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Christian Keuschnigg and Wilhelm Kohler

INTERNATIONAL TRADE



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### **NON-TECHNICAL SUMMARY**

The European Union has reacted quite promptly to the new challenge at its Eastern border. The Europe Agreements were signed in May 1990 with several Central and East European Countries (CEECs) to facilitate and accelerate the integration of commodity markets. Full membership is now the major policy issue. While the CEECs are quite keen to join, present member countries have mixed feelings about an early fifth enlargement to the East, primarily because of budgetary concerns. The CEECs are still vastly different from West European countries, both in economic structure and income levels. Being relatively poor, they would qualify for large amounts of transfers under the structural funds programme. A major part of the Common Agricultural Policy (CAP) budget would probably be diverted to support Eastern farmers. Fears of hardship in present member countries go beyond these budgetary consequences, however. There is a general presumption that imports from the CEECs are concentrated in goods with a relatively large content of unskilled labour. Trade liberalization might thus widen the wage spread between highand low-skilled labour, and thereby contribute to a more uneven income distribution. Moreover, if capital is sector-specific in the short run, the impacts on capital owners will significantly differ across sectors and add further distributional concerns. Finally. with slow capital reallocation accumulation, the gains in real income materialize only after a considerable number of transition periods of low aggregate consumption. The full gains from integrating the East will thus be reaped only by future generations, while current wage earners are in a much less favourable position. Such distributional problems tend to make enlargement a matter of internal controversies despite the potential for sizeable overall gains. Quantitative estimates of the gains from EU enlargement might help to justify the highly visible budgetary costs and distributional problems that tend to dominate the discussion on current EU countries. Against this background we ask whether EU enlargement is worth its price. We provide a tentative answer for Austria which for obvious reasons is a particularly interesting country to look at.

The principal nature of potential gains for current EU members are easily pointed out. EU enlargement involves tariff cuts and savings in real resource costs in trade with Eastern Europe. Eastern enlargement should also promote investment. Capital accumulation entails important beneficial spillovers since it contributes to the specialization and division of labour in industrial production. The resulting advances in productivity further augment the static welfare gains and enhance the attractiveness of trade liberalization from an aggregate point

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### 1. Introduction

Enlargement of the European Union (EU) to the emerging market economies of Central and Eastern Europe (CEE) has become a major and contentious policy issue. The CEECs are keen on EU membership, hoping that this will help them catch-up more quickly to Western income levels. The EU, in turn, has reacted quite promptly by means of the 1990 European Agreements which were intended to facilitate and accelerate integration of commodity markets. Full membership of CEECs, however, is much more controversial largely because of its consequences for the EU budget. Since they are still vastly different from present member countries, the entrants would all be net recipients of EU funds which causes mixed feelings about an early fifth enlargement. An exclusive focus on budgetary costs would, however, be a bad policy guide towards enlargement. They need to be set against economic benefits which, though less visible, are no less important for incumbent countries. Trade integration seems to hold a clear potential for mutual welfare gains on the part of both new entrants and present EU member countries. These arise in the form of traditional efficiency gains, pro-competitive gains, increased exploitation of economies of scale, and a medium run growth bonus. But what are the likely orders of magnitude? Are they large enough so that the fiscal burden of EU enlargement is a price worth paying?

There is an established tradition of looking at European integration through the lens of calibrated general equilibrium models [Gasiorek et al. (1992), Haaland (1992), Haaland and Norman (1992,1995), and Keuschnigg and Kohler (1996a), among others]. Regarding the upcoming fifth enlargement towards the CEECs, a consensus view seems to be that large gains are at stake for CEECs while the efficiency gains for Western countries are largely offset by the budgetary cost. Using their "internal market model" in conjunction with gravity estimates of the East-West trade potential, Gasiorek et al. (1994) calculate rather small output and welfare effects and even minuscule factor price changes for the West. Similar conclusions arise from Brown et

- [14] Helpman, Elhanan and Paul R. Krugman (1989), "Trade Policy and Market Structure", Cambridge, Mass.: MIT Press.
- [15] Hofer, Helmut, Christian Keuschnigg, and Wilhelm Kohler (1997), "A Dynamic Applied General Equilibrium Model for the Austrian Economy With Special Emphasis on Eastern EU Enlargement", University of Linz, Department of Economics, Working Paper No. 9724
- [16] Keuschnigg, Christian (1996), "Investment Externalities and a Corrective Subsidy", University of Saarland, Europa-Institute, DP No. 9607, forthcoming in: International Tax and Public Finance.
- [17] Keuschnigg, Christian and Wilhelm Kohler (1996a), "Austria in the European Union: Dynamic Gains from Integration and Distributional Implications", Economic Policy, 22, 155–211.
- [18] Keuschnigg, Christian and Wilhelm Kohler (1996b), "Commercial Policy and Dynamic Adjustment Under Monopolistic Competition", Journal of International Economics, 40, 373–409.
- [19] Schneider, Mathias (1995), "Bilanz der ersten Erfahrungen mit der Gemeinsamen Agrarpolitik", WIFO Monatsberichte 5/1995, 333-338.
- [20] Winters, L. Alan, and Zhen Kun Wang (1994), "Eastern Europe's International Trade", Manchester - New York: Manchester University Press.

channels through which an enlargement of the Union affects aggregate welfare of an incumbent country, including growth effects. Relying on a calibrated intertemporal equilibrium model we then provide evidence on the likely orders of magnitude, and we extend our view to distributional and sectoral issues. In doing so, we focus on the Austrian economy, building on our assessment of Austria's own membership in the EU [see Keuschnigg and Kohler (1996a)]. More specifically, the questions we try to answer are: Which are the sectors most favorably affected by an EU enlargement? Which factors, if any, are likely to be hurt? Is it worth its price for the economy at large? Section 2 specifies the policy scenario. Section 3 offers a general theoretical perspective, while section 4 turns to the computational model and presents our quantitative estimates. Section 5 offers a summary and derives some conclusions.

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### 2. The Policy Scenario

The main elements of an Eastern enlargement scenario are summarized in table 1. Relying on gravity equations which tie the volume of trade to size and distance of countries, several authors have estimated that transformation in the East might increase trade flows by a factor in the vicinity of four [see Baldwin (1994), and Winters/Wang (1994)]! Relying on a reduced form equation, however, gravity theory offers little help in specifying the mechanism through which such trade creation takes place. We argue that the special conditions that have kept the historical volume of East-West trade far below its potential may in one way or another be seen as acting like a huge real trade cost, which is eliminated to a large extent once systemic transformation has succeeded and CEECs are opened-up to trade. Experiments with our model have indicated that taking the early studies at face value implies real trade costs well above 50 percent of the value of transactions. This seems overly optimistic, especially in view of Gros and Gonciarz (1996) who use more recent data and find much less scope for a further increase

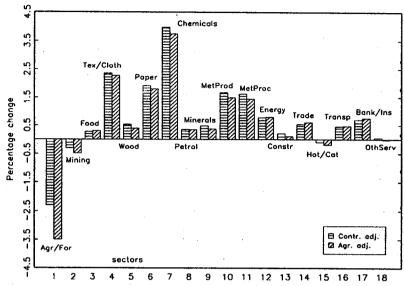


Figure 1: Sectoral equity revaluation (real, on impact), base case

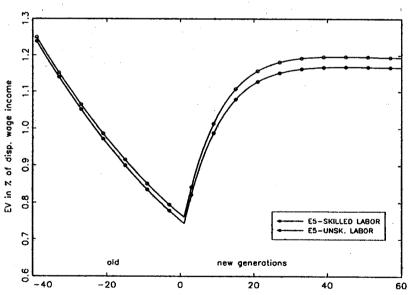


Figure 2: Intergenerational, effects, contr. payments adj., base case

of 13.125 Mio ECU or 0.21 percent of EU(15)-GDP.<sup>2</sup> Relying on these estimates, we calculate that Austrian contribution payments would have to rise by 0.22 percentage points of GDP if the EU budget were to balance under current expenditure policies (scenario a). If budget balance is achieved by cutting agricultural spending instead of raising contribution rates, Austria would be hit in the amount of 0.18 GDP-percentage points (scenario b).

### 3. A Theoretical Perspective

**Static Effects** Economic policy should ultimately rest on welfare based arguments. This section develops a theoretical perspective on the principal sources of gains and losses in welfare, or real consumption. Assuming balanced trade, expenditure of a Union country is

$$P(\mathbf{p}, \mathbf{p}_U, \mathbf{p}_E, \mathbf{p}_R, \mathbf{N})(C+I) = (\mathbf{p} + \mathbf{s})'\bar{\mathbf{y}} + \mathbf{t}_E'\bar{\mathbf{d}}_E + \mathbf{t}_R'\bar{\mathbf{d}}_R - \mathbf{s}'\bar{\mathbf{y}} - T.$$
(3.1)

Overall demand is for a basket of consumption and capital goods. Assuming an identical, linearly homogeneous aggregator function,  $P(\cdot)$  may be interpreted as an exact price index dual to D=C+I, a composite consumption and investment good. Symbols appearing without a regional subscript indicate the home country, while imports stem from the European Union (U), Eastern Europe (E), and the rest of the world (R):  $Z \in \{U, E, R\}$ . Sectoral values such as import prices  $p_{Zj}$  are stacked into boldfaced vectors  $\mathbf{p}_Z$ . Commodities are differentiated as in Dixit & Stiglitz (1977) where a total of  $N_j = n_j + n_{Uj} + n_{Ej} + n_{Rj}$  brands are available in sector j. Given symmetry, prices and quantities of a given sector are the same for each brand. The value of domestic output at producer prices (inclusive of subsidies  $s_j$ ) is  $(\mathbf{p} + \mathbf{s})'\bar{\mathbf{y}} = \sum_j (p_j + s_j)n_jy_j$ , where a prime indicates vector transposition. A bar indicates aggregate quantities for all varieties, e.g.  $\bar{d}_{Zj} = n_{Zj}d_{Zj}$ . Domestic income includes the value of output, plus tariff

<sup>&</sup>lt;sup>2</sup>Baldwin et al. (1997) present estimates based on a power politics model which are reassuringly similar.

Table 3: Long-Run Structural Effects of Enlargement
Contribution payments adjusted, percentage changes

Sec	tors	η	р	$ ilde{p}$	K	$L_s$	$L_u$	ny	$\overline{n}$
1	Agr/For	1.06	0.46	0.91	-3.04	-3.82	-3.87	-3.36	-2.10
2	Min/Quar	1.19	0.30	0.99	0.28	-0.39	-0.44	0.55	-0.15
3	Food	1.09	0.02	1.09	0.60	-0.49	-0.54	0.90	-0.16
4	Tex/Clot	1.06	0.10	1.20	4.27	2.89	2.83	4.32	3.19
5	Wood	1.11	0.18	1.20	0.84	-0.35	-0.41	0.92	-0.09
6	Paper	1.35	-0.54	1.11	3.58	2.36	2.30	4.41	2.71
7	Chemic	1.43	-0.60	1.17	7.58	6.39	6.33	8.57	6.67
8	Petrol	1.25	-0.45	0.83	1.07	0.40	0.34	2.03	0.73
9	Minerals	1.19	0.22	1.10	1.16	-0.34	-0.39	0.98	0.10
10	MetProd	1.23	-0.04	1.03	3.26	1.83	. 1.77	3.41	2.32
11	MetProc	1.18	0.12	1.24	2.22	1.45	1.39	2.74	1.59
12	Energy	1.25	-0.09	0.51	1.57	1.08	1.03	2.04	1.43
13	Constr	1.06	0.61	1.37	0.06	-0.37	-0.43	0.42	-0.34
14	Trade	1.11	0.65	1.12	1.22	-0.10	-0.15	0.73	0.26
15	Hot/Cat	1.11	0.22	0.92	0.14	-1.16	-1.21	0.09	-0.61
16	Trans	1.11	0.24	0.83	1.19	-0.13	-0.19	1.11	0.51
17	BankIns	1.11	0.40	0.53	1.48	0.16	0.11	1.23	1.10
18	OthServ	1.11	0.65	1.20	-0.04	-1.34	-1.40	-0.52	-1.06

 $\eta$ : markup, p: price of home goods,  $\tilde{p}$ : price of value added, K: capital stocks,  $L_s$ : skilled labor demand,  $L_u$ : unskilled labor demand, n: product range, y: production scale.

This equation summarizes how the home economy is affected by an enlargement of the Union. The first four terms capture terms of trade effects, setting changes in import prices  $d\mathbf{p}_Z^*$  against changes in export prices  $d\mathbf{p}$ . Product differentiation implies intra-industry trade and  $\bar{y}_j - \bar{d}_j$  is always positive. Adopting a single country perspective, we take prices in all other regions as given. Product differentiation, however, rules out the notion of a small economy facing given prices. Instead, prices of home goods are determined by a market clearing condition,  $\bar{y}(\mathbf{p}+\mathbf{s},\cdot) = \bar{\mathbf{d}}(\mathbf{p},\cdot) + \bar{\mathbf{e}}_U(\mathbf{p},\cdot) + \bar{\mathbf{e}}_E(\mathbf{p} + \tau_E^e,\cdot) + \bar{\mathbf{e}}_R(\mathbf{p} + \tau_R^e,\cdot)$ . Domestic demand and supply are summarized by the two vector-valued functions  $\bar{\mathbf{y}}$  and  $\bar{\mathbf{d}}$ , while export demand functions  $\bar{\mathbf{e}}_Z$  highlight the role of real trade costs which determine demand prices for foreigners. The overall terms of trade effect is ambiguous. The next two terms highlight that any reduction of real import trade costs operates on welfare just like a positive terms of trade effect. The final terms in line one identify trade creation and trade diversion effects. As familiar from customs union theory, a reduction of a subset of trade distortions  $\mathbf{t}_E$  is not necessarily welfare increasing if other distortions  $\mathbf{t}_R$  remain in place. Domestic welfare increases if changes in import demand are positively correlated across commodities with common EU tariff rates,  $\mathbf{t}_E = \mathbf{t}_R$ .

The second line first identifies welfare effects resulting from imperfect competition. Welfare increases if output is shifted to those sectors where the wedge between demand prices and marginal cost is particularly high (pro-competitive effect). However, the economy will also incur (save) fixed costs if such output changes are brought about by firm entry (exit). Hence the second term emphasizes the trade-off between a positive variety effect ( $\mathbf{P}_N < \mathbf{0}$ ), and a negative efficiency effect due to additional fixed resource use.<sup>5</sup> The next term identifies the centerpiece of the ongoing public discussion: domestic welfare declines on account of higher net contribution

<sup>&</sup>lt;sup>4</sup>In Keuschnigg and Kohler (1996a,b), we have solved analytically for the equilibrium price adjustment in a stylized one sector model, taking account of the long-run savings and investment response.

<sup>&</sup>lt;sup>5</sup>Baldwin and Venables (1995) look at this same trade-off between variety and efficiency from a different angle.

Table 1: Policy Scenario

Pol	icy Elements	OLD	NEW	
"O	pening-Up" of Eastern Europe:	% of transactions value		
real	trade cost-equivalent	10%	5%	
Eas	stern Enlargement of EU:			
Tra	de liberalization:			
a)	Real trade costs	5%	0%	
b)	CEEC tariffs vis à vis Austria	6.5%	0%	
<b>c</b> )	Austrian (EU) tariffs vis à vis CEECs	3%	0%	
d)	Import prices farm products, % change Import prices food products, % change		-23% -5%	
EU	-budget implications:	in % of GDP		
<b>a</b> )	Raising contribution payments	1.28%	1.50%	
b)	Cutting agricultural funds	0.50%	0.32%	
		Mio ECU (2000)		
a)	Raising contribution payments	2,569	3,020	
<u>b)</u>	Cutting agricultural funds	1,004	651	

Budget implications are based on projections to the year 2000, see Breuss and Schebeck (1996).

devoid of any first order welfare effect.

Significant welfare gains might, however, arise if capital accumulation raises the degree of product differentiation n. Under fairly general conditions, a larger resource base entails a larger number of varieties, and a more differentiated capital good. This acts like a fall in the acquisition price of capital, P, and saves consumption expenditure. If each private investor produces a negligible segment of the total number of goods, this capital-induced variety effect of n on P will go unnoticed by the individual agent. Alongside this positive externality, however, firm entry entails additional resource use due to fixed costs. To identify the net welfare effect, we introduce relationships y(K) and n(K) with  $n_K > 0$ . Holding the number of foreign brands constant, and using the intertemporal optimality condition  $w_K/(i^*+\delta)=P$ , the net welfare effect of accumulation is  $(\mathbf{p} - \mathbf{u})' d\bar{\mathbf{y}} - (D \mathbf{P}_N + \mathbf{u}_f)' d\mathbf{n}$ . Thus, the gap between the social and private rate of return on capital is, in general, ambiguous. The final verdict depends on how firm output and the number of firms in equilibrium depend on resource endowments. However, the ambiguity disappears for a popular class of models where y and n are jointly determined by free entry and zero profits. Given linearly homogeneous technology, zero profits imply  $\mathbf{u} \cdot \mathbf{n} \cdot \mathbf{y} + \mathbf{u}_f \cdot \mathbf{n} = \mathbf{p} \cdot \mathbf{n} \cdot \mathbf{y}$ . Consequently,  $\mathbf{u}' \, d\bar{\mathbf{y}} + \mathbf{u}_f' \, d\mathbf{n} + \bar{\mathbf{y}}' \, d\mathbf{u} + \mathbf{n}' \, d\mathbf{u}_f = \mathbf{p}' d\bar{\mathbf{y}} + \bar{\mathbf{y}}' \, d\mathbf{p}$ which reads as  $\mathbf{u}'d\bar{\mathbf{y}} + \mathbf{u}'_f d\mathbf{n} = \mathbf{p}'d\bar{\mathbf{y}} + \Delta$ , where  $\Delta = \bar{\mathbf{y}}'d\mathbf{p} - \bar{\mathbf{y}}'d\mathbf{u} - \mathbf{n}'d\mathbf{u}_f$ . Now we may rewrite  $\Delta = (\mathbf{p} \cdot \bar{\mathbf{y}})' \hat{\mathbf{p}} - (\mathbf{u} \cdot \bar{\mathbf{y}})' \hat{\mathbf{u}} - (\mathbf{n} \cdot \mathbf{u}_f)' \hat{\mathbf{u}}_f$ , where a caret indicates percentage changes as usual. Given zero profits initially,  $\Delta = 0$  if commodity prices, marginal cost and fixed cost, respectively, all change proportionately ( $\hat{\mathbf{p}} = \hat{\mathbf{u}} = \hat{\mathbf{u}}_f$ ). Such is the case, for instance, if markups are constant and if the fixed and variable production activities rely on the same technology. Given  $\Delta = 0$ , the differential of the zero profit condition is  $(\mathbf{p} - \mathbf{u})' d\bar{\mathbf{y}} = \mathbf{u}_f' d\mathbf{n}$ . Therefore, dy = 0 and the first order welfare effect of capital accumulation reduces to  $-(D P_N)'(\mathbf{n}_K dK)$ . Given  $P_N < 0$ , the social rate of return exceeds the private return, and trade induced capital cratic shock that happens to favor demand for unskilled over skilled labor, albeit to a moderate degree (see the wage effects in table 2).

The need for industrial restructuring is mirrored by windfall profits or losses on sectoral capital. Since in reality individual ownership of capital tends to be concentrated in certain industries, such capitalization effects may involve a massive redistribution of wealth. Quite obviously, distributional issues weigh heavily in the policy debate. Figure 2 reports the change in capital values deflated by the consumer price index at the time when enlargement occurs. Not surprisingly, severe windfall losses are expected in agriculture and, to a lesser extent, in mining, while textiles and chemicals report significant gains.

### 5. Conclusion

Several objections are often stated against the more optimistic proponents of EU enlargement. Taking in the Visegrad countries may create a formidable fiscal burden. With Eastern Europe being strong in labor intensive industries, it is expected to further aggravate the slump in sensitive industries and hurt unskilled workers in current member countries. Against this somewhat pessimistic outlook we have asked: Is EU enlargement worth its price for Austria? We find that some of the oft quoted objections seem ungrounded. Despite the difficulties in agriculture, the integration of the Visegrad5 countries creates an expansionary impetus for the Austrian economy. Rather than being a fiscal burden, it contributes to a more healthy public sector budget. Despite of higher contributions to the EU, the expanded macroeconomic activity swells tax bases, allowing more generous transfers to households without increasing public debt. Another unexpected consequence is the compression of the wage spread. The particular integration scenario coming with Eastern enlargement tends to favor the labor intensive over the skill intensive industries! Unlike a typical globalization scenario where integration with low

### 4.1. Aggregate Long-Run Effects

Opening-up of Eastern Europe: All numbers in table 2 are steady state effects in terms of percentage differences from the benchmark equilibrium, except for the welfare change EV which duly takes account of transitional effects as well (see below). For comparison, column 1 reports the effects from Austria's own EU-accession in 1995. Integration of Eastern Europe in the world economy initiates an export boom, but producers also face more import competition by Eastern suppliers. At the same time, cheaper intermediate and capital goods from the East improve supply conditions. An investment led expansion involves both a variety and a rationalization effect. It boosts real income which, in turn, strengthens overall demand. The expansion is retarded somewhat by a slight fall of labor supply, essentially an income effect due to transfer payments which increase on account of swelling tax bases. Surprisingly, a higher capital intensity raises wages more for unskilled than for skilled workers! With higher domestic prices and cheaper imports, there is a significant terms-of-trade improvement vis à vis the CEECs. However, since cheaper imports reflect savings in resource use on the part of Eastern suppliers, there is no offsetting terms-of-trade loss for the East!

EU Enlargement: Compared to the opening-up scenario, the trade shock is now magnified since the CEECs must scrap tariffs on Austrian exports (6.5 % on average), while Austria eliminates EU tariffs on CEEC imports (3 % on average). Additional non-tariff barriers are dismantled in agriculture and food, implying further price cuts for imports from CEECs. Starting from the post-opening-up equilibrium gives significant leverage to further liberalization since it applies to a higher volume of trade. Enlargement therefore produces more powerful effects from

<sup>&</sup>lt;sup>7</sup>As we have extended the model and recalibrated to somewhat more recent trade data, column 1 is slightly different from the results reported in Keuschnigg and Kohler (1996a).

figure 1. Since the stock of savings accumulates with age, this wealth effect increases with age as well. Quite clearly, those 'born' at the date of the policy change should be the most unfortunate. They benefit the least from future wage increases and are not able to share in capital gains either since they start life without any assets. The uneven generational distribution notwithstanding, however, figure 2 shows that no generation is hurt by enlargement.

These results suggest, with a safe error margin, that Eastern enlargement is in Austria's own economic interest. With our aggregate welfare measure readily at hand, we are tempted to ask a somewhat provocative question: How much is enlargement of the EU actually worth? How much could Austria pay to the EU if it were to remain indifferent in aggregate welfare terms? The final column of table 2 displays a scenario where an endogenous net contribution rate ensures that EU enlargement just gives a zero aggregate welfare effect. Such a welfare-neutral enlargement would allow for a sizeable increase of net contributions up to 2 % of GDP. This is well beyond even the most generous spending policies that may be contemplated in Brussels.

### 4.2. Structural Effects

Depending on their cost structure and exposure to Eastern Europe, individual sectors benefit quite differently from Eastern enlargement (tables 3 and 4). Agriculture faces the highest reduction in non-tariff protection vis à vis CEECs and an attendant loss of domestic sales (11%) as consumers switch to Eastern imports. At the same time, it sells rather less to Eastern markets (2 % of production initially). The agricultural slump (by more than 3%) comes as no surprise. But why do farm prices rise (+0.5 %)? Not unlike a Dutch disease phenomenon, expansion of the rest of the economy boosts wages and raises farm costs. Moreover, since the cost share of intermediate goods is rather low, agriculture benefits less than other sectors from lower import prices and, by the same token, is more severely affected by a rise in factor costs. The food sector