

Mexico's manufacturing competitiveness in the US market: A short-term analysis

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Abstract

This paper investigates the impact of some key variables on Mexican manufacturing competitiveness in the US market. To that end, we construct an international competitiveness (IC) index for the manufacturing sector. The responsiveness of such an index to an ample set of variables is evaluated through the use of a stationary VAR model. The short-term empirical evidence indicates that: 1) real currency depreciation weakens, rather than strengthens, IC; 2) labor productivity has a strong positive effect on IC, and 3) a real interest rate increase reduces IC. These findings reflect three fundamental problems of the Mexican manufacturing sector and thus have important economic policy implications.

Key words: manufacturing industry, international competitiveness, Mexico, Latin America.

JEL Classification: C32, F14.

Resumen

Este artículo investiga el impacto de algunas variables clave en la competitividad internacional (CI) de la industria manufacturera mexicana en el mercado estadounidense. Para tal fin, se construye un índice de CI para el sector manufacturero. La sensibilidad de dicho índice frente a determinadas variables se evalúa mediante el uso de un modelo VAR estacionario. La evidencia empírica de corto plazo indica que: 1) una depreciación real del peso deteriora, en lugar de fortalecer, la CI; 2) la productividad laboral surte un efecto positivo de larga duración en la CI, y 3) un incremento en la tasa de interés real reduce la CI. Estos hallazgos reflejan tres problemas de fondo de las manufacturas mexicanas y revisten importantes implicaciones de política económica.

Palabras clave: industria manufacturera, competitividad internacional, México, América Latina.

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INTRODUCTION

The aim of this paper is to investigate some key factors influencing Mexican manufacturing competitiveness in the US market during the 2007-2014 period. To accomplish this task, an international competitiveness (IC) index is constructed. The index is based on the ratio of Mexican manufacturing exports (to the US market) to total US manufacturing imports, which essentially means that: 1) it can be used for time series econometric analysis, and 2) it is consistent with the notion of IC proposed by authors such as Fouquin (1986), Nabi and Luthria (2002) and Cellini and Soci (2002), among others. After analyzing the behavior of such an index in recent years, we evaluate its responsiveness to changes in an ample set of variables through the use of a stationary Vector Autoregression (VAR) model. The time frame is necessarily restricted due to significant changes in the coverage of Mexico's published statistics for the manufacturing industry.¹

The selection of potential explanatory variables is based on previous empirical evidence, economic theory, and the availability of complete statistical series for the reference period. Along these lines, we assess the impact of the real exchange rate, labor productivity, real wages, the real interest rate and Foreign Direct Investment (FDI), among other variables, on the manufacturing sector's IC. The empirical evidence supports three important conclusions within a short-term horizon. First, real exchange rate depreciation weakens rather than strengthens IC, given that the country's exporting manufacturing industry is highly dependent on imported intermediate inputs, capital stock and technology. Secondly, labor productivity significantly enhances IC, presumably by way of reducing unit labor costs. Finally, an increase in the real cost of credit reduces IC. These findings underline the role of cost competition and reflect three fundamental problems of the Mexican manufacturing sector: 1) excessive reliance on foreign suppliers of intermediate inputs, capital stock and technology, 2) low investment in proper training programs, which prevents a faster growth in labor productivity and IC, and 3) the lack of a well-developed financial system, which

1 In January 2007, the National Institute of Statistics and Geography of Mexico (*Instituto Nacional de Estadística y Geografía*, INEGI) broadened the coverage of the statistical data regarding the manufacturing sector, in order to include the maquiladora exporting establishments. Therefore, from this date on, the standard manufacturing data cover 240 types of economic activity according to the North American Industrial Classification System (NAICS) 2007.

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