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Comment on Dalia Marin, "'Nation of Poets and Thinkers' – Less so with Eastern Enlargement? Austria and Germany"

The paper presented by Dalia Marin (Marin, 2004) addresses several topical and highly policy-relevant issues. The implications of the analysis pose a challenge to European policy making, in particular regarding the long-run repercussions of integration.

First, the two decades surrounding the turn of the century are characterized by a profoundly new international division of labor. Not only cross-border trade but also foreign direct investment underwent major structural change. Second, inasmuch as foreign direct investment was geared towards a reorganisation of the value chain of multinational companies, capital mobility may have had a major impact on job creation and job destruction. Taking into account country-specific relative factor endowments, EU enlargement may even lead to a relocation of high-skill jobs from the former EU-15 Member States to the new Member States, a process I will refer to as depletion of skilled jobs henceforth.

Consider first the emergence of a new pattern of the international division of labor across Europe. Take

a brief look at the export dynamics of, for instance, Hungary in the period between 1996 and 2001. Chart 1 depicts the top eight, three-digit Standard International Trade Classification (SITC) export categories of all manufactured goods exported by Hungary to the former EU-15 Member States. We confront a most striking finding: Within merely five years Hungarian exports of motors and motor parts, automatic data processing machines, and video recorders have risen in excess of 10,000%. Back in 1996 items such as women's and girls' outerwear, furniture, and aluminium – at best mid-tech products – belonged to the top eight export categories. By contrast, currently six out of eight categories represent high tech products.

In tandem with the shift in technological content, we also witness an increasing degree of export concentration in the new Member States, as measured by the Hirschman-Herfindahl index of export shares and demonstrated in chart 2. The smaller the area covered, the lower the degree of export concentration. While the diversification of exports from Austria, Germany, and Italy remains largely unaffected, as a result of the changed division of labor the new Member States appear to focus on an increasingly narrower portfolio of export goods.

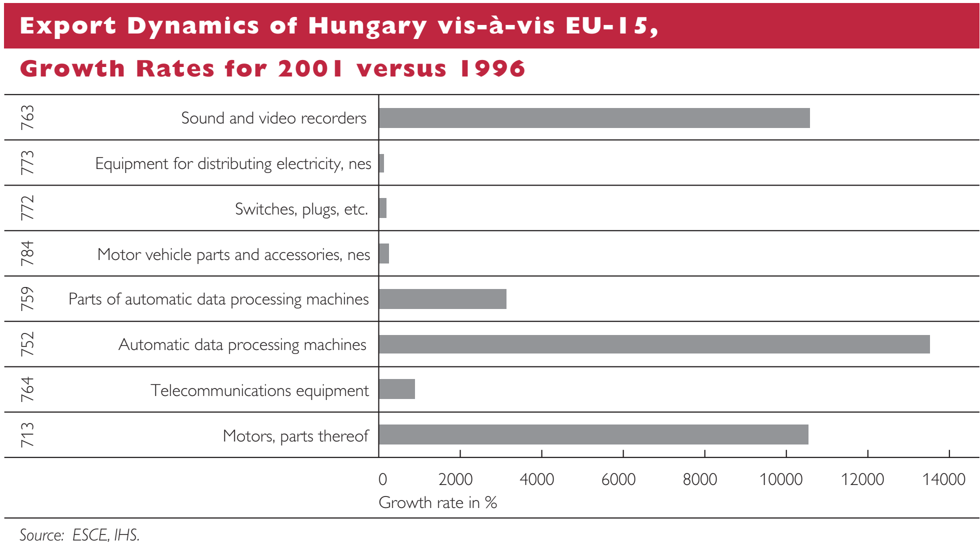
Most recently in some countries, Hungary included, the process of diminishing export diversification appears to have come to a halt. In others, such as the Czech Republic, this has not yet been the case.

Specialization will help the new Member States to maintain high export growth rates. However, the decreasing degree of diversification leaves these countries increasingly vulnerable to adverse shocks. Viewed from the perspective of the former EU Member States, in particular Austria and Germany, the question of interest is whether an increasing degree of concentration of exports from the new Member States is likely to crowd out production and employment in their midst.

Dalia Marin provides a multi-faceted answer. The outcome of the process depends on whether the associated cross-border shifts in production capacity are horizontal in

Chart 1

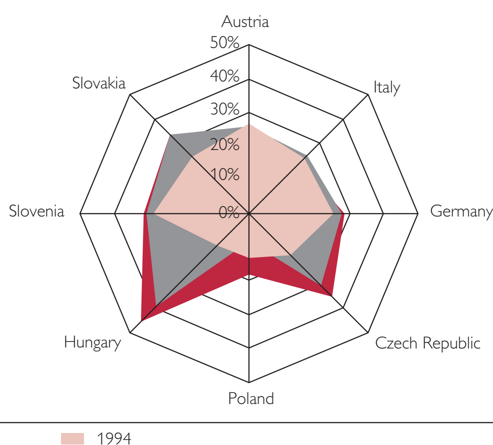
Export Dynamics of Hungary vis-à-vis EU-15, Growth Rates for 2001 versus 1996



Source: ESCE, IHS.

Chart 2

Concentration of Manufacturing Exports



Source: ESCE, IHS.

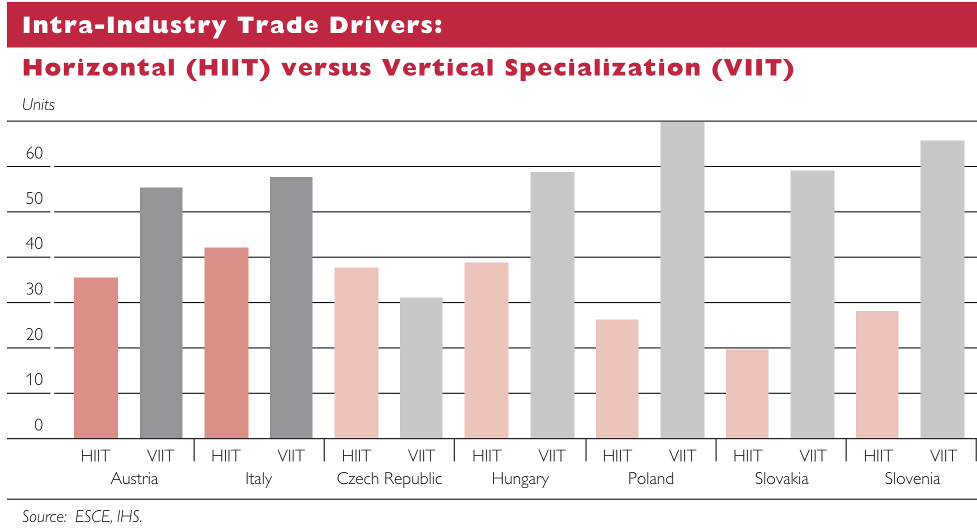
nature or vertical. Horizontal foreign direct investment means that multinationals produce the same or similar products in their East European affiliates, the driving force behind this kind of investment being market access considerations. Vertical foreign direct investment, by contrast, means that multinationals re-organize the value chain in such a way as to maximize the benefit from factor price differentials across production sites in different countries. Outward investment in the new Member States thus means the outsourcing of the labor intensive part of production to a low wage country in Eastern Europe. Thus, a vertical foreign investment leads to an increase in the wage of skilled workers relative to unskilled workers, or, under a regime of rigid wages, to an increase in unemployment in the EU-15 area.

While Dalia Marin focusses on the foreign direct investment part of the process, an analysis of trade data provides corroborating evidence, as shown by chart 3: vertical intra-industrial trade (VIIT) plays a major role in overall intra-industrial trade in all the countries referred to in chart 2. Compared to the role of horizontal intra-industrial trade (HIIT), vertical intra-industrial trade is particularly dominant in Slovak and Polish exports. How do these results compare with Dalia Marin's findings on the outsourcing activity of multinationals? According to her results, the Slovak Republic and Romania appear to be the premier destinations for cost advantage seeking outward investment. In fact, these two countries also feature a particularly pronounced role of vertical intra-industrial trade relative to horizontal intra-industrial trade. Contrary to the results derived from the analysis of foreign direct investment, in the case of Poland, however, the analysis of trade data appears to point towards a more important role of cost advantage seeking investment.

Let us now turn to the second topic, foreign direct investment and its impact on job creation and job destruction. Irrespective of the preceding considerations, the situation

Chart 3

Intra-Industry Trade Drivers:
Horizontal (HIIT) versus Vertical Specialization (VIIT)



Source: ESCE, IHS.

confronting Austria and Germany may be more challenging than is widely believed.

A simple analysis suggests that there are reasons to believe that a considerable tilt of the skilled-workers/unskilled-workers ratio in favor of the new EU Member States is likely. Following Galor and Stark (1994), consider a small, open, technologically advanced economy that operates in a competitive world in which economic activity extends over an infinite discrete time. The supply of efficiency labor in every period is due to the aggregate investment in human capital in the preceding period. A member of generation t who is born in an economy with an *average* level of human capital h_t secures, by investing real resources, h_{t+t} units of human capital. If, prior to integration, a technologically superior economy is characterized by a dynamical system with multiple steady-state equilibria and is positioned to the right of a specific minimum average level of human capital, integration affects the economy in one of the following ways.

First, integration may impinge on the average level of human capital through cross-border migration.

(a) If migration is not large enough or if the average level of the human capital of the incoming migrants is not sufficiently low so as to reduce the average level of human capital of the host economy, then, compared to the alternative, that is, no migration, integration reduces the average level of human capital at every point in time during the transition period, yet the long-run average human capital remains unchanged. This is the optimistic scenario.

(b) If the conditions in (a) above do not hold, however, then migration reverses the evolution pattern of the economy. The economy steps onto a path that will ultimately lead to a lower average human capital steady-state equilibrium, which is equivalent to a low skill, low income equilibrium. Along the path the average human capital level at every point in time is lower than the level that would have been

achieved in the absence of migration. This is the harsh scenario.

Second, integration may impinge on the resources available for human capital formation.

(c) If, as hypothesized in Dalia Marin's paper, "in skill poor Austria both trade as well as the outsourcing activities of firms to skill rich Eastern Europe should have led to a decline in relative wages for skills in Austria," and if "skill poor Austria specializes in the labor and raw material intensive sectors leading to a relative decline in the demand for skills in Austria" (p. 37), integration implies that even for the present level of human capital, Austria and, for that matter, Germany as well, may find themselves on a path to a low skill, low income equilibrium. Of course, one may – and I do – have considerable reservations whether Austria is in fact a skill poor country – the comparatively low share of the labor force with tertiary education is not a sufficient statistics to draw this conclusion. This reservation notwithstanding, the essence of the analysis remains unaffected – integration may change the factor endowments of a country, including the depletion of its supply of skilled workers.

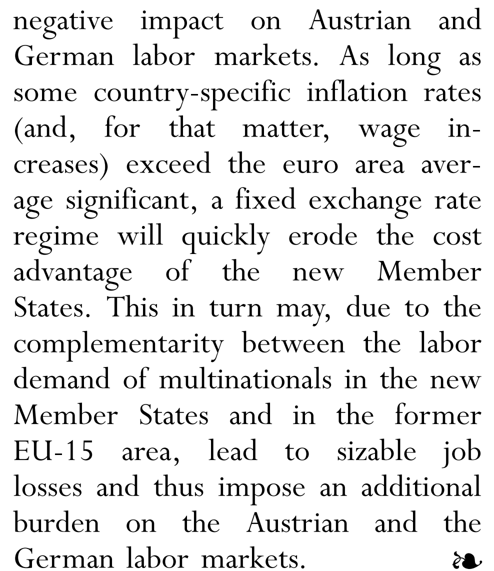
(d) Along with a declining supply of skilled workers in, say, Austria, there is likely to be a rising supply of skilled workers in the new Member States. In a series of papers (Stark et al., 1997 and 1998, Stark and Wang, 2002) it was shown that under specific conditions a strictly positive probability of employment abroad – in the present context the term "abroad" refers to the former EU-15 area – raises the level of human capital formed by workers in the country of origin, that is, in the new EU Member States. The prospect of migration induces workers to optimally acquire more human capital than they would have chosen to acquire absent such a prospect. While a fraction of the labor force will migrate, "taking along" more human capital than had they migrated without factoring in the possibility of migration (a form of a brain drain), others will stay at home with more human capital than they would have formed in the absence of the possibility of migration (a form of a brain gain). The papers cited above provide conditions under which the brain gain is larger than the brain drain. Hence, the country of origin, that is, the new Member States, can end up with a higher average level of human capital per worker than without integration cum feasible migration, thereby further increasing their supply of skilled workers.

The migration prospect is not necessary, however, to induce higher human capital investment. The possibility of being employed by a multinational firm located in a new Member State may well substitute for the migration perspective. Dalia Marin's paper provides illuminating evidence. Average wages in the second round accession countries relative to Germany amount to just 10.4%, while wages paid by multinationals amount to 18.6%. Being employed by a multinational may thus offer a significant premium rel-

ative to the average wage paid in the accession countries, implying an inducement effect for human capital formation similar to the one stemming from a migration possibility. The accelerated formation of human capital triggered by foreign direct investment may compound the pressure on high-skill jobs in Austria and Germany. Apparently, these countries may well find themselves involved in a race for human capital formation to avoid the fate of ending up specializing in the production of labor-intensive and raw materials-intensive goods.

Turning now to the policy implications of this analysis, I concur with Dalia Marin's conclusion that R&D subsidies will not only be ineffective but even counter-productive, a waste of scarce public resources. A complementary short-term solution could well be the liberalization of immigration, provided that it is highly skill-selective.

The results of Dalia Marin's econometric analysis, provided that they will turn out to be robust, have a far-reaching implication for the enlargement of the euro area. If outward foreign investment activity of Austrian and German multinationals has helped "these firms to stay competitive" such that "affiliate jobs in the new Member States appear not to compete with jobs in Austria and Germany," then a premature introduction of the euro in the new Member States would have a strong



negative impact on Austrian and German labor markets. As long as some country-specific inflation rates (and, for that matter, wage increases) exceed the euro area average significant, a fixed exchange rate regime will quickly erode the cost advantage of the new Member States. This in turn may, due to the complementarity between the labor demand of multinationals in the new Member States and in the former EU-15 area, lead to sizable job losses and thus impose an additional burden on the Austrian and the German labor markets. ❧

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