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MEASURING INSTITUTIONAL COMPETITIVENESS IN EUROPE

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NOTE: This policy brief should not be reported as representing the views of the European Central Bank (ECB). The views expressed are solely those of the authors.

This policy brief presents research conducted within the Competitiveness Research Network (CompNet). The network is composed of economists from the European System of Central Banks (ESCB) - i.e. the 28 national central banks of the European Union (EU) and the European Central Bank – a number of international organisations (World Bank, OECD, EU Commission) universities and think-tanks, as well as a number of non-European Central Banks (Argentina and Peru) and organisations (US International Trade Commission).

The objective of CompNet is to develop a more consistent analytical framework for assessing competitiveness, one which allows for a better correspondence between determinants and outcomes.

The research is carried out in three workstreams: 1) Aggregate Measures of Competitiveness; 2) Firm Level; 3) Global Value Chains. CompNet is chaired by Filippo di Mauro (ECB). The three workstreams are headed respectively by Chiara Osbat (ECB), Giovanni Lombardo (ECB) and Konstantins Benkovskis (Bank of Latvia); Antoine Berthou (Banque de France) and Paloma López-Garcia (ECB); João Amador (Banco de Portugal) and Frauke Skudelny (ECB). Julia Fritz (ECB) is responsible for the CompNet Secretariat.

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ABSTRACT

While there are many methods to measure the competitiveness of an economy, most of these concepts do not sufficiently distinguish between how market factors influence competitiveness, and what governments can do to improve their competitive position. Disentangling market-induced and politics-induced changes in competitiveness is not easy, but strongly warranted given current discussions about competitiveness differentials among EMU Member States. This policy brief proposes a new competitiveness index, the Institutional Competitiveness Index, which focuses on those dimensions which politics can influence, such as labour market and product market regulation or taxation.

The new index serves well for mapping the catching-up process in Europe after the formation of EMU. While the index shows that all Member States have improved their institutional competitiveness since the start of EMU, it also shows considerable room for improvement in those areas that fostered the current crisis, like product or labour market functioning. Therefore, the Institutional Competitiveness index can also serve as a tool to pinpoint vulnerabilities and flag specific need for policy action in individual countries.

In contrast to other commonly used competitiveness indices like the World Economic Forum's Global Competitiveness Index, the Institutional Competitiveness Index explicitly disentangles institutional drivers from market-driven processes, such as prices and wages. Therefore, the Institutional Competitiveness Index is a useful complement to existing approaches to measuring competitiveness.

INTRODUCTION

While the on-going sovereign debt crisis in Europe is often associated with differences in competitiveness, it is difficult to pin down the policy changes that have led to these competitiveness differentials. This policy brief provides a tool for measuring the contribution of politics to overall competitiveness.

This tool, the Institutional Competitiveness Index (ICI), allows to disentangle by what extent overall competitiveness is affected by government policies as opposed to market processes like wage negotiation and interest rate developments.

While established indicators of competitiveness such as the WEF Global Competitiveness Index are largely factor-price driven, the ICI focuses exclusively on policy variables under the direct influence of governments. In this way, the index can provide policy-relevant input on the relative competitiveness position of countries in institutional terms and identify those areas in which a country lags behind its peers, and where country-specific reforms are most urgently needed.

1 THE INSTITUTIONAL COMPETITIVENESS INDEX

1.1 CONSTRUCTION OF THE INSTITUTIONAL COMPETITIVENESS INDEX

How can a country's effort to improve its competitiveness be measured? In a globalised economy, a country's external competitiveness is affected by international capital flows, international trade and the associated adjustments of capital and labour costs as well as the exchange rate. We can summarise such price-cost factors in a Price Competitiveness Index (PCI). However, there are also factors that can be actively and directly influenced by policies, e.g. competing for foreign direct investment via a favourable institutional set-up. We define those as institutional factors, summarised in the Institutional Competitiveness Index (ICI). In other words, the ICI encompasses all those areas of economic policy which governments may affect to improve their country's competitiveness, while it excludes all variables that represent adjustment processes, like interest rates or the current account. Table 1 presents both price-cost factors and institutional factors in our sample. The last column indicates whether a variable is included in the ICI or in the PCI. Price-cost factors and institutional factors in Table 1 can be combined in one index, the Total Competitiveness Index (TCI).

Table 1: Composition and sources of the Total Competitiveness Index

Sub-indicator	Sub-sub-indicator	Variable	Source	Variable included in …
Regulation of product markets	Product market taxation	Implicit taxation on consumption	Eurostat	ICI
		Taxes on goods and services	OECD Revenue Statistics	ICI
Public institutions	Soundness of public finances	General government debt	Eurostat	ICI
		General government deficit	Eurostat	ICI
		Long term bond yield	Eurostat	ICI
	Democracy	Perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.	The Worldwide Governance Indicators, World Bank	ICI
		Perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means.	The Worldwide Governance Indicators, World Bank	ICI
	Policy quality	Perceptions of the quality of public services, the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.	The Worldwide Governance Indicators, World Bank	ICI
		Perceptions of the government's ability to formulate and implement policies that promote private sector development.	The Worldwide Governance Indicators, World Bank	ICI
	Law enforcement	Perceptions of the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.	The Worldwide Governance Indicators, World Bank	ICI
		Perceptions of the extent to which public power is exercised for private gain, as well as "capture" of the state by elites and private interests.	The Worldwide Governance Indicators, World Bank	ICI
Infrastructure	Transport infrastructure	Motorway index	Eurostat	ICI
		Railway index	Eurostat	ICI
		Airtravel passengers	Eurostat	ICI
		Investment in airports	OECD	ICI
		Investment in railways	OECD	ICI
		Investment in roads	OECD	ICI
	Communication infrastructure	Fixed telephone lines	UNdata	ICI
		Mobile phone subscriptions	World Bank	ICI
		Internet users	World Bank	PCI
Regulation of financial markets	Access to financial markets	Domestic credit to private sector	World Bank	PCI
		Domestic credit provided by banking sector	World Bank	PCI
	Trust in financial markets	Soundness of banks	Global Competitiveness Index (8.06), World Economic Forum	ICI
		Loan to capital ratio	ECB	ICI
Cost of Capital	Interest rate	Short-term interest rate	OECD	PCI
		Long-term interest rate	OECD	PCI
	Tax on capital	Implicit tax rate on capital, of which on capital and business income	Eurostat	ICI
		Taxes on property	OECD Revenue Statistics	ICI
		Taxes on income, profits and capital gains total	OECD Revenue Statistics	ICI
		Taxes on income, profits and capital gains, corporations only	OECD Revenue Statistics	ICI
Regulation of labour markets	Labour market flexibility	Strictness of employment protection	OECD Labour Statistics	ICI

Labour cost	Wages	Real unit labour cost	Eurostat	PCI
		Nominal unit labour cost	Eurostat	PCI
		Hourly earnings (MEI)	OECD	PCI
		Unit labour cost	OECD	PCI
	Taxes on labour and contributions	Implicit taxation on labour	Eurostat	ICI
		Social security contributions	OECD Revenue Statistics	ICI
		Taxes on payroll and workforce	OECD Revenue Statistics	ICI
Social security	Public pension	Retirement age	OECD	ICI
Technology	Access to technology	Availability of latest technologies	Global Competitiveness Index (9.01), World Economic Forum	PCI
		Firm-level technology absorption	Global Competitiveness Index (9.02), World Economic Forum	PCI
		FDI and technology transfer	Global Competitiveness Index (9.03), World Economic Forum	PCI
	Financing of R&D	Government budget appropriations or outlays on R&D (GBAORD)	Eurostat	ICI

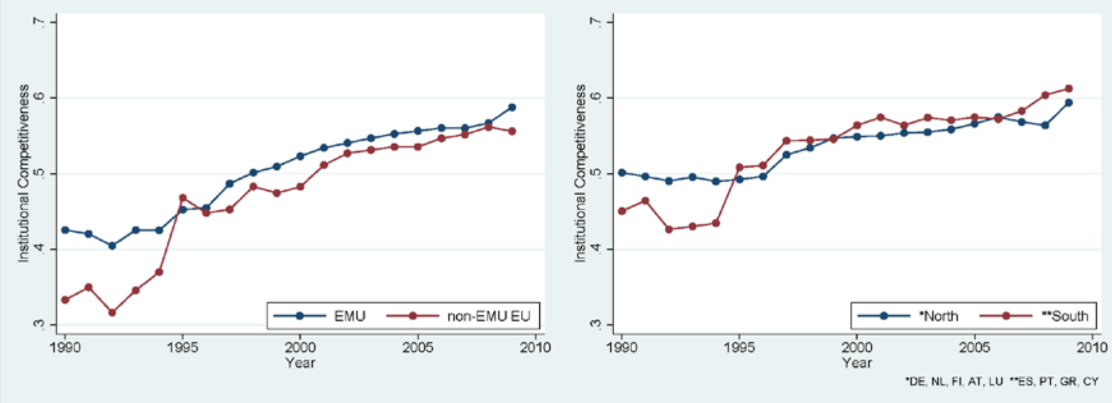
Notes: ICI = Institutional Competitiveness Index; PCI = Price Competitiveness Index. The PCI includes those variables that represent processes of economic adjustment that cannot be influenced by the policy maker. The dataset covers 36 countries from 1990 to 2009. The countries are classified in three groups: Sixteen EMU countries (Austria, Belgium, Cyprus, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Slovakia, Slovenia and Spain; Malta is omitted in spite of EMU membership due to data constraints), 10 non-EMU EU countries (Bulgaria, Czech Republic, Denmark, Latvia, Lithuania, Hungary, Poland, Romania, Sweden and the United Kingdom) and 10 OECD countries (Australia, Canada, Iceland, Japan, South Korea, New Zealand, Norway, Switzerland, Turkey, USA).

For the construction of the ICI we normalise all variables within 0 (lowest) and 1 (highest). This procedure makes the ICI comparable across countries and over time. We aggregate the variables to the index in three steps. Within each step, we attach equal weights to all sub-components relating to one country in a given year. Note that not all data are available for all countries for each point in time.

1.2 INSTITUTIONAL COMPETITIVENESS COULD HAVE IMPROVED MORE IN THE COUNTRIES HIT MOST BY THE CRISIS

Contrary to what is often suggested, both EMU countries as well as non-EMU EU countries have improved their institutional competitiveness (as measured by the ICI) since the formation of EMU. The left panel of Figure 1 illustrates that average institutional competitiveness of EMU countries has steadily improved since the early 1990s. Since competition for foreign capital is fiercer in the absence of the exchange rate as a differentiating factor, improvements in economic policy should not be as surprising as one might guess at first. Moreover, the ICI shows a catching-up process of non-EMU EU countries in terms of institutional competitiveness after the formation of EMU. Even though non-EMU EU countries did not face the same form of between-country competition for capital as EMU countries, they faced the challenge of a more closely integrated market at their borders, which also required improved economic policy to stay competitive in comparison to the euro area.

Figure 1: Developments in Institutional Competitiveness in the EU and within EMU



Source: own calculations.

However, aggregate improvements in Institutional competitiveness do not imply that the countries hit most by the crisis pursued the best possible economic policy and that the impact the crisis had on these countries was purely driven by adverse price-cost factors. On the contrary, a closer look at country groups reveals that the countries hit most by the crisis could have done more to improve their competitive position. As illustrated on the right panel of Figure 1, after an initial catching up during the early years of monetary union, institutional competitiveness grew in parallel in 'Northern' and 'Southern' members of EMU. [1] Given the overall imbalances that were building up, one can argue that the insufficient improvement in institutional competitiveness in the Southern countries may have contributed to the severity of the crisis they were subject to.

1.3 AREAS FOR IMPROVEMENT ARE COUNTRY-SPECIFIC

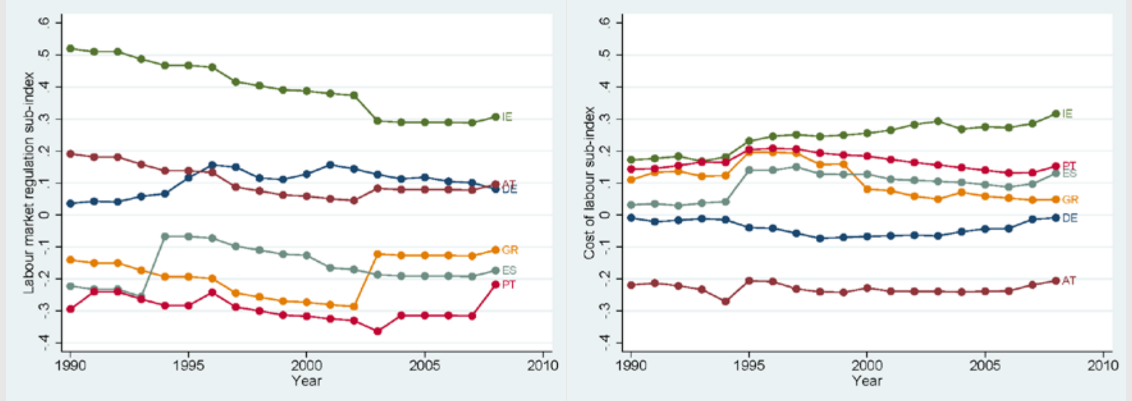
A closer look at the sub-components of the Institutional Competitiveness Index (ICI) helps identifying in the labour market the area of most needed improvement for the countries hit hardest by the crisis. The left panel of Figure 2 shows that while Austria, Germany and Ireland have displayed a labour regulation sub-index consistently above EMU average, Greece, Spain and Portugal remained persistently below.

Improvements in terms of institutional competitiveness are, however, not only needed in the countries hit most by the crisis. For example, as shown in the right panel of Figure 2, the programme countries have fared much better in institutional competitiveness in terms of indirect labour costs, although the downward trend in Greece and Spain calls for careful scrutiny. The examples of labour market regulation and indirect labour costs illustrate that institutional

[1] 'North' is defined as Germany, the Netherlands, Finland, Austria and Luxembourg. 'South' is defined as Spain, Portugal, Greece and Cyprus, also refer to Figure 1.

competitiveness is a story of many components. As a consequence, the ICI can help to detect those areas in which reforms are most needed and also the combination of areas in which reforms are most warranted.

Figure 2: Developments in selected sub-components of Institutional Competitiveness in EMU countries, deviation from EMU average



Source: own calculations. "Cost of labour sub-index" (right panel) refers to indirect taxation on labour. Values above 0 indicate competitiveness in terms of either labour market regulation (left panel) or labour costs excluding wages (right panel) above EMU average, while values below zero indicate competitiveness below EMU average.

2 THE INSTITUTIONAL COMPETITIVENESS INDEX AND THE WEF COMPETITIVENESS INDEX

Why is there a need for another competitiveness index? This policy brief shows that the impact of political and institutional factors provided important insights to assess overall competitiveness. In order to shed light on the value added of our approach we compare our indicators - and most notable the ICI - with the World Economic Forum Global Competitiveness Index (WEF GCI).[2]

To do so we run simple correlations between the WEF index with respect to our Total Competitiveness Index and its components, i.e. PCI and most notably ICI (Table 2). The WEF GCI is more strongly correlated with the PCI than with the ICI, in particular for the EMU sample. The lower correlation between the ICI and the WEF GCI for this sample confirms that the ICI measures a different aspect of competitiveness. As a consequence, the ICI provides value added to the WEF GCI in terms of its focus on institutional variables. Note that the correlation with the WEF GCI is lowest for EMU countries for all three indices, PCI, ICI and TCI, suggesting that the WEF GCI seems to capture fewer of the factors that play a role in EMU

[2] Note that only very few variables in our dataset are taken from the WEF GCI database. Therefore, the information content in both indices is necessarily different. However, since the correlation between the PCI and the WEF GCI is comparatively strong, this indicates that the information contained in the WEF GCI can be attributed to price-cost factors to a large extent.

countries. This implies that the ICI may serve as a better benchmark for governments' progress in improving structural competitiveness.

Table 2: Correlation coefficients across competitiveness indicators; by region

Correlation of WEF GCI with …	EMU	Non-EMU EU	Other OECD
PCI	0.47	0.92	0.71
ICI	0.06	0.46	0.69
TCI	0.23	0.72	0.73

Notes: ICI = Institutional Competitiveness Index; PCI = Price Competitiveness Index

3 CONCLUSIONS

Competitiveness is often perceived as the silver bullet in the quest to reduce imbalances and foster growth in Europe. However, while critical for policies, the extent in which governments can actually influence overall competitiveness by setting policy variables has been somewhat disregarded by the literature. In order to fill this gap we propose an index of competitiveness which measures the institutional factors that governments can more directly affect. We call it the Institutional Competitiveness Index (ICI). Together with a standard index composed by price and cost competitiveness indicators (PCI), we obtain the Total Competitiveness Index (TCI). We compare this indicator and its components to a well-established index of overall competitiveness, i.e. the Global Competitiveness Index of the World Economic Forum (WEF). The overall results of the analysis point to the importance of evaluating institutional factors, such as structural reforms, as a critical benchmark for competitiveness assessment and policy advice, particularly within the Euro Area.