Office Memorandum

To: Members of the Executive Board July 22, 2013

From: The Secretary

Subject: **German-Central European Supply Chain—Cluster Report**

The attached correction to FO/DIS/13/100 (7/3/13) has been provided by the staff:

Evident Ambiguity

Page 4, Figure 1: for "Selected Periphery" read "Selected European Countries"

Questions may be referred to Mr. Lall (ext. 36113), Mr. Aiyar (ext. 35973), and Mr. Elekdag (ext. 34835) in EUR.

This document will shortly be posted on the extranet, a secure website for Executive Directors and member country authorities.

Att: (1)

Other Distribution:
Department Heads

FO/DIS/13/100
Correction 2

INTRODUCTION

1. **In recent decades supply chains—production spread across several countries within a particular region—have arisen in many different parts of the world.** The distribution of the manufacturing process over more than one country, with different countries specializing in different stages of production, owes to both a favorable policy environment and technological developments. Global and regional trade agreements have resulted in significant tariff reduction and removal of non-trade barriers, while increased financial liberalization has encouraged foreign direct investment (FDI) supporting the offshoring of production. Technological developments have also played a vital role: falling transportation costs and improvements in communication technologies have significantly reduced the costs of information exchange and made it easier for firms to coordinate and monitor production in diverse locations.

2. **In Europe the German-Central European Supply Chain (GCESC) has expanded rapidly since the mid-1990s and assumed global importance.** Large labor cost differentials together with geographical proximity and cultural similarities have led many German firms to shift large parts of their production to central European countries, most notably the Czech Republic, Hungary, Poland and Slovakia (CE4, hereafter) either by directly investing there or by purchasing intermediate inputs from local firms. The pattern is exemplified by the automobile industry, where increasing competition in both domestic and foreign markets has triggered a sustained process of outsourcing of manufacturing activities.

3. **This report examines the evolution and economic implications of the GCESC.** Several questions of policy relevance are discussed. What have been the chief benefits of membership in the GCESC, and how should these best be safeguarded? Have vulnerabilities to external shocks risen as a result of the supply chain? Have demand or policy spillovers within the cluster become more important over time? To answer these questions, the study first documents the pattern of vertical trade integration in the GCESC, and the pattern of international capital flows supporting this integration. The benefits and costs of GCESC membership are then examined empirically along several dimensions. Model simulations are used to examine policy actions and spillovers.

THE EVOLUTION OF TRADE AND FINANCIAL LINKAGES

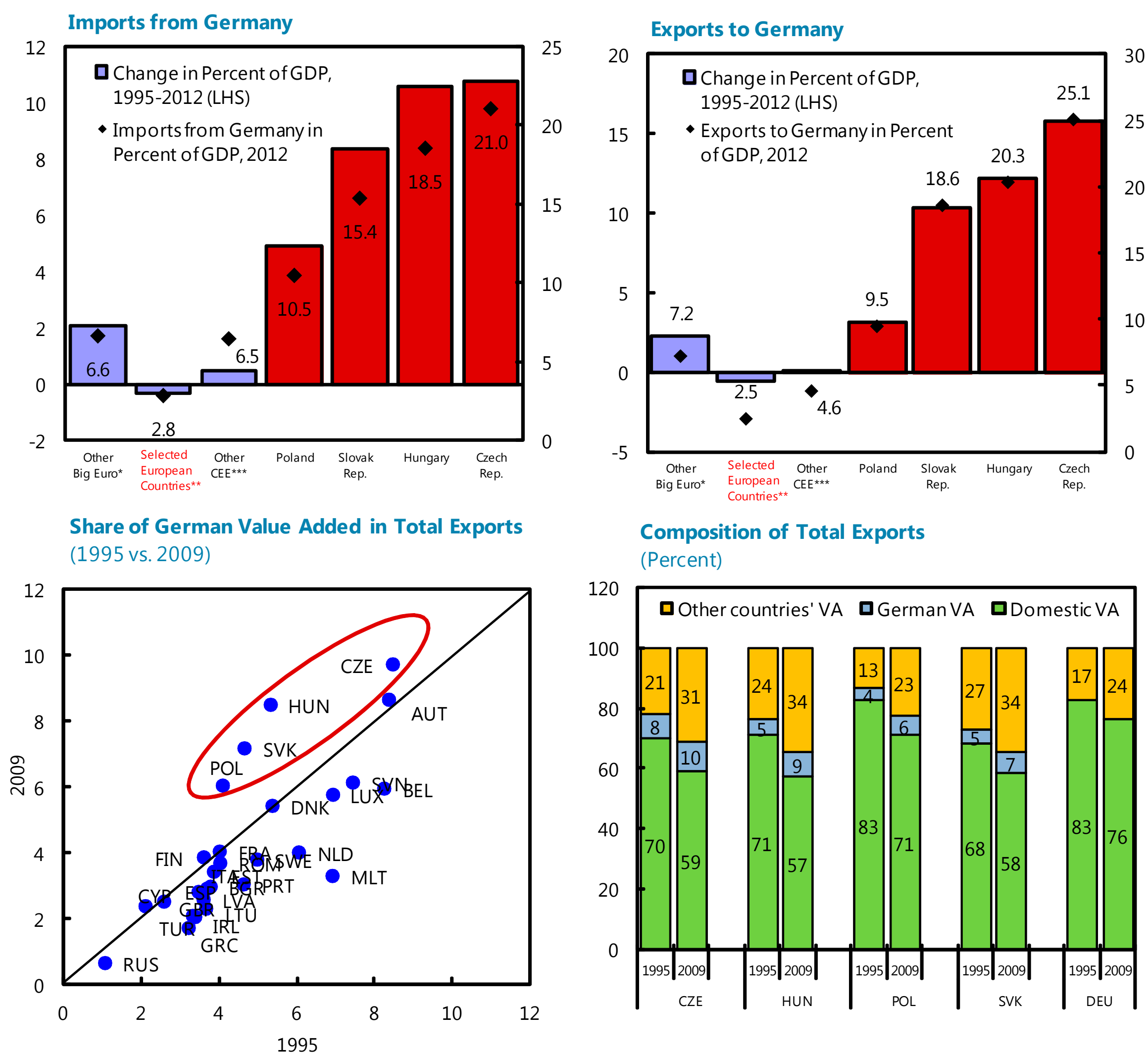
A. Trade Linkages

4. **The CE4's trade links with Germany have strengthened considerably since the mid-1990s, largely reflecting their increased integration into the GCESC.** Bilateral trade with Germany grew much faster in CE4 countries than in other European countries (Figure 1). However, there is heterogeneity among the CE4 countries. In particular, Poland, which accounts for more than half of CE4 GDP, is a relatively less open economy than the others, and its trade with Germany has grown more slowly. Similarly the share of German value added embodied in CE4 exports expanded much more rapidly than in comparator countries. Apart from large unit labor cost differentials and

adequate labor skills to support supply chain activities, the CE4's integration into the GCESC reflects several bilateral advantages vis-à-vis Germany: geographic proximity, cultural similarities, and a similar sectoral structure. Rahman and Zhao (2013) compute an "industrial similarity index" relative to Germany, and show that the CE4 countries had strong similarities with Germany even before they integrated into the GCESC.

5. The growth of the supply chain has substantially increased the exposure of both Germany and the CE4 to final demand outside Europe, to an extent not captured by bilateral

Figure 1. Bilateral Trade with Germany



Sources: DOTS; IMF staff calculations based on the WIOT.
* Other Big Euro includes Austria, Belgium, France, Italy, and the Netherlands.
** Selected European Countries includes Greece, Ireland, Portugal, and Spain.
*** Other CEE includes BiH, Bulgaria, Croatia, Estonia, Latvia, Lithuania, Macedonia, Romania, Slovenia, and Ukraine.