

Steinwachs, Thomas; Yalcin, Erdal

**Article**

## Stimulating Foreign Direct Investment and International Trade to Generate Employment

CESifo Forum

**Provided in Cooperation with:**

Ifo Institute – Leibniz Institute for Economic Research at the University of Munich

*Suggested Citation:* Steinwachs, Thomas; Yalcin, Erdal (2016) : Stimulating Foreign Direct Investment and International Trade to Generate Employment, CESifo Forum, ISSN 2190-717X, ifo Institut - Leibniz-Institut für Wirtschaftsforschung an der Universität München, München, Vol. 17, Iss. 1, pp. 17-21

This Version is available at:

<https://hdl.handle.net/10419/166633>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*

## STIMULATING FOREIGN DIRECT INVESTMENT AND INTERNATIONAL TRADE TO GENERATE EMPLOYMENT

THOMAS STEINWACHS AND  
ERDAL YALCIN\*

### Introduction

After Croatia was granted EU candidate status in 2004, its gross domestic product (GDP) and foreign direct investment (FDI) inflows increased steadily until the outbreak of the financial crisis in 2008. Both GDP and inward FDI in Croatia have been stagnating ever since, with macroeconomic imbalances becoming increasingly problematic and overall economic conditions changing for the worse. An increase in FDI inflows and a stimulation of international trade could help the country to create new firms and thereby achieve sustainable growth in employment.

Analysis of sectoral import and export data provided by the United Nations Conference on Trade and Development's data center (UNCTADstat) reveals that Croatia's export performance over the past decade has been poor. This suggests that its exports are not sufficiently competitive to gain market share in the EU, even though European market access has improved for Croatian exporters. Croatia currently runs a trade deficit in nearly all major sectors. While EU membership has increased Croatia's imports, the exporting sector has not yet benefited from increasing integration into the EU. We argue that Croatia has significant scope to return to a sustainable growth path by stimulating inward FDI and exports *via* measures to increase its competitiveness, in particular through relative labor cost reduction.

\* Ifo Institute.

### How labor costs affect FDI, exports and GDP growth

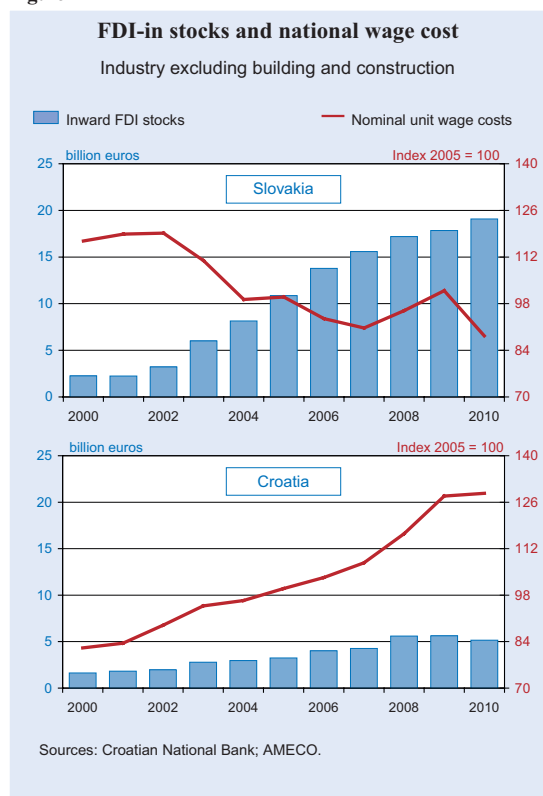
In cross-border business, there is a strong negative correlation between a country's cost-driving conditions – like labor costs – and inward foreign direct investment. Rising labor costs in Croatia have hampered inward FDI growth, leading to unfavorable economic conditions relative to other EU countries, where declining labor costs have been accompanied by a very sharp increase in FDI inflows. Taking Slovakia as an example, Figure 1 illustrates the strong negative relationship between wage costs and FDI inflows. By contrast, Croatia is a clear underperformer in attracting FDI: While Slovakian FDI inflows into the industrial sector increased by 750 percent over 10 years (from 2,245 million euros in 2000 to 19,086 million euros in 2010), Croatia only experienced an increase of 215 percent over the same period (from 1,636 million to 5,158 million euros). Simultaneously, Croatia has relatively higher labor costs, which are uncompetitive, compared to other recent EU members, and thus impede FDI attraction: 9.20 euros per hour on average in 2008, compared to 7.30 euros per hour in the same year in Slovakia, according to Eurostat.

Low labor costs in comparison to alternative FDI destinations can be considered a core reason for foreign direct investors to enter countries. Attracted by the advantage of low production costs, foreign investors not only set up new companies to serve domestic markets, but often integrate those newly built or acquired plants into their European production network, providing a further boost to exports. Indeed, sectoral data from the Ifo Database and the Croatian National Bank suggest that stagnating and falling FDI inflows in Croatia's manufacturing industries have been associated with stagnating and weakening exports.

However, the economic relationship between labor costs, FDI inflows, and exports is not unidirectional. It is characterized by an endogenous circle of economic interdependencies that has been observed in most EU member countries over the past decade. Initially, a reduction in labor costs is associated with increasing FDI inflows. Subsequently, most European member countries experienced a substantial increase



Figure 1



in labor productivity driven by capital investments originating from FDI inflows. Hence, a rise in FDI inflows can improve labor productivity and thereby support a lasting low labor cost environment with increasing output. Both increasing FDI and stable labor costs with rising productivity lead to competitive exports. Finally, rising exports again have positive repercussions on FDI inflows, labor productivity, and labor costs. It has been well substantiated in the economic literature that there is not only a selection process of relatively more productive firms into exports,<sup>1</sup> but that exporters also become more productive over time compared to their non-exporting competitors.<sup>2</sup> This increase in productivity then allows the exporting firms to pay higher wages, leading to a demand-driven boost to the domestic economy, which in turn results in additional incentives for foreign investors to increase FDI. Once this circle is set in motion by external measures (like exchange rate policy) or internal measures (like labor cost reduction), increasing FDI inflows and exports can result in sustainable GDP growth and additional employment.

<sup>1</sup> See e.g. the prominent theoretical work by Melitz (2003) and empirical studies by Bernard and Jensen (1999) and Van Biesebroeck (2005).

<sup>2</sup> See e.g. Bustos (2011) on the firm-level innovation-promoting effects of international trade (learning by exporting) or Lileeva and Trefler (2010) on the market-expanding effects of trade causally encouraging firms to innovate.

### Comparing Croatia with recent EU members and candidates

Several countries that have become new EU members over the past decade have successfully initiated deep economic reforms to boost domestic growth and employment by taking advantage of easier access to the EU markets (e.g. Slovakia and the Czech Republic). To assess the potential quantitative effects of economic reforms in Croatia, it is important to identify and compare countries that are similar to Croatia in their economic development. We subdivide the sample of European countries into three quantiles by real GDP per capita. Within the lowest quantile, Macedonia, Bulgaria and Romania constitute outliers at the lower end and therefore are dropped from the sample. The resulting subsample contains 12 European countries that are evenly distributed around Croatia in terms of real GDP per capita. These countries are referred to as Croatia's *peer group* and include the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Turkey over the time horizon from 1990 to 2014, whereas Greece, Portugal, Slovenia and Malta leave the peer group over the course of time. We use this peer group to quantitatively assess the correlations between labor costs, inward FDI, and exports.

Using Eurostat data on hourly gross wages in 2013, it can be seen that Croatian hourly labor costs, with an average of 7.40 euros, are comparatively high relative to its peer countries, with the only notable exceptions being the Czech Republic (7.50 euros) and Slovenia (12.40 euros). Average wages are lower in Lithuania (4.40 euros), Latvia (5.00 euros), Hungary (5.60 euros), Slovakia (6.20 euros), Poland (6.40 euros) and Estonia (6.60 euros). Looking at wage data on the sectoral level provided by INDSTAT, a similar pattern holds for major industries. In many sectors, Croatia represents the upper end of the wage distribution among its peer group, even though this peer group has been defined such that Croatia, in terms of real GDP per capita, occupies an average position.

Thus, the Croatian economy is relatively uncompetitive in terms of labor costs such that its peer group countries offer a more attractive environment for foreign direct investors. To attract additional FDI, increase exports, and get back onto a sustainable growth path, Croatia needs to improve its competitiveness by reducing average labor costs.

### Potential strategies to improve FDI and international trade competitiveness

To analyze empirically the correlation between unit labor costs and inward FDI and exports, especially for Croatia and its peer group countries, we employ a cross-country regression approach, using a number of control variables and country fixed effects to account for unobserved country characteristics. One methodological caveat is that endogeneity in the explanatory variables may lead to biased estimates of the effect of wages on FDI and exports, as well as of the effect of FDI and exports on output. To partially alleviate reverse causality, we use lagged explanatory variables.<sup>3</sup> Nevertheless, endogeneity bias in the coefficients is very likely to persist, such that the estimators should be interpreted as correlations in sign and overall magnitude, but not as exact causal predictors.

Moreover, sensitivity of exports and inward FDI to labor costs may differ significantly across different industries due to underlying and systematic differences in industry characteristics. It is therefore important to identify the industries in which an internal devaluation strategy appears most reasonable to boost exports and inward FDI. In a first step, we use country-level data provided by Eurostat for the years 2000–2013 to analyze the aggregate relationship between labor cost, FDI, exports, and GDP for Croatia and its peer group. This allows us to quantify the overall potential to stimulate economic growth in Croatia through internal or external devaluation.

In a second step, we take an industry perspective by constructing and analyzing a panel dataset at industry level<sup>4</sup> for 29 European countries (excluding Germany, France, and Britain as positive outliers). The panel includes industry-level export data collected by the United Nations and harmonized by the French Research Center in International Economics (CEPII). Data on FDI positions by industry are obtained from the OECD and from the Croatian National Bank. Industry-level data on wages, output, and the number of employees are provided by the United Nations Industrial Development Organization's INDSTAT database for 23 industries observed over one decade up to

<sup>3</sup> To facilitate an exact identification of causal effects, an instrumental variable approach would be needed. However, an adequate instrument – one which, conditional on other covariates, is correlated with the respective endogenous explanatory variables but at the same time satisfies the exclusion restriction, i.e., is not correlated with the error term in the regression equation – could not be provided for the scope of this analysis.

<sup>4</sup> Industries are defined according to the two-digit ISIC Rev. 3 industry classification.

the year 2008. This allows us to identify key industries in which a reduction of unit labor cost would be particularly fruitful in terms of potential growth effects.

#### *Internal devaluation*

Empirical measures suggest a significantly negative correlation between labor costs and inward FDI across Croatia's peer group of countries. A one-percent internal devaluation (i.e. a decline in wages) has the potential to translate into an average increase in inward FDI by one percent. Regarding exports, the country-level correlation with labor cost turns out to be even stronger. A one-percent decline in wages correlates with an increase in exports by 1.27 percent. Moreover, within the peer group of countries, the combined effects of the additional inward FDI and exports that can be induced by a 10 percent decline in average wages correlate with an annual growth in GDP by an additional 1.18 percentage points over a period of 10 years.

#### *External devaluation*

Economic effects similar to those achieved *via* an internal devaluation can be triggered by an appropriate exchange rate policy: A devaluation of the kuna (Croatia's currency) would make Croatian goods prices and wages cheaper relative to other countries. Such a monetary policy would also imply that the Croatian economy becomes relatively more competitive, and would be able to attract additional inward FDI and expand exports. An external devaluation can spark a similar endogenous circle of economic interdependencies as an internal one, leading to a sustainable increase in wages and GDP over the long run. Drawing on the same regression specifications used to quantify the expected effects of an internal devaluation, the magnitude of an external currency devaluation needed to achieve an equivalent long-run outcome in terms of GDP per capita growth can be quantified. Estimates suggest that, in order to generate the same effect on GDP per capita via increased inward FDI and exports that could be achieved with a 10 percent decline in labor costs, the kuna would have to depreciate by approximately 17.19 percent. A viable compromise for decision-makers could be a mixed strategy combining both external and internal devaluation, choosing appropriate adjustment magnitudes along each of the two margins.

#### *An industry perspective*

First, the average aggregate correlations between labor cost and FDI and exports are confirmed by our

industry-level data in both sign and magnitude, suggesting overall consistence with the aggregate data available for a longer time horizon. Second, we use the industry-level data to examine the relationship between wages per capita, inward FDI, and exports for individual industries. It turns out that the point estimates for the correlations of labor costs with inward FDI and exports indeed vary significantly between industries.

An over-proportionally strong response of inward FDI to wage reductions can be expected in the manufacturing industries for *motor vehicles (ISIC-34)*, *radio, television and communication equipment (ISIC-32)*, *rubber and plastics products (ISIC-25)*, *coke, refined petroleum products and nuclear fuel (ISIC-23)*, *office, accounting and computing machinery (ISIC-30)* and *fabricated metal products (ISIC-28)*, while in other industries inward FDI correlates less than proportionally, but still largely significantly. Notably, Croatian per capita wages rank highest among its peer group in each of these industries. Thus, there is considerable scope for improvements in competitiveness to attract additional inward FDI, increase GDP, and boost employment, resulting in sustainable wage growth in the long run.

A significantly positive response of exports to wage reductions occurs in *textiles (ISIC-17)*, *wearing apparel (ISIC-18)*, *leather, luggage, handbags, saddlery, harness and footwear (ISIC-19)*, *wood and cork products (except furniture) (ISIC-20)*, *paper and paper products (ISIC-21)*, *other non-metallic mineral products (ISIC-26)*, *fabricated metal products (ISIC-28)* and *electrical machinery and apparatus (ISIC-31)*. Empirical measures further suggest that a 1 percent decline in per capita wages has very heterogeneous effects on exports across Croatia's peer countries, ranging from an average increase of 0.06 percent in Latvia to 1.8 percent in Lithuania. Among its peer group, the effect is above average in Croatia, with 1.5 percent. Successful FDI attraction *via* increased competitiveness can be supported by additional flanking measures such as privatizations and labor market and banking sector reforms.

### Conclusion

Croatia has experienced a dramatic slowdown in FDI inflows and exports for several years, in particular after the financial crisis hit in 2008. A major reason for

Croatia's economic weakness can be found in its relatively high labor costs, which have made the country uncompetitive after its integration into the EU.

To escape this situation, Croatia's economy can be stimulated by either an external or an internal devaluation. We emphasize the potential effects of an internal devaluation and provide an estimate for the *equivalent* external devaluation required to obtain economic effects of the same order of magnitude. Average effects on FDI inflows and exports originating from labor cost reductions can be derived from similar policies observed in comparable new EU member countries and candidates.

Overall, Croatia can expect an additional annual growth in GDP of around 1.18 percentage points if labor costs are reduced in the short run by 10 percent, and if this adjustment is kept in place over a longer period. The main reason behind this annual growth effect is an increase in FDI inflows and growing exports due to improved competitiveness.

To maximize the impact of an internal devaluation, competitiveness should be increased particularly in those sectors where inward FDI and exports react strongly. While an internal devaluation will increase Croatia's attractiveness for foreign investors, it is important to simultaneously reform investment policies for foreigners. The observed rise in FDI inflows in similar countries, such as Slovakia or the Czech Republic, after an internal devaluation, was accompanied by privatization programs that enabled foreign investors to acquire domestic facilities and to modernize those acquisitions.

A rise in FDI inflows will increase capital investment, leading to a steady rise in labor productivity. Hence, maintaining labor costs on a competitive level relative to Croatia's peer group of countries offers the chance to achieve a sustainable GDP growth path with a steady decline in unemployment. Once the current stagnation is overcome, rising productivity in principle offers an opportunity to increase wages. The challenge for politicians will be to resist this temptation in the initial years, as it could foil a sustainable economic recovery.

Finally, the effects outlined are partial effect considerations. From a political point of view, a reasonable combination of an internal and external devaluation



permits a balanced distribution of economic costs between different social groups.

## References

Bernard, A.B. and J.B. Jensen, (1999), “Exceptional Exporter Performance: Cause, Effect, or Both?”, *Journal of International Economics* 47, 1–25.

Bustos, P. (2011), “Trade Liberalization, Exports, and Technology Upgrading: Evidence on the Impact of MERCOSUR on Argentinian Firms”, *American Economic Review* 101, 304–340.

Lileeva, A. and D. Trefler, (2010), “Improved Access to Foreign Markets Raises Plant-level Productivity ... For Some Plants”, *Quarterly Journal of Economics* 125, 1051–1099.

Melitz, M. (2003), “The Impact of Trade on Intra-industry Reallocations and Aggregate Industry Productivity”, *Econometrica* 71, 1695–1725.

Van Biesebroeck, J. (2005), “Exporting Raises Productivity in Sub-Saharan African Manufacturing Firms”, *Journal of International Economics* 67, 373–391.