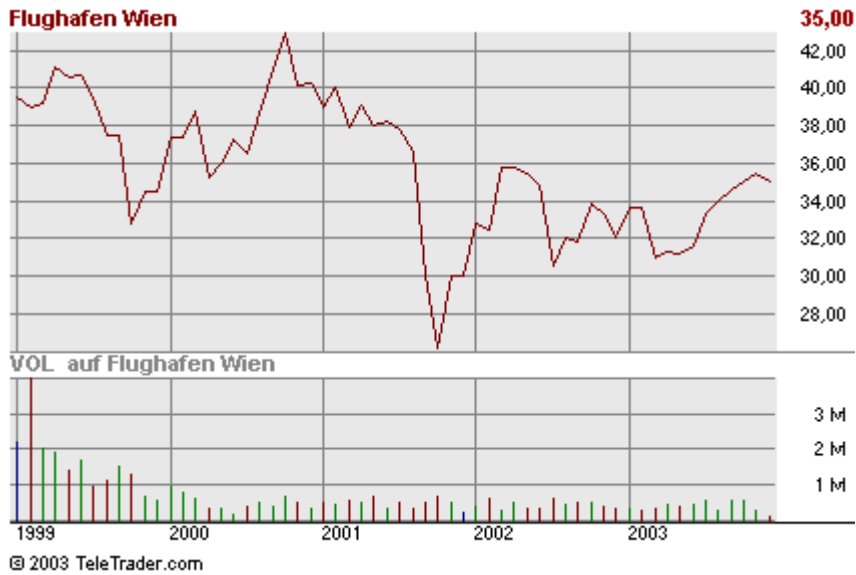


**Table 3.2: Latest privatization proceeds in Austria (Federal government) over 1999-2001**

<b>Year</b>	<b>Public Enterprise</b>	<b>Proceeds (Mio. Euro)</b>
1999:	Privatization of 9,4% of the Austrian Tabacco AG	6.8 Mio. Euro
2000:	100% PSK (Postal Bank)	969.5 Mio. Euro
	24.4% Telecom (to Telecom Italia)	763.8 Mio. Euro
	100% State Printing Office	2.2 Mio. Euro
		<b>1,742.3 Mio. Euro</b>
2001:	17.38% Airport Vienna AG	54.1 Mio. Euro
	41.1% Austrian Tabacco AG	582.2 Mio. Euro
	100% Dorotheum	55.6 Mio. Euro
	100% Strohal Rotary Printing	21.1 Mio. Euro
		<b>713.0 Mio. Euro</b>
<b>Sum</b>	<b>1999-2001</b>	<b>2,455.3 Mio. Euro</b>

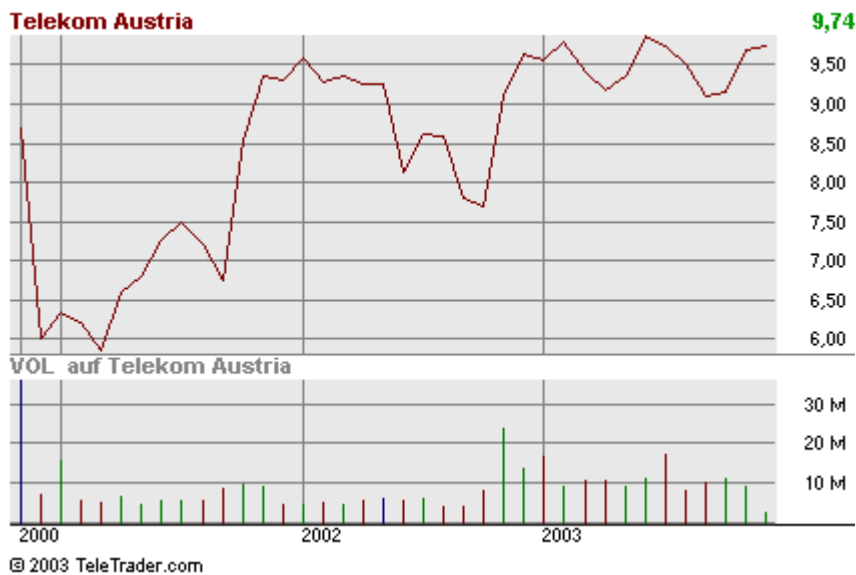
Source: Ministry of Economic Affairs (2002).

**Fig. 4.1: Performance of shares of Vienna Airport at the Vienna Stock Exchange**



Source: Vienna Stock Exchange (2003). VOL means trade volume.

**Fig.4.2: Performance of shares of Telekom Austria at the Vienna Stock Exchange**



Source: Vienna Stock Exchange (2003). VOL means trade volume.

**Table 4.1: Performance of privatized ATX-quotations**

<b>Austrian stocks</b>	<i>Change of performance</i>	<b>MSCI index</b>	<i>Change of performance</i>	<i>Comparison of performance</i>
AMS AG	+ 20 %	Electrical & Electronics	+ 411 %	-
AUA	- 44 %	Transportation - Airlines	+ 35%	-
Austria Tabak AG	+ 2 %	Beverages & Tobacco	+ 1 %	-
Bank Austria AG	- 36 %	Banking	+ 39 %	-
Böhler-Uddeholm AG	- 46 %	Metals – Steel	+ 34 %	-
EVN AG	- 31 %	Utilities-Electrical-gas	+ 34 %	-
Flughafen Wien AG	- 12 %	Transportation-Airlines	+35 %	-
OMV AG	- 14 %	Energy Sources	+ 99 %	-
VA Stahl AG	- 19 %	Metals – Steel	- 49 %	-
VA Tech AG	- 68 %	Machinery & Engineering	- 22 %	-
Verbundgesellschaft	+49 %	Utilities & Gas	+ 34 %	

Source: Sachsenhofer (2000), pp. 108ff. +: Performance of Austrian stocks is better than the Morgan Stanley MSCI industrial sector index (MSCI), Web: <http://www.msdata.com>. -: Performance of Austrian stocks is worse than the Morgan Stanley MSCI industrial sector index (MSCI). Performance is measured as the development of share prices.



**Table 4.2: Dividend yields gained by privatized ATX-quotations (first year of comparison)**

<b>Austrian firm</b>	<i>Dividend yield</i>	<b>European competitor</b>	<i>Dividend yield</i>	<i>Comparison of dividend yields</i>
AMS AG	1.46 %	ST Microelectronics SA	0 %	+
AUA	3.09 %	British Airways PLC	4.93 %	-
Austria Tabak AG	3.83 %	Altadis SA	2.49 %	+
Bank Austria AG	0.87 %	Deutsche Bank AG	2.32 %	-
Böhler-Uddeholm AG	3.25 %	ThyssenKrupp AG	5.18 %	-
EVN AG	2.12	RWE AG	3.14 %	-
Flughafen Wien AG	1.81 %	British Airports Authority PLC.	2.56 %	-
OMV AG	3.98 %	Royal Dutch Petroleum Co.	6.23 %	-
VA Stahl AG	3.11	Usinor SA	5.96 %	-
VA Tech AG	2.18 %	Asca Brown Boven Ltd.	1.77 %	+
Verbundgesellschaft	5.25 %	Scottish PowerPLC.	0 %	+

Source: Sachsenhofer (2000), pp. 110ff. +: Dividend yield of Austrian firm is higher than that of the international competitor. -: Dividend yield of Austrian firm is lower than that of the European competitor.

**Table 4.3: Dividend yields gained by privatized ATX-quotations (1999)**

<b>Austrian firm</b>	<i>Dividend yield</i>	<b>European competitor</b>	<i>Dividend yield</i>	<i>Comparison of dividend yields</i>
AMS AG	0 %	ST Microelectronics SA	0.05 %	-
AUA	2.71 %	British Airways PLC.	6.03 %	-
Austria Tabak AG	4.38 %	Altadis SA	3.52 %	+
Bank Austria AG	1.82 %	Deutsche Bank AG	1.37 %	+
Böhler-Uddeholm AG	4.37 %	ThyssenKrupp AG	3.83 %	+
EVN AG	1.82 %	RWE AG	3.19 %	-
Flughafen Wien AG	4.64 %	British Airports Authority PLC.	4.77 %	-
OMV AG	2.49 %	Royal Dutch Petroleum Co.	2.48 %	+
VA Stahl AG	3.69 %	Usinor SA	3.60 %	+
VA Tech AG	1.83 %	Asea Brown Boven Ltd.	1.54 %	
Verbundgesellschaft	0.83 %	Scottish Power PLC.	5.43 %	-

Source: Sachsenhofer (2000), pp. 110ff. +: Dividend yield of Austrian firm is higher than that of the international competitor. -: Dividend yield of Austrian firm is lower than that of the European competitor.

## References

- Aiginger, Karl (1999), The Privatization Experiment in Austria, in: *Austrian Economic Quarterly*, 4/1999, pp. 261-270.
- Alchian, Armen A. (1961), Some Economics of Property Rights, *Rand Corporation*, Santa Monica.
- Alchian, Armen A. (1965), Some Economics of Property Rights, *Il Politico* 30/4, pp. 816-829.
- Aussenegg, Wolfgang (1997), Short and Long-Run Performance of Initial Public Offerings in the Austrian Stock Market, *Working Paper no. 24, Austrian Working Group on Banking and Finance*, August, Vienna.
- Aussenegg, Wolfgang (2000), Privatization versus Private Sector Initial Public Offerings in Poland in: *Multinational Finance Journal*, Vol. 4, pp. 69-99.
- Austrian Parliament (2000), *Parlament Industrieausschuss, Parlamentskorrespondenz/02/13.04.2000/Nr. 199*, Vienna.
- Baron, M. and P. Myerson (1982), Regulating a Monopolist with Unknown Costs, in: *Econometrica*, Vol. 50, pp. 911-930.
- Bartel, Rainer and Friedrich Schneider (1991), The “Mess” of Public Industrial Production in Austria: A Typical Case of Public Sector Inefficiency?, *Public Choice* Vol. 68/1, pp. 17-40.
- Belke, A. (2000a), Too Big to Fail: Bankenkonkurs und Wählerstimmenkalkül, in: von Delhaes, D., Hartwig, K.-H., Vollmer, U. (Hrsg.), *Monetäre Institutionenökonomik, Schriften zu Ordnungsfragen der Wirtschaft*, Band 67, Lucius & Lucius, Stuttgart, pp. 261 - 297.
- Belke, Ansgar, Schneider, Friedrich (2004), Privatization in Austria: Some Theoretical Reasons and First Results About the Privatization Proceeds, *CESifo Working Paper No. 1123*, Munich, January.
- Belke, Ansgar, Fehn, Rainer and Neil Foster (2003), Venture Capital Investment and Labor Market Performance - A Panel Data Analysis, forthcoming in: Keuschnigg, Christian, Kannianen, Veas (Hrsg.), *Venture Capital, Entrepreneurship and Public Policy*, CESifo, MIT Press, Cambridge/MA.
- Bertelsmann Foundation (Ed., 2002), International Employment Ranking, Guetersloh/Germany.
- Biais, Bruno and Enrico Perotti (2002), Machiavellian Privatization, in: *American Economic Review*, Vol. 92, pp. 240-258.
- Boardman, Anthony E., and Aidan R. Vining (1989), Ownership and Performance in Competitive Environments: A Comparison of the Performance of Private, Mixed and State-Owned Enterprises, in *Journal of Law and Economics*, Vol. 32, pp. 1-33.
- Boardman, Anthony E., and Aidan R. Vining (1991), The Behavior of Mixed Enterprises, in: *Research in Law and Economics*, Vol. 14, pp. 223-250.
- Boes, Dieter and Friedrich Schneider (1996), Private Public Partnership: Gemeinschaftsunternehmen zwischen privaten und der oeffentlichen Hand, *Zeitschrift fuer Unternehmens- und Gesellschaftsrecht*, pp. 519-543.

- Borcherding, Thomas, Werner W. Pommerehne and Friedrich Schneider (1982), Comparing the Efficiency of Private and Public Production: The Evidence from 5 Countries, *Zeitschrift fuer Nationaloekonomie/Journal of Economics* 89 (Supplement 2), pp. 127-156.
- Bortolotti, Bernardo, Domenico Siniscalco and Marcella Fantini (2000), Privatisation and Institutions: A Cross Country Analysis, *CESifo Working Paper Series 375*, CESifo, Munich.
- Bortolotti, Bernardo, Pinotti, Paolo (2003), The Political Economy of Privatization, *Nota di Lavoro 45.2003*, Fondazione Eni Enrico Mattei, Venice.
- Bortolotti, Bernardo, Fantini, Marcella and Domenico Siniscalco (2001), Privatisation Around the World – New Evidence from Panel Data, *Nota di Lavoro 77.2001*, Fondazione Eni Enrico Mattei, Venice.
- Boutchkova, Maria K., and William L. Megginson (2000), Privatization and the Rise of Global Capital Markets, in: *Financial Management*, Vol. 29, pp. 31-76.
- Carlin, Wendy, Fries, Steven, Schaffer, Mark E., and Paul Seabright (2001): Competition and Enterprise Performance in Transition Economies: Evidence from a Cross-country Survey, *CEPR Discussion Paper no. 2840*, Centre for Economic Policy Research, London.
- Clemenz, Gerhard (1999): Privatization, Liberalization and Deregulation – The Austrian Experience, *Paper presented at the ISNIE-Conference 1999, Session: Public Policies and Industrial Structures*, Washington/DC, September 17-19, 1999.
- Communist Party of Austria (2003), E-Wirtschaft in globaler Kapitalhand, *Web: <http://www.kpoe.at/bund/archiv/antiprivatisierung/ewirtschaft.htm>*.
- Davidson, Richard (1998), Market Analysis: Underperformance Over?, *Privatisation International Yearbook*, London: IFR Publishing.
- Davis, Jeffrey, Ossowski, Rolando, Richardson, Thomas, and Steven Barnett (2000), Fiscal and Macroeconomic Impact of Privatization, *IMF Occasional Paper 194*, Washington/DC.
- EIRO (2002), Comparative Study Questionnaire on ‘Industrial Restructuring: the Impact of Variations in Forms of Corporate Governance’, European Industrial Relations Observatory, Ireland, Web: <http://www.eiro.eufound.ie/2002/09/word/AT0207203S.doc>, accessed January 15, 2003.
- Grossman, S. and O. Hart (1983), An Analysis of the Principal-Agent Problem, in: *Econometrica*, Vol. 51, pp. 7-45.
- Gugler, Klaus (1998), Corporate Ownership Structure in Austria, in: *Empirica*, Vol. 25, pp. 285-307.
- Jones, Steven L., Megginson, William L., Nash, Robert C. and Jeffrey M. Netter (1999), Share Issue Privatizations as Financial Means to Political and Economic Ends, in: *Journal of Financial Economics*, Vol. 53, pp. 217-253.

- Katsoulakos, Yannis, Likoyanni, Elissavet (2002), Fiscal and Other Macroeconomic Effects of Privatization, *Nota di Lavoro 113.2002*, Fondazione Eni Enrico Mattei, Venice.
- Meggison, William L., and Jeffrey M. Netter (2001), From State to Market – A Survey of Empirical Studies on Privatization, in: *Journal of Economic Literature*, Vol. 39, pp. 321-389.
- Ministry of Economic Affairs* (2000), Latest Privatization Proceeds in Austria (Federal Government), Vienna.
- Nationalrat der Republik Österreich (1996), *Stenographisches Protokoll der 41. Sitzung des Nationalrates der Republik Österreich, XX. Gesetzgebungsperiode, Donnerstag, 3. Oktober 1996*, Wien.
- Niskanen, W.A. (1971), Bureaucracy and Representative Government, Chicago and New York, *Chicago University Press*.
- Niskanen, W.A. (1975), Bureaucrats and Politicians, *Journal of Law and Economics* 18/4, pp. 617-643.
- Nowotny, E. (1998): Privatization, Deregulation, Reregulation – Experiences and Policy Issues in Austria, in: *Journal for Institutional Innovation, Development, and Transition*, Vol. 2, pp. 35-49.
- Nowotny, Ewald (1982), Nationalist Industry As an Instrument of Stabilization Policy, *Annalen der Gemeinwirtschaft* 51/1, pp. 41-57.
- Österreichische Industrieholding AG (2003): OEIAG – Österreichische Industrieholding AG:  
<http://www.oeiag.at/english/OeIAG/privatisierung.shtm>.
- Pardo, José Casas and Friedrich Schneider (1996), *Current Issues in Public Choice*, Cheltenham, UK, Edward Elgar Publishing Company.
- Perotti, Enrico (1995), Credible Privatization, *American Economic Review*, Vol. 85, pp. 847-859.
- Sachsenhofer, Susanne (2000), Performance und Dividendenpolitik privatisierter ATX-Werte, *Diplomarbeit Universität Linz*, Institut für betriebliche Finanzwirtschaft, Dezember.
- Schaffhauser-Linzatti, Michaela (2003): Ökonomische Konsequenzen der Privatisierung in Österreich: Eine empirische Analyse anhand börsennotierter Aktiengesellschaften, in: *Zeitschrift für Betriebswirtschaft*, Vol. 73, No. 1, January 2003, pp. 49-71.
- Schaffhauser-Linzatti, Michaela, and Engelbert Dockner (1999): The Financial and Operating Performance of Privatized Firms in Austria, mimeo, University of Vienna.
- Schneider, Friedrich (1997): Deregulierung und Privatisierung als Allheilmittel gegen ineffiziente Produktion von öffentlichen Unternehmen?, in: *Wieviel Staat, wieviel Privat?*, *Sammelband der Arbeitsgemeinschaft der wissenschaftlichen Wirtschaftspolitik*, Vienna, pp. 33-59.
- Schneider, Friedrich (2002): Privatisierungen und Deregulierungen in Österreich in den 90er Jahren: Einige Anmerkungen aus Sicht der neuen politischen Ökonomie, in: Hartmut Berg (editor), *Deregulierung und*

- Privatisierung: Gewolltes – Erreichtes – Versäumtes?, *Schriften des Vereins fuer Socialpolitik* (Neue Folge, Band 287), pp. 89-120.
- Schneider, Friedrich and Markus F. Hofreither (1990), Privatisierung und Deregulierung in oeffentlichen Unternehmen in westeuropaeischen Laendern: Erste Erfahrungen und Analysen, Vienna: Manzsche *Verlags- und Universitaetsbuchhandlung*.
- Schneider, Friedrich und Bruno Frey (1988), Political Business Cycles: A Survey, in: Thomas Willet (editor), *Inflation and the Political Business Cycles*, Durham, N.C., pp. 239-275.
- The Economist* (2003), Don't Sell Our Family Silver! Austrians Are Still Reluctant Free-Marketeers, Sep 4th 2003.
- Vienna Stock Exchange (2003): Österreich/Börse Wien, Aktien, Web: [http://vlbg.rdg.ttweb.net/\\_frm/index.asp](http://vlbg.rdg.ttweb.net/_frm/index.asp), December 1<sup>st</sup>.

**ARBEITSPAPIERE 1991-2004**  
des Instituts für Volkswirtschaftslehre, Johannes Kepler Universität Linz

- 9101 WEISS, Christoph: Price inertia and market structure under incomplete information. Jänner 1991. in: *Applied Economics*, 1992.
- 9102 BARTEL, Rainer: Grundlagen der Wirtschaftspolitik und ihre Problematik. Ein einführender Leitfaden zur Theorie der Wirtschaftspolitik. Jänner 1991; Kurzfassung erschienen unter: Wirtschaftspolitik in der Marktwirtschaft, in: *Wirtschaft und Gesellschaft*, 17. 1991,2, S. 229-249
- 9103 FALKINGER, Josef: External effects of information. Jänner 1991
- 9104 SCHNEIDER, Friedrich; Mechanik und Ökonomie: Keplers Traum und die Zukunft. Jänner 1991, in: R. Sandgruber und F. Schneider (Hrsg.), "Interdisziplinarität Heute", Linz, Trauner, 1991
- 9105 ZWEIMÜLLER, Josef, WINTER-EBMER, Rudolf: Manpower training programs and employment stability, in: *Economica*, 63. 1995, S. 128-130
- 9106 ZWEIMÜLLER, Josef: Partial retirement and the earnings test. Februar 1991, in: *Zeitschrift für Nationalökonomie / Journal of Economics*, 57. 1993,3, S. 295-303
- 9107 FALKINGER, Josef: The impacts of policy on quality and price in a vertically integrated sector. März 1991. Revidierte Fassung: On the effects of price or quality regulations in a monopoly market, in: *Jahrbuch für Sozialwissenschaft*.
- 9108 PFAFFERMAYR, Michael, WEISS, Christoph R., ZWEIMÜLLER, Josef: Farm income, market wages, and off-farm labour supply, in: *Empirica*, 18, 2, 1991, S. 221-235
- 9109 BARTEL, Rainer, van RIETSCHOTEN, Kees: A perspective of modern public auditing. Pleading for more science and less pressure-group policy in public sector policies. Juni 1991, dt. Fassung: Eine Vision von moderner öffentlicher Finanzkontrolle, in: *Das öffentliche Haushaltswesen in Österreich*, 32. 1991,3-4, S. 151-187
- 9110 SCHNEIDER, Friedrich und LENZELBAUER, Werner: An inverse relationship between efficiency and profitability according to the size of Upper-Austrian firms? Some further tentative results, in: *Small Business Economics*, 5. 1993,1, S. 1-22
- 9111 SCHNEIDER, Friedrich: Wirtschaftspolitische Maßnahmen zur Steigerung der Effizienz der österreichischen Gemeinwirtschaft: Ein Plädoyer für eine aktivere Industrie- und Wettbewerbspolitik. Juli 1991, in: *Öffentliche Wirtschaft und Gemeinwirtschaft in Österreich*, Wien, Manz, 1992, S. 90-114
- 9112 WINTER-EBMER, Rudolf, ZWEIMÜLLER, Josef: Unequal promotion on job ladders, in: *Journal of Labor Economics*, 15. 1997,1,1, S. 70-71
- 9113 BRUNNER, Johann K.: Bargaining with reasonable aspirations. Oktober 1991, in: *Theory and Decision*, 37, 1994, S 311-321.
- 9114 ZWEIMÜLLER, Josef, WINTER-EBMER, Rudolf: Gender wage differentials and private and public sector jobs. Oktober 1991, in: *Journal of Population Economics*, 7. 1994, S. 271-285
- 9115 BRUNNER, Johann K., WICKSTRÖM, Bengt-Arne: Politically stable pay-as-you-go pension systems: Why the social-insurance budget is too small in a democracy. November 1991, in: *Zeitschrift für Nationalökonomie = Journal of Economics*, 7. 1993, S. 177-190.
- 9116 WINTER-EBMER, Rudolf, ZWEIMÜLLER, Josef: Occupational segregation and career advancement. Dezember 1991, in: *Economics Letters*, 39. 1992, S. 229-234
- 9201 SCHNEIDER, Friedrich: Ecological objectives in a market economy: Three simple questions, but no simple answers? Jänner 1992, in: Giersch, H. (Hrsg.), *Environmental economics*, Heidelberg, Springer-Verl., 1993
- 9202 SCHNEIDER, Friedrich: The federal and fiscal structures of representative and direct democracies as models for a European federal union: Some preliminary ideas using the public-choice approach, in: *Journal des Economistes et des Etudes Humaines*, 3. 1993,2
- 9203 SCHNEIDER, Friedrich: The development of the shadow economy under changing economic conditions: Some tentative empirical results for Austria. Revised version. März 1992.
- 9204 HACKL, Franz, SCHNEIDER, Friedrich, WITHERS, Glenn: The public sector in Australia: A quantitative analysis. März 1992, in: Gemmell, N. (ed), *The growth of the public sector*, Aldershot, Elgar, 1993, S. 212-231
- 9205 SCHNEIDER, Friedrich: The federal and fiscal structures of western democracies as models for a federal union in former communist countries? Some thoughts using the public-choice approach. April 1992, in: Wagner, H.-J. (ed.), *On the theory and policy of systematic change*, Heidelberg, Springer-Verl., 1993, S. 135-154
- 9206 WINTER-EBMER, Rudolf: Endogenous growth, human capital, and industry wages. in: *Bulletin of Economic Research*, 4/1994, 289-314.
- 9207 BARTEL, Rainer: Gleichgewicht, Ungleichgewicht und Anpassung in der komparativen Statik. August 1992; 1. Teil erschienen unter: Auf welchen Grundlagen beruhen unsere ökonomischen Aussagen? in: *Wirtschaft und Gesellschaft*, 19, 2, 1993, S. 153-170; 2. Teil erschienen unter: Neoklassische Rationierung, in: *WiSt*, 23, 3, 1993, S. 151-154
- 9208 WEISS, Christoph R.: Market structure and pricing behaviour in Austrian manufacturing. August 1992. in: *Empirica*, 21. 1994, S. 115-131.
- 9209 WINTER-EBMER, Rudolf: Unemployment and individual pay: Wage curve or compensating differentials? erscheint u.d.T.: Wage Curve, Unemployment Duration and Compensating Differentials, in: *Labour Economics*, 3/1996,4, S. 425-434
- 9210 SCHUSTER, Helmut: Chaostheorie und Verkehrswissenschaft? September 1992, in: *Österreichische Zeitschrift für Verkehrswissenschaft*, 1-2, 38. 1992, S. 48-51
- 9211 BARTEL, Rainer, PRUCKNER, Gerald: Strukturelle und konjunkturelle Charakteristika der Budgetpolitik von Bund und Gesamtstaat in Österreich. Oktober 1992, in: *Wirtschaftspolitische Blätter*, 40. 1993,2, S. 134-154
- 9212 PFAFFERMAYR, Michael: Foreign direct investment and exports: A time series approach. Oktober 1992
- 9213 HACKL, Franz, SCHNEIDER, Friedrich: Austrian economic policy since 1945: An exploratory analysis. Oktober 1992, in: Paldam, M. (ed.), *Economic development of small open economies in Europe and South America*, Basingstoke, Macmillan, forthcoming 1994
- 9214 SCHNEIDER, Friedrich: Die Kunst als Wirtschaftsfaktor - vernachlässigbar oder beachtenswert? Oktober 1992, in: *Musicologica Austriaca*, 11. 1993,1, S. 19-29
- 9215 SCHNEIDER, Friedrich: Measuring the size and the development of the shadow economy: Can the causes be found and the obstacles be overcome? November 1992, in: Brandstätter, Hermann and Güth, W. (eds.), *Essays on Economic Psychology*, Heidelberg, Springer-Verl., 1994, S. 208-211
- 9216 SCHNEIDER, Friedrich: Public choice - economic theory of politics: A survey in selected areas. Dezember 1992, in: Brandstätter, Hermann and Güth, W. (eds.), *Essays on*

\*\*\*

*Economic Psychology*, Heidelberg, Springer-Verl., 1994, S. 188-192

\*\*\*

- 9301 SCHUSTER, Helmut: Energiepolitik im Spannungsfeld zwischen Wirtschaft und Umwelt. Jänner 1993, in: Friedrich Schneider (Hrsg.), *Energiepolitik in Österreich*, Linz, Trauner, 1993
- 9302 WINTER-EBMER, Rudolf: Motivation to migrate and economic success. März 1993, erscheint u.d.T.: Motivation for Migration and Economic Success, in: *Journal of Economic Psychology*, 15. 1994, S. 282-284
- 9303 LANDESMANN, Michael and GOODWIN, Richard: Productivity growth, structural change and macroeconomic stability. März 1993
- 9304 PFAFFERMAYER, Michael: Foreign outward direct investment and exports in Austrian manufacturing. März 1993
- 9305 BARTEL, Rainer: Zur Ökonomie der öffentlichen Finanzkontrolle. April 1993, erschienen unter: Öffentliche Finanzkontrolle als politische Machtkontrolle. Eine ökonomische Fundierung, in: *Politische Vierteljahresschrift*, 34. 1993,4, S. 613-639
- 9306 HACKL, Franz: Die Internalisierung von überbetrieblichen Leistungen der Landwirtschaft aus allokatorentheoretischer Sicht. April 1993.
- 9307 ZWEIMÜLLER, Josef, WINTER-EBMER, Rudolf, FALKINGER, Josef: Retirement of spouses and social security reform, in: *European Economic Review*, 40/1996, S. 471-472
- 9308 BRUNNER, Johann K.: Abilities, needs, and the size of the cake: an axiomatic bargaining approach to redistributive taxation. Juli 1993.
- 9309 HACKL, Franz, PRUCKNER, Gerald: Touristische Präferenzen für den ländlichen Raum: Die Problematik ihrer empirischen Erfassung und Internalisierung. Juli 1993. Ersch. in: Gesellschaftliche Forderungen an die Landwirtschaft / Gesellschaft für Wirtschafts- und Sozialwissenschaften des Landbaues (GEWISOLA), hrsg. von Konrad Hagedorn ... 1994, Schriften der GEWISOLA, Bd. 30
- 9310 NECK, Reinhard, SCHNEIDER, Friedrich: Steuersystem und Schattenwirtschaft. Juli 1993.
- 9311 POINTNER, Johannes und SCHNEIDER, Friedrich: Österreich im internationalen Wirtschaftssystem, August 1993, in: Ewald Nowotny und Günther Winckler (Hrsg.), *Grundzüge der Wirtschaftspolitik Österreichs*, 1994.
- 9312 SCHNEIDER, Friedrich: The Relationship between efficiency and profitability with respect to the size of firms: an empirical investigation for Austria. September 1993.
- 9313 ÖTSCH, Walter: Die mechanistische Metapher in der Theoriengeschichte der Nationalökonomie. September 1993.
- 9314 BARTEL, Rainer: Wirtschaftspolitische Kontrolle und Beratung: Grundlagen, Probleme, Erfordernisse. September 1993, erschienen als: Kontrolle und Beratung in der Wirtschaftspolitik, in: *Wirtschaftspolitische Blätter*, 41. 1994,4, S. 442-462
- 9315 BARTH, Erling and ZWEIMÜLLER, Josef: Relative wages under decentralized and under corporatist bargaining systems, in: *Scandinavian Journal of Economics*, 97. 1995,3, S. 369-384
- 9316 FALKINGER, Josef and ZWEIMÜLLER, Josef: The impact of income inequality on product diversity and economic growth. Oktober 1993.
- 9317 SCHNEIDER, Friedrich: Anreizorientierte Systeme im Gesundheitswesen unter besonderer Berücksichtigung des stationären Sektors. Oktober 1993.
- 9318 HORSTMANN, Winfried and SCHNEIDER, Friedrich: Deficits, bailout and free riders: Fiscal elements of European constitution. Oktober 1993.
- 9319 BARTEL, Rainer: Egoismus, Altruismus, Ineffizienz und Kontrolle im öffentlichen Bereich: Ein kurzer Blick auf die Argumente und ihre Implikationen. November 1993, in: *Wirtschaft und Gesellschaft*, 20. 1994,2, S. 231-246
- 9320 BURGER, Christina: Theorien der Koalitionsbildung und ihre Anwendbarkeit auf österreichische Regierungen. November 1993.

- 9321 BARTEL, Rainer: Konjunkturelle Selbststabilisierung oder kompensatorische Nachfragepolitik? Ein Leitfaden für Studenten. Dezember 1993, tw. erschienen unter: Konjunkturprobleme - Selbstheilung oder Staatseingriffe?, in: *WiSt*, 17. 1994,4, S. 111-39, erscheint tw. unter: Lohnindexierung - Effiziente Institution zur Stabilisierung der Wirtschaft?, in: *WiSt*, 26. 1997,3, S. 154-156

\*\*\*

- 9401 WINTER-EBMER, Rudolf, ZWEIMÜLLER, Josef: Immigration and the Earnings of Young Native Workers. Jänner 1994, in: *Oxford Economic Papers*, 48. 1996, S. 473-491
- 9402 KUNST, Robert, HAUSER, Michael: Fractionally Integrated Models With ARCH Errors. Jänner 1994.
- 9403 ZWEIMÜLLER, Josef, WINTER-EBMER, Rudolf: Internal Markets and Firm-Specific Determination of Earnings in the Presence of Immigrant Labor, in: *Economics Letters*, 48. 1995, S. 185-191
- 9404 SCHUSTER, Helmut: Energie und Umwelt. März 1994.
- 9405 PFAFFERMAYER, Michael: Testing for Ownership Advantages of Direct Investing Firms. März 1994.
- 9406 SCHNEIDER, Friedrich: Determinanten der Steuerhinterziehung und der Schwarzarbeit im internationalen Vergleich. März 1994.
- 9407 FALKINGER, Josef: Social Stability and the Equity-Efficiency Trade-off. April 1994.
- 9408 WINTER-EBMER, Rudolf, ZWEIMÜLLER, Josef: Do Immigrants Displace Native Workers? Mai 1994, erscheint in: *Journal of Population Economics*, 1998.
- 9409 FALKINGER, Josef: How to overcome free-riding: Rewarding deviations from average. Mai 1994. Revidierte Fassung: Efficient Private Provision of Public Goods by Rewarding Deviations from Average, in: *Journal of Public Economics*, 62. 1996,3, S. 413-422
- 9410 ZWEIMÜLLER, Josef: Wealth distribution, innovations, and economic growth. Mai 1994.
- 9411 GANTNER, Manfred, SCHNEIDER, Friedrich: Budgetausgliederungen - eine polit-ökonomische Analyse. Juni 1994.
- 9412 AIGINGER, Karl: The use of game theoretical models for empirical research - A survey of testing non-cooperative game theory with real world data in recent industrial organization literature. Juni 1994.
- 9413 FALKINGER, Josef: The private provision of public goods when the relative size of contribution matters. Juli 1994, in: *Finanzarchiv*, 51, 1994, S. 358 - 371.
- 9414 WINTER-EBMER, Rudolf: Sex discrimination and competition in product and labour markets, in: *Applied Economics*, 27. 1995,9, S. 849-857
- 9415 FALKINGER, Josef, ZWEIMÜLLER, Josef: The cross-country Engel curve for product diversification, August 1994, in: *Structural Change and Economic Dynamics*, 7. 1996,1, S. 79-97
- 9416 FALKINGER, Josef: Tax evasion, consumption of public goods and fairness, August 1994, in: *Journal of Economic Psychology*, 16, 1995, S. 63 - 72.
- 9417 SCHNEIDER, Friedrich: Einige Gedanken zur Harmonisierung indirekter Steuern in der Europäischen Union, September 1994.
- 9418 WINTER-EBMER, Rudolf: Firm size, earnings and displacement risk, Oktober 1994, erscheint in: *Economic Inquiry*, 2000.
- 9419 WEISS, Christoph: Labour market adjustment in U.S. manufacturing: Does market structure matter? Oktober 1994.
- 9420 WEISS, Christoph: State dependence, symmetry and reversibility of off-farm employment, November 1994.
- 9421 SCHNEIDER, Friedrich: Is there a European public choice perspective?, Dezember 1994.

\*\*\*

- 9501 BARTEL, Rainer: Reform des öffentlichen Sektors - Grundlagen und Grundsätze. Jänner 1995.
- 9502 RIESE, Martin: The GINI-index as a measure of the goodness of prediction, Jänner 1995, in: *Bulletin of Economic Research*, 49. 1997,2, S. 127-135.



- 9503 AIGINGER, Karl, WINTER-EBMER, Rudolf und ZWEIMÜLLER, Josef: Eastern European Trade and the Austrian Labour Market, in: *Weltwirtschaftliches Archiv*, 132. 1996,3, S. 476-500
- 9504 WEISS, Christoph: Size, Growth, and Survival of Upper Austrian Farms in the 1980s, Februar 1995. in: Sotte, F. and Zanoli, R.: "The Regional Dimension of Agricultural Economics and Politics", forthcoming (1995).
- 9505 BARTEL, Rainer: Umweltpolitik in den Reformländern Europas. Voraussetzungen und Erfordernisse, Februar 1995.
- 9506 PFAFFERMAYR, Michael: Foreign Outward Direct Investment and Exports in Austrian Manufacturing: Substitutes or Complements?, March 1995.
- 9507 BURGER, Christina, SCHNEIDER, Friedrich: How Valuable is the Health of the Elderly- Evaluation of the Treatment of Alzheimer's Disease; April 1995.
- 9508 BRUNNER, Johann, RIESE, Martin: Measuring the Severity of Unemployment, April 1995.
- 9509 SCHNEIDER, Friedrich: Volkswirtschaftliche Aspekte der Mitarbeiterbeteiligung, Mai 1995.
- 9510 ÖTSCH, Walter: Erwartungen und Framing. Keynes und die "Anomalien" der Erwartungsnutzentheorie, Mai 1995.
- 9511 ÖTSCH, Walter: Die Herausforderung des Konstruktivismus für die ökonomische Theorie, Mai 1995, in: Birger P. Priddat und Gerhard Wegner, Hrsg., Zwischen Evolution und Institution, Metropolis-Verl., Marburg, 1996, S. 35 - 55
- 9512 ÖTSCH, Walter: Kreativität und Logik im ökonomischen Handlungsmodell, Mai 1995.
- 9513 WEISS, Christoph: Determinants of Farm Survival and Growth, Mai 1995.
- 9514 BARTEL, Rainer: Zum Verhältnis von Ökonomie und Politik des öffentlichen Sektors. Einige kurze Anmerkungen, Juni 1995.
- 9515 KUNST, Robert M.: The Myth of Misspecification. Some Metaphors, Juni 1995.
- 9516 VAN DER BURG, Brigitte, SIEGERS, Jacques, WINTER-EBMER, Rudolf: Gender and Promotion in the Academic Labour Market. Juli 1995.
- 9517 FALKINGER, Josef, FEHR, Ernst, GÄCHTER, Simon, WINTER-EBMER, Rudolf: A simple mechanism for the efficient private provision of public goods - experimental evidence, August 1995, erscheint in: *American Economic Review*, 1999.
- 9518 SCHNEIDER, Friedrich: Some Elements of a European Federal Union: A Public Choice Approach, September 1995.
- 9519 BRUNNER, Johann, FALKINGER, Josef: Nonneutrality of taxes and subsidies for the private provision of public goods, September 1995.
- 9520 WEISS, Christoph: Product Market Power and Dynamic Labour Demand, September 1995.
- 9521 LANDESMANN, Michael, PFAFFERMAYR, Michael: Technological Competition and Trade Performance, October, 1995.
- \*\*\*
- 9601 WEISS, Christoph: Exits From a Declining Sector: Econometric Evidence From a Panel of Upper-Austrian Farms 1980-90., Jänner 1996.
- 9602 BÖS, Dieter und SCHNEIDER, Friedrich: Private-public partnership: Gemeinschaftsunternehmen zwischen Privaten und der öffentlichen Hand, Februar 1996.
- 9603 GÄCHTER, Simon, FEHR, Ernst, KMENT, Christiane: Does Social Exchange Increase Voluntary Cooperation?, Februar 1996.
- 9604 ZWEIMÜLLER, Josef, BRUNNER, Johann: Heterogeneous consumers, vertical product differentiation and the rate of innovation, März 1996.
- 9605 SCHNEIDER, Friedrich: The Contributions of Werner W. Pommerehne to Public Choice, März 1996.
- 9606 SEDJAV, Tsagaan-Uvgun: Wissenschaftlich-technologische Entwicklungsfragen der Mongolei, April 1996, Wissenschaftlicher Betreuer: o.Univ.-Prof. Dr. Helmut Schuster, B.Com.
- 9607 KEUSCHNIGG, Christian u. KOHLER Wilhelm: Innovation, Capital Accumulation and Economic Transition, revised version April 1996.
- 9608 AIGINGER, Karl: Beyond Trade Balances: the competitive race between the US, Japan and Europe, Juni 1996.
- 9609 POMMEREHNE, Werner W., HART, Albert und SCHNEIDER, Friedrich: Tragic Choices and Collective Decision-Making: An Empirical Study of Voter Preferences for Alternative Collective Decision-Making Mechanisms, Juli 1996.
- 9610 BARTEL, Rainer, POINTNER, Johannes, SCHNEIDER, Friedrich: Österreich im internationalen Wirtschaftssystem, Juli 1996, erschienen in: E.Nowotny und G. Winckler (Hg.), Grundzüge der Wirtschaftspolitik Österreichs, 2. Aufl., Manz-Verlag, Wien 1997, S. 49-98.
- 9611 SCHNEIDER, Friedrich, VOLKERT, Jürgen: Die Realisierung ökologisch-orientierter Wirtschaftspolitik - eine Unmöglichkeit? Überlegungen aus Sicht der Neuen Politischen Ökonomie, Juli 1996.
- 9612 AIGINGER, Karl, WEISS, Christoph R.: Does it Pay to be Flexible? Empirical Evidence on the Relation-ship between Labour Demand Flexibility and Profit Margins, Juli 1996.
- 9613 WEISS, Christoph R.: Beneficial Concentration in a Menu Cost Model: A Note, August 1996.
- 9614 GUSENLEITNER, Markus, WINTER-EBMER, Rudolf, ZWEIMÜLLER, Josef: The Distribution of Earnings in Austria, 1972-1991, *Allgemeines Statistisches Archiv*, 3/98.
- 9615 WINTER-EBMER, Rudolf: Benefit Duration and Unemployment Entry: Quasi-Experimental Evidence for Austria, Oktober 1996.
- 9616 WINTER-EBMER, Rudolf: Potential Unemployment Benefit Duration and Spell Length: Lessons from a Quasi-Experiment in Austria, in: *Oxford Bulletin of Economics and Statistics*, 60. 1998,1, S. 33-45
- 9617 SCHNEIDER, Friedrich, FREY, Bruno S.: Warum wird die Umweltökonomik kaum angewendet?, November 1996.
- 9618 SCHNEIDER, Friedrich: Aktuelle Ergebnisse über die Schattenwirtschaft (Pfüsch) in Österreich, November 1996.
- 9619 KOHLER, Wilhelm: Die langfristige Entwicklung der Transformationsländer Osteuropas: Welche Rolle spielt die Integration der Märkte?, Dezember 1996.
- 9620 BRUNNER, Johann K., PRINZ, Christopher, WIRTH, Friedrich: Die Zukunft der gesetzlichen Pensionsversicherung, Dezember 1996.
- 9621 SCHNEIDER, Friedrich, GAWEL, Erik: Umsetzungsprobleme ökologisch orientierter Steuerpolitik: Eine polit-ökonomische Analyse, Dezember 1996.
- \*\*\*
- 9701 SCHNEIDER, Friedrich: Hält der EURO, was er verspricht? Ökonomische Überlegungen zur Stabilität und zur Einführung des EURO, Jänner 1997.
- 9702 SCHNEIDER, Friedrich: Welche Chancen hat Österreich als Wirtschaftsstandort im EU- und Globalisierungskontext derzeit und in Zukunft?, Jänner 1997.
- 9703 BRUNNER, Johann K.: Ökonomische Analyse des umlagefinanzierten Pensionsversicherungssystems, Jänner 1997.
- 9704 PFAFFERMAYR, Michael, WEISS, Christoph R.: On Market Power and Investment Behaviour, January 1997.
- 9705 LANDESMANN, Michael A., STEHRER, Robert: Industrial Specialisation, Catching-up and Labour Market Dynamics, January 1997.
- 9706 BARTEL, Rainer: Taking even introductory textbooks seriously. A note on the importance of a usual neglect, February 1997.
- 9707 KUNST, Robert M.: Decision bounds for data-admissible seasonal models, March 1997.
- 9708 WINTER-EBMER, Rudolf, ZWEIMÜLLER, Josef: Intra-firm Wage Dispersion and Firm Performance, *Kyklos*, 1999.
- 9709 PRITZL, F. J. Rupert und SCHNEIDER, Friedrich: Korruption, März 1997.

- 9710 SCHNEIDER, Friedrich: Empirical Results for the Size of the Shadow Economy of Western European Countries Over Time, März 1997.
- 9711 SCHNEIDER, Friedrich und VOLKERT, Jürgen: No Chance for Incentive-orientated Environmental Policies in Representative Democracies? A Public Choice Approach, März 1997.
- 9712 FALKINGER, Josef: Wachstum, Verteilung und Beschäftigung, März 1997.
- 9713 PRITZL, F. J. Rupert und SCHNEIDER, Friedrich: Zur Politischen Ökonomie autokratischer politischer Systeme - Ein theoretischer und empirischer Ansatz, April 1997.
- 9714 SCHUSTER, Helmut: Das Phänomen der strukturellen Arbeitslosigkeit und Maßnahmen zu seiner Bekämpfung,, Mai 1997.
- 9715 BARTEL, Rainer: Paradigmatik versus Pragmatik in der (Umwelt-)Ökonomie. Eine epistemologische Sicht, Mai 1997.
- 9716 BERGER, Helge und SCHNEIDER, Friedrich: Does the Bundesbank Yield in Conflicts? Frey and Schneider Revisited, Juni 1997.
- 9717 RIESE, Martin und BRUNNER, Johann K.: Interpreting risk with demographic statistics, Juni 1997.
- 9718 KUNST, Robert M.: Asymptotics for Unit-Root Processes with Underspecified Deterministic Structures, Juni 1997.
- 9719 GAWEL, Erik und SCHNEIDER, Friedrich: Implementation Problems of Eco-Taxation: A Political-Economy Analysis, Juli 1997
- 9720 PRITZL, Rupert und SCHNEIDER, Friedrich: Political Economy of Autocratic Political Regimes: A Theoretical and Empirical Approach, Juli 1997
- 9721 WINTER-EBMER, Rudolf: Unknown Wage Offer Distribution and Job Search Duration, *Economics Letters*, 1998.
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- \*\*\*
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- \*\*\*
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\*\*\*

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