

Indices of Price and Cost Competitiveness

**The most common measure of the
country's competitiveness vis-à-vis its
trading partners:**

***The Real Effective Exchange Rate*
(REER)**

**Aggregate measure of competitiveness
between countries**

Measuring the PEER

There are many different ways of measuring the REER, that depend on

- The choice of the price indices,**
- The division of the country's traded products into sub-groups**
- The choice of countries that are included in the analysis,**
- The different ways of taking into account various trade barriers.**

The “law of one price.”

The “law” that international trade equates the purchasing power parity (PPP)

Expressed by the familiar equation:

$$**E = P/P^***$$

where P and P* are the prices of homogeneous goods in the Home and the Foreign countries

E is the nominal exchange rate between the two countries = The Home Country’s price of a unit of the foreign currency.

The real effective exchange rate (REER)

$$r_t = e_t - p_t + p_t^*$$

- Lower case variables indicate the natural logarithm of the upper case variables
- r_t is the (natural logarithm) of the country's *real effective exchange rate*

The *change* in competitiveness

The effect of price changes and/or a change in the nominal exchange rate on competitiveness.

It is assumed that any change in prices or the exchange rate triggers commodity arbitrage that will re-establish the PPP

The change in the real effective exchange rate

$$\Delta r_t = \Delta e_t - \Delta p_t + \Delta p_t^*$$

Where $\Delta = \text{Change}$

*Change in the natural logarithm =
percentage change*

When only part of the country products are tradable:

- $p = \alpha p^N + (1 - \alpha)p^T$ Home country

- $p^* = \alpha^* p^{*N} + (1 - \alpha^*)p^{*T}$ “foreign” country

REER:

$$r = e - p^T + p^{*T}$$

Cost Competitiveness

- **W/D** “unit labor costs”

$$r = e - [(w - d) - (w^* - d^*)]$$

- The change in REER is determined by the change in labor costs, $(w - w^*)$ the change in productivity $(d - d^*)$ and the change in e

Real effective exchange rate in a multi-country

$$\varepsilon = \prod_j \{[\{P_H/E_j \times P_j\}]^{\theta_j}\}$$

θ_j = the share of country j in Home country's trade;

- The shares of the countries in I in the Home country total imports
- The share of the countries in E in the Home country total exports
- The share of the countries in both I and E in the total trade = (Exports and Imports) of the Home country.

multi-country multi-product world

$$\varepsilon = \sum_i \omega_i \{[\Pi_j (P_H / E_j \times P_j)]^{\theta_{ij}}\}$$

- ω_i = Share of industry i in either the country's total output or total employment
- θ_{ij} = share of industry's i of country j in the Home country's total trade (or total exports or total imports)

The *change* in the REER

This change can be due to one of the following changes:

- **A change in the price index of imported goods**
- **A change in the price index of exported goods**
- **A change in the nominal exchange rate**
- **A change in the share of countries of origin of imported goods**
- **A change in the countries of destination of exported goods**

“Third country”:

- The Home country is exporting to only part of the world countries.
- Some of the countries with which the Home country does not have trade are exporting to some of the same countries to which the Home country is exporting.
- These “*third countries*” are also competing with the export industries of the Home country.

Alternative measures of competitiveness

- **Divide the products into homogeneous subgroups**
- **With focus on Industrial products, select products in the ‘Standard International Trade Classification’ (SITC) categories 5 - 8, excluding SITC category 68.**
- **Use the producer price index (PPI) or the wholesale price index (WPI)**

Alternative evaluations of competitiveness

- *The quality of institutions, policies, and input factors that determine the level of productivity of a country.*
- These evaluations are based on the country's 'business environment'.
- World Bank: "Ease of Doing Business"
- Ranks countries according to the following criteria:

- **Starting a Business**
- **Dealing with Construction Permits**
- **Employing Workers**
- **Registering property**
- **Getting Credit**
- **Protecting Investors**
- **Paying Taxes**
- **Trading Across Borders**
- **Enforcing Contracts**
- **Closing a Business**

