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# Austria in the European Union

Over the last forty years, the Austrian Institute of Economic Research (WIFO) has repeatedly analyzed the consequences of Western European integration processes for the Austrian economy. The first studies of this kind, dating back to the year 1954, were concerned with the consequences of the European Coal and Steel Community. In 1957, WIFO published in-depth analyses of the effects of the Treaty of Rome. Other studies of WIFO investigated the effects of Europe splitting into two trade policy blocks in the 1960s, the free trade agreements of the 1970s, the building of a European currency union and the continuing enlargement of the European Communities.

The most recent phase of the Western European integration process began in the mid-1980s with the concept for the completion of the Internal Market and the Single European Act. This motivated WIFO to embark on extensive studies analyzing the effects of these developments on Austria. In early 1988 WIFO was the first Austrian economic research institute to produce a comprehensive survey on the subject. This study, titled „Austrian Alternatives to Approaching the EC and their Consequences“, established the essential economic arguments of EC membership and consequently formed the basis for Austria's formal application to the EC in 1989. A large number of in-depth empirical studies followed, covering such subjects as the effects of the creation of the European Economic Area, the perspectives of the Economic and Monetary Union as well as a wide spectrum of sectoral and regional aspects of EC membership.

In terms of Austria's general and economic policy, EC membership is a very significant step. Therefore, the immediate and short-term economic effects should not occupy center stage, but rather the long-term opportunities and risks of this step.

A long-term evaluation of EC membership cannot rely exclusively on econometric modeling results. Econometric modeling is based on historical data and has severe restrictions with respect to forecasting radical policy changes. An econometric model is, however, very useful for checking the consistency of analyzed paths, for determining the direction and order of magnitude of the dependent variables involved and to simulate different assumptions of the explanatory variables. In the interpretation of the WIFO model runs, we are aware that experiences with small integration steps of the past (e.g., tariff elimination) cannot be transferred one-to-one to an analysis of the much more radical step of EC membership (in which tariff reduction only plays a very minor role).

The present study compares two scenarios:

- An EU membership scenario which assumes that Austria (together with Sweden, Finland and Norway) will join EU as a full member in 1995 and at that time assume all rights and obligations of former EC primary law plus all the legal acts from Maastricht.
- An EEA (European Economic Area) scenario assumes that membership in the EU will not result, but rather that participation in EEA will continue. This case in particular includes the assumption that Austria will have to accept more comprehensive obligations from the recent Uruguay round of the GATT agreement than as member of the EU (Kramer, 1994).

As a result of EU membership changes in institutions and market structure will occur. The investigation of the effects of these two changes are at the heart of the present investigation. Developments which may possibly occur simultaneously with membership, but are not caused by it, e.g., a cyclical upturn, will not be considered.

It would be illusory to expect empirical economists to be able to produce a definitive quantitative evaluation of the benefits and costs of EU membership and to evaluate their balance. What is within the reach of WIFO's professional competence, however, is to offer the public information which is as complete as possible on and analyses of the general economic consequences of EU membership in comparison to non-membership. In addition, WIFO can identify and explicitly analyze those effects and opportunities of EU membership that do not lend themselves to quantification. In this way, WIFO can confidently produce realistic and responsible information on possible perspectives and options. However, WIFO is constantly aware of the fact that evaluating EU membership concerns many objectives and issues which are clearly beyond the scientific realm of empirical economists.

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## Austria's Steps towards European Integration

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The planned membership of Austria in the European Union is only a preliminary end phase of a several decades long political and economic approach toward the institutions of Western European integration. Joining the EU will complete these previous steps and fully integrate Austria into Western Europe on a political and economic level.

At the same time, the membership of Austria and the three Nordic countries would help to overcome the split of Western Europe into the two integration blocks dating back to the late 1950s. An enlarged EU will be more representative of all of Western Europe and be even more attractive to

the reform states, especially those of Central and Eastern Europe

While membership means radical changes in Austria as far as general political and constitutional issues are involved, the immediate economic consequences are limited. In fact, Austria's economic integration into the EU is nearly complete. The additional steps needed for membership at this point in time are of far less importance than those already taken over the past decades

From an economic point of view, EU membership means the additional integration of the few remaining economic sectors not yet fully integrated, as well as the elimination of barriers and discriminations presently in effect. The free trade agreements reached in the 1950s and 1970s with EFTA and EC, the effective pegging of the Schilling to the Deutschmark and Austria's participation in the European Economic Area (effective as of January 1, 1994) have all had much larger immediate economic consequences for Austria

These past steps towards integration resulted in the elimination of tariffs and a large number of other trade barriers, an increasingly closer harmonization of macroeconomic policy with that of the Western European hard currency block, the complete liberalization of capital flows, the adoption of common competition rules, free service flows, non-discrimination of entrepreneurs and employees in the larger European area, and the possibility of participating in common programs and projects, such as in research and training as stipulated in the EEA agreements

The most important new economic steps resulting from EU membership are the adoption of the common external tariff, the elimination of border controls, and the integration of the agricultural and food processing sectors.

The political importance of EU membership goes far beyond these economic steps. Membership assures Austria's active and equal participation in Western European policies and thus avoids the possible risks of these integration effects for non-members. Membership involves an especially active participation in and harmonization of nearly all aspects of economic policy and its peripheral areas. In order for Austria to be able to make use of this political opportunity, a number of adjustments and efforts will still be necessary. Adaptation by entrepreneurs and individuals will be likewise required in order for them to be able to make use of the economic potential of full integration

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## Theoretical Expectations

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Economic theory posts, with rare consensus that the integration of previously separate economies brings about gains in efficiency, economic welfare and growth for the area to be integrated. These effects are explained by the classical effects of increased competition, specialization and division of labor and higher economies of scale for larger markets. In addition, significant transaction costs are eliminated. This line of thought was borne out in the Cecchini Report, which presented arguments supportive of the 1992 Internal Market project (*EC Commission, 1988*)

Most analytical models are able to estimate static efficiency effects quite well; only the empirical explanations for dynamic effects are weak. New growth theory stresses the dynamic effects resulting from a climate which has improved in terms of material and immaterial investment. There is justified doubt, however, whether these theories offer satisfactory explanations for the creation and implementation of organizational and/or technical innovations (*Baldwin, 1993*)

Empirical estimates of these effects are in an even more formative stage than theoretical findings. To date, they have not been able to take alternative political and global scenarios surrounding the area of integration into account. It seems plausible to post that integration effects and potential depend on the effectiveness of a common economic policy; however this is very hard to measure quantitatively. Far-reaching integration, such as that of Western Europe, also affects tertiary countries, forcing them to react.

On the other hand, it is hard to argue against the hypothesis that the far-reaching regional — but even more so global — liberalization of the world economy after World War II in the form of GATT represents one of the major driving forces of economic progress. The economic — especially the dynamic — effects will most likely only become clear from a wider historical perspective.

The cyclical and structural problems which have plagued the countries of the European Union since the Internal Market was completed have led to doubts as to whether the findings of integration theory are still valid and the hopes generated for the Internal Market are still realistic. It has been argued that the unexpected and politically very dangerous increase in unemployment is not only due to short-term cyclical influences, but also to adjustment problems as well as to the general weakening of Western Europe's image as a location for industrial production internationally.

This loss in competitiveness cannot be plausibly argued as resulting from ongoing integration; it is much more plausible to argue that the economic policy instruments in place in the EU were more effective in overcoming the crisis than would have been completely uncoordinated policy actions of the individual member states. A number of arguments have been brought forward to the effect that incongruent economic policy preconditions (e.g., the spillover effects of the domestically dominated German interest rate policies to her partners), as well as un-coordinated national policies which led to the devaluation race in 1992-93, had a significant influence on the recession.

This leads to the very controversial question regarding the optimal mix of national and supra-national economic policy. Radical liberals („competition among different political regimes“), federalists („efficiency of subsidiarity“) as well as state interventionists („interventions are easier to coordinate at nation state level“) — all argue against, or at least for less, centralized economic policy making at the community level — although with very divergent arguments.

The scientific question of the optimal size and structure of integrated economies is a very complex topic with a num-

ber of facets. Community policy making might not only produce more efficient solutions for a number of problems, it might also give national governments significant support in overcoming internal resistance to change. By the same token, however, community policy making has a tendency to reach consensus at the level of the smallest common denominator, and to deal with averages. This often inhibits the development of more individually efficient solutions. In addition, decision-making processes may be difficult and time-consuming (Tichy, 1991). Moreover, the danger of wrong collective decisions or failed collective policy with potentially much graver effects than that of a multitude of independent national decisions exist. This question has special relevance for the efficiency of a common competition policy, as the effectiveness of this policy is a precondition for realizing the economic potential of the larger market.

### Further Considerations Concerning Integration Policy

The strongest arguments for Western European integration do not originate in traditional theoretical reasoning, but rather in the economic policy mechanisms of today's world:

1. Western Europe competes in world markets with other industrial nations or regions which control larger home markets (USA, Japan) than the average small or medium-sized European nation. Without the Internal Market or Economic and Monetary Union, Western Europe would have disadvantages in exploiting scale economies.
2. The interests of Western Europe in global economic negotiations (e.g., GATT) can be more effectively represented by a unified European Union than by separate individual nations.
3. The same is true with respect to the greater efficiency of common institutions in foreign policy and security matters.
4. EU membership will eliminate discrimination of Austrian producers currently in effect due to the lack of cumulation possibilities of the European free trade areas and in outward processing traffic. At present this creates severe competitive disadvantages for parts of the Austrian manufacturing sector and prevents them from organizing strategic supply chains with firms in Visegrad countries.
5. The completion of European Single Market, Germany's reunification and the reforms in Eastern Europe as well as the integration of these economies into the European and world economies — all these lead transnational companies to position their various activities optimally within this world's largest economic area. Investment capital from all over the world is flowing into Europe. Until the end of the 1980s, Austria in this respect was less successful than the EU member states as investors assumed that barriers existed to supply the EU market from Austria. EU membership will improve Austria's competitive position as a location for international

investment significantly. This improvement will also enable Austria to exploit fully her geo-political position between Eastern and Western Europe. It is impossible to quantify this effect; it can be assumed, however, that it will be significant in the medium run.

6. The number as well as the importance of problems which cannot be solved at all, or can only be solved less efficiently, at the national level has increased. This applies especially to energy, transport and environmental policies, to international labor migration, to the controlling of multinational firms and to the fight against international crime.

The international literature unanimous as it is on the theoretical effects of integration, produces widely diverging results on the empirical evaluation of past integration effects as well as of the possible future of the EU. Be that as it may, it must be stressed that in evaluating the effects of Austria's EU membership, the question to be answered is not whether the European process of integration as such is desirable or not, but whether the Austrian economy has better development opportunities as a member or as a non-member of the EU.

This question, of course, involves the more general effects of European integration, but because Austria's weight in the EU is only around 2.5 percent, the effects of this step on Austria will be quite different than those on the EU as a whole. In general, it can be said that integration of areas of very divergent sizes offers higher economic opportunities to the smaller partner. Empirical evidence for the past corroborates this analysis (CEPR, 1992).

One must, however, also consider the argument that the smaller partner is confronted with the higher risk of being crushed by the overwhelming power of the larger partner and, as a result, is eliminated from the home market and other markets. This argument was brought forward when Austria negotiated the free trade agreement with the EC in 1972. However, in the mean time (1972-1993) Austria has increased its exports into the current twelve EC states by 528 percent, while imports from that region rose only by 369 percent (at current Austrian Schilling values).

Even if one were to argue — against all empirical evidence — that Austria's competitive position has deteriorated, this argument would have to be weighed against the risks which a small open economy would incur by virtue of it being by necessity and fact tightly interlinked with the EU economy but not able to influence EU policy.

When evaluating EU membership in economic terms, the benefits of avoiding discrimination effects must be added to the potential gains from integration as a result of membership.

On the debit side, one would have to count potential losses of the small partner which could be avoided by keeping existing barriers intact against competitors from the EU market (or building new ones). This calculus is relevant for Austrian agriculture and food processing. Nearly all other economic sectors had already been liberalized when the European Economic Area went into effect.

The major advantage of EU membership for Austria and the other small EFTA countries is their full participation in

future EU policy making. The corresponding participatory opportunities in the European Economic Area are comparatively very limited in form and reality. As a member of the EU, Austria has the opportunity to play a formative role in future policy making. In this way Austria could avoid the danger of being cut off from information and political trends, as well as the danger of being insufficiently able to defend vital interests. In today's highly interlinked world the density and efficiency of economic policy networks gains ever increasing importance.

Sometimes it is argued that Austria's weight in EU deliberations and decision-making institutions will be so small that it hardly represents an improvement vis-à-vis the present EEA situation. This argument can be countered by the fact that the smaller member states have more than their proportionate weight at most EU decision levels. It can also be shown that small interest groups are able to exert considerable influence in national as well as international political life — if they are well organized and form the needed coalitions, illustrating the dictum „size is less important than organization". One could add that organization and well thought-out ideas are more important than the size of a country. It is also true that in certain sectors most small EFTA countries hold strong market positions enabling them to significantly influence EU policies. In Austria's case, this holds true only for smaller niches (*Baldwin, 1992, p. 17*)<sup>1)</sup>

## Macroeconomic Context

In the past, Austria was very successful in combining above-average growth, also in labor productivity, with a high level of employment and internal and external stability. Serious temporary imbalances occurred during the second half of the 1970s (basic balance) and the first half of the 1980s (federal budget). Since then the basic balance has performed acceptably, even though the structural import surplus in the trade balance is at times interpreted as an indicator for a weak industrial base. At this point in time Austria is closer to fulfilling the Maastricht convergence criteria than most EU member states.

After 1987, Austria succeeded in reducing the budget deficit. The planned target, to reduce net lending to 2½ percent of GDP, has not been reached, however. Especially in 1993 the recession caused the deficit to increase to a level unacceptable in the longer run. In 1990 and again in 1994 the tax system was significantly restructured and the total tax burden substantially reduced. Today, the need to reduce the deficit goes beyond cyclical effects and will, or at least should, determine fiscal policy for years to come.

Austria's employment situation continues to be better than that of most other Western European countries. Still, during the past years, unemployment rose to levels unheard of in Austria during the last decades, at a time when total employment was still growing or at least not sinking. Simultaneously, with the help of a number of social policy

measures, sizable groups threatened by unemployment were eliminated from the labor force. At present a growing labor supply dominates the labor market, in spite of the effects of a number of supply-reducing instruments (e.g., early retirement, upper limits for the employment of foreigners).

People skeptical about Austria's EU membership frequently argue that there is no reason for Austria to join an economic community whose performance is worse than Austria's with respect to nearly all macroeconomic indicators. This argument assumes that membership automatically or institutionally leads to a convergence of economic performance.

In fact, there is some validity to this argument. An economic area without internal borders, with mobile factors of production and products will make convergence of economic performance indicators (e.g., price stability, unemployment rates, etc.) easier than when barriers exist. It must also be said that convergence of specific indicators (inflation, budget deficit, interest rates, exchange rates) is an explicit target of an economic union: specific institutions have been designed to promote this convergence.

This restriction does not apply to income policy, labor market policy or structural and locational policies. Given community convergence objectives, the economy in which income policy adjusts more efficiently and flexibly to these targets and in which the allocation of resources functions better will have a higher level of employment. Thus, even as a member of an economic union, a nation successful in these adjustment processes will have higher employment and higher growth.

If Austria does not join, it is likely that potential effects of disintegration (directed towards a non-member) would reduce domestic competitiveness which could lead to less employment. In addition, budget and external balance targets, as well as price stability, would all come under pressure.

The example of the Netherlands shows that even small open economies are able to achieve improvements in their employment situation, at a time when labor market conditions are deteriorating in most of the EU. From the mid-1980s to 1992, the Netherlands reduced their unemployment rate from 11.8 percent to 6.8 percent.

If integration leads to the opening up of larger sectors of the domestic economy to international competition, competitive and rationalization pressures can result which in turn can have negative employment effects. Temporary employment reductions cannot be excluded. Already the Cecchini Report presented such a result: in the first year after the completion of the Single Market, employment was estimated to fall by ½ percent. A positive net effect on employment was to occur only after the third year (*EC Commission, 1988, p. 166*).

Similar results are obtained in the WIFO simulations for the EEA effects. Short-run losses in employment due to increased competitive pressure can be ascribed to the ef-

<sup>1)</sup> The argument about the importance of interest groups needing to be well organized in order to be effective at the community level should be taken seriously given the reports of certain deficiencies during the membership negotiation process.

fects of the completion of the Single Market rather than of EU membership.

EU membership causes negative employment effects due to increased competition and changes in the market regime occurring mainly in agriculture and food processing. In addition, employment losses must be expected in sectors directly involved with border controls. But the scenario investigating the effects of membership relative to EEA participation, exhibits positive net employment from the start even though the first EU membership year will push productivity significantly upward.

EU membership will dampen inflation. Relative to the EEA scenario, which itself contains price dampening effects due to increased competition in the Single Market, inflation is still further reduced. This is mainly the result of Austrian agricultural prices approaching the lower EU level and of increased competition in food processing.

The WIFO model calculations contain extra burdens particularly during the initial phase of membership in two additional areas. First, imports are likely to rise faster than exports (which will also rise). This is due to increased investment in the wake of EU membership having a high import content. In addition, in a number of consumer goods sectors, foreign brands and marketing systems might make a strong inroad into the Austrian market. It is unclear, however, whether this is due to EU membership, or to the EEA. Secondly, public households will initially come under pressure, as membership requires additional budget expenditures. However, since most of these effects are tied to a transition phase, this burden will fall away with time.

There is sufficient agreement by now as to the comparative-static effects of EU membership on the public households, even within a certain quantitative range. When discussing these effects, one should have in mind the system of national income accounts, which does not only consist of „Austria“ and „EU“, but subdivides Austria into accounts for „government“, „enterprises“ and „private households“. Such considerations avoid the misleading impression that all net expenditures by the „government“ (public bodies) caused by EU membership are automatically „costs“ of the Austrian economy. A large number of these expenditures are transfer payments from „government“ to other sectors. It should also be noted that not all budget expenditures are „costs“ in an economic sense. Such expenditures also include investments, e.g., shares in the European Investment Bank.

EU membership will shift account structures towards the public households in the short run. This means that, in addition to costs and benefits between Austria and the EU, shifts in the domestic distribution of income and wealth have to be considered. So far the distributional aspects of integration have not yet been investigated, even though theoretical and empirical predecessors exist (Neven, 1990).

In the short run, and in comparative-static analysis, the financial obligations of the government (federal government and states) vis-à-vis the EU and domestic sectors and regions receiving increased adjustment aid will lead to a net burden on the public households, especially of the federal government. Since adjustment aids are, however, only

temporary, after a few years this burden will fall significantly.

This calculation does not yet take into account the dynamic effects which result from EU membership vis-à-vis the EEA scenario, where both the growth rate and employment rate are higher. This dynamic effect will lead to higher tax receipts and reduced expenditures and will reduce the budget burden already in the short and medium run.

It seems attractive to view the costs of EU membership as an economic investment, or, alternatively as a kind of insurance premium against recessions and other dangers in the world economy. But even such an interpretation does not relieve budget policy from following a consistent medium- and long-run strategy of reducing the already high and, with membership in the short run, increasing budget imbalance. The expected positive economic effects of membership will make such a strategy easier. These effects should also give rise to a re-examination of the need for existing government expenditures, especially since membership will reduce the risks for the household and enterprise sectors in the long run and thus make a number of now existing expenditures superfluous.

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## Effects Outside the Model

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The calculation of the WIFO macro model in combination with a sectoral input-output model allows for a consistent quantification of endogenous variables on the basis of exogenous assumptions and past econometric relationships. These model results must be carefully qualified with respect to alternative exogenous assumptions, to the internal model structure, as well as to quantitative past experiences. A number of questions outside the reach of econometric modeling have already been mentioned in the initial section on integration policies. Other important effects which cannot be endogenized by the model come from a change in market structures.

The international environment influencing the Austrian economy has changed not only as a result of the Western European process of integration, but also as a result of the reforms in Eastern Europe. The application of EU rules of competition will do away with a number of traditional practices which influence investment, employment, production and marketing decisions. In this way, the actual competitive environment of the EU and Austrian markets escapes the efforts of quantitative modeling.

The effects of EEA participation and EU membership on the various sectors of agriculture, manufacturing and services were already investigated extensively by WIFO. The following chapters are an update of these analyses following the results of Austria's negotiations with the EU.

There is still a number of important aspects which have not been analyzed sufficiently so far. Even now it is not too late to commission studies providing additional information on the competitiveness of Austrian products and locations in the European markets. Such studies will have to deal more with the effects of the EEA participation than those of EU membership.

Above all, analyses concerning the following aspects are missing:

- 1 Of the behavior of multinational enterprises already active in Austria. It is likely that these firms will re-examine their respective locations as a result of the completion of the Internal Market, the opening up of Eastern Europe and Austria's membership in the EU. Such a re-evaluation may very well be positive for Austrian affiliates and locations, as membership increases their attractiveness.
- 2 Next to the agricultural sector, the elimination of barriers to competition concerns mainly sectors which supply public institutions and a number of service, transport, telecommunications and utility sectors. Intensive studies on the effects of EU rules of competition and their execution on these sectors are desirable and necessary.
- 3 The advantages of the larger market will be passed on to consumers only to the extent that these rules of competition also apply to the distribution sector. Observation shows that concentration processes lead to the formation of Europe-wide distributors with a lot of market power, especially vis-à-vis their suppliers. If this trend continues, forecasts of price-dampening effects have high error margins. Studies would be needed to show the effects of such strong European distributors on those relatively small Austrian suppliers of consumer goods having only weak brands.

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## Austrian Economic Policy Within the EU

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Participation in the EEA and EU membership also involve a significant break for governmental and institutional structures, especially in economic policy making. Just as the economy must adjust to a new environment, institutional structures and mechanisms of economic policy require a thorough re-evaluation.

A number of essential aspects of a previously autonomous national economic policy, especially on the macro level, will be transferred to the European Union, either concurrent with membership, or with the completion of the Economic and Monetary Union. The major areas involved are monetary policy (which already in the past was informally tied into these structures), the macro aspects of budget policy with the inclusion of some fiscal aspects, and the shaping of structural policy especially with respect to subsidies. This tendency will increase the importance of income policy.

It would be wrong to assume that traditional Austrian practices and mechanisms can remain intact; however, it would be equally wrong to assume that EU membership automatically means that all important aspects of policy

making will be transferred to the community, thus rendering indigenous Austrian efforts and strategies useless.

It is by no means true that all tested and proved Austrian patterns of policy making must be discarded. Such measures as toe pegging of income policy to the monetary environment, important aspects of wage policy and labor market policy, parts of support schemes after adjustment to EU rules, especially with respect to R&D, environment and regional problems can be maintained and even extended. Also, the community does not directly interfere with national budget structures or social policy. International aspects and relationships will have to be considered even more so than today.

Very convincing arguments can be advanced to devise a comprehensive and consistent Austrian location strategy. Such a strategy could be based on the recent proposals by the *Advisory Council for Social and Economic Affairs* (1994). These concern above all instruments for improving the material and immaterial infra-structure and the efficiency of the supply of services by the public sector. These proposals conform to EU rules and have the advantage of not being expensive.

In addition to a review of the Austrian economic policy system, a new activity will have to begin, i.e., an active consideration of and participation in European economic policy making. To fulfill this difficult task with competence is at the same time a precondition for being able to exploit all opportunities of EU membership, and also constitutes a prime obligation of Austria towards the EU. How well Austria will fulfill this task will strongly determine Austria's position within Europe. Austrian persons and institutions have expertise in a number of fields which could also be useful and interesting at the EU level. Active and competent participation requires, however, that the limited personal capacities to deal with such difficult questions and which require theoretical training as well as practical-political experience, will have to be expanded at a faster rate.

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## References

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- Advisory Council for Social and Economic Affairs (Beirat für Wirtschafts- und Sozialfragen) *Wirtschaftsstandort Österreich*. Wien 1994.
- Baldwin R. E. „The Economic Logic of EFTA Countries Joining the EEA and the EC“ *EFTA Occasional Paper* 1992 (41).
- Baldwin R. „On the Measurement of Dynamic Effects of Integration“ *Empirica* 1993 20(2) pp 129-146.
- CEPR Annual Report *Is Bigger Better? The Economics of EC Enlargement*. London 1992.
- EC Commission „The Economics of 1992: The European Economy 1988 (35)“.
- Kramer H. „Zum Abschluß der Uruguay-Runde des GATT“ *WIFO-Monatsberichte* 1994 67(4) pp 262-268.
- Neven D. J. „EEC Integration Towards 1992: Some Distributional Aspects“ *Economic Policy* 1990 (10) pp 14ff.
- Tichy G. „EC 92 and the Outsiders View: The European Neutrals“ *Karl-Franzens-Universität Graz Research Memorandum* 1991 (9006).