

Changes in the global economic power structure: towards a multipolar world?

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Abstract

Many of the studies that participate in the debate on the “polarity” characterizing the current world usually assume that the global power structure has changed significantly or they adopt a purely conceptual and descriptive approach to the changes that have taken place over the last years. A limited number of studies have attempted to empirically verify the global power redistribution process, and those studies which have tried to do so have restricted their analysis to only very few indicators in order to show trends in a reduced group of countries. This paper intends to stand aloof from this eminently conceptual and descriptive—and, in many cases, prescriptive—debate so as to provide some quantitative elements that serve to contrast, in a more rigorous way, the proposition that the world is heading towards a multipolar configuration.

For this purpose, we will seek to pinpoint a series of indicators of economic power and to assess their performance over the last 30 years for the group of countries having the largest share in the world economy during said period. On the basis of the comparison of the performance of these indicators in the group of countries selected, we will draw some tentative conclusions about the possible reconfiguration of global economic power.

1. Introduction

In 1990, Krauthammer proclaimed in a famous paper that the United States had become the hegemonic power (Krauthammer, 1990). His proclamation crystallized the consensus prevailing at that time: the post-Cold War world had given rise to a unipolar world, that is, a system in which a state has significantly greater capacities than the rest (Ikenberry et al. 2009: 4-5). One decade later, some academics began to foresee a scenario in which the clear predominance of the United States would gradually lead to a world where different poles of power coexist (Huntington, 1999).

A series of events occurred at global level over the last years seem to have paved the way for this prediction to become true, at least, in the economic arena. The growing role of China due to the opening process initiated in the late seventies and, more recently, – in 2008 – the outbreak of the most severe financial and economic crisis at world level since 1930 entailed significant changes in the distribution of global economic power. For example, a recent work published by OECD has forecast that the rapid growth of China and India will imply that their GDPs, taken together, will surpass that of the G7 in the year 2025, and that in 2060 they will surpass that of the OECD (OECD, 2012). As a result of these trends, the repeated references in the literature on international relations to concepts such as “empire”, “hegemony”, and “unipolarity” started to give way to others such as “uni-multipolarity”, “multipolarity” or, at least, to plausible questions and hypotheses about a possible reconfiguration of the global power structure.

Over the last years, much has been written on this topic. While some authors argue that we are already in a multipolar world¹ (Zoellick, 2011; Wade, 2011; Subacchi, 2008), others point out that, even though there have been some changes in the distribution of power, it is not yet possible to argue that the unipolar phase has been overcome (Ikenberry et al., 2009; Brooks and Wohlforth, 2008; Jervis, 2009). A third group of authors claim that, given the new characteristics of the world we are living in, none of these two concepts (namely, multipolar and unipolar) is enough to fully understand the current situation. Thus, new terms such as “nonpolarity” – which intends to reflect the growing role of non-state actors (Haass, 2008) – or “interpolarity” – which refers to the notion of multipolarism in the age of interdependence (Grevi, 2009) – were coined.

Many of the research studies that participate in the debate on the “polarity” that characterizes the current world either assume that the global power structure has changed significantly or adopt a purely conceptual and descriptive approach to analyse the changes that have taken place over the last years. Very few research studies have attempted to empirically verify the global power redistribution process, and those studies which have tried to do so have restricted their analyses to only very few indicators (in most cases, share in world GDP and military budget) in order to show trends in a reduced group of countries (in general, China and the United States).

This paper intends to stand aloof from this merely conceptual and qualitative – and, in many cases, prescriptive – debate and to provide, instead, some quantitative elements that serve to confirm, in a more rigorous way, the proposition that the world is heading towards a multipolar configuration. In view of the wide range of possible indicators, we will only focus on one of the aspects of this alleged redistribution of global power – namely, economic power – and we will not consider other elements, such as military power (which is central in the realist school of thought) or the so-called “soft power” (Nye, 2005).

¹ A world with a flat hierarchy in which no state is unambiguously number one (Wohlforth, 2009: 40).

Within this framework, we will seek to pinpoint a series of indicators of economic power and to assess their performance over the last 30 years for the group of countries having the greatest share in the world economy during said period. We will compare the performance of these indicators in the group of countries selected and will draw some tentative conclusions about the possible reconfiguration of global economic power.

This paper is organized in the following way. In the second section we review the existing literature and try to provide an operational definition of the concept of power. On the basis of this definition, and after reviewing the literature available on the measurement of economic power, we will identify a set of indicators with series which are long enough (from 1980 to 2011) and complete for the whole group of countries selected for our analysis. The third section presents the series of these indicators for the countries selected, as well as some reflections on their performance throughout time. Lastly, we will draw some conclusions on the trends in the redistribution of global economic power that will derive from our study.

2. Power, economic power and indicators of economic power

The study of power has played a central role in the debates within the theory of international relations. Power is, in fact, the key element in one of the predominant schools of the discipline: the realist school of thought. Hans Morgenthau, who is considered to be the father of classical realism, stated that the quest for power is both the engine that drives the state forward and the essential component of inter-state relations (Morgenthau, 1948: 41-42; see also, in the same sense, Waltz, 1979). Furthermore, Mearsheimer (2001: 12), the founder of the most recent “offensive” version of realism, has stated that “calculations about power lie at the heart of how states think about the world around them”.

For those authors who advocate this school of thought, the power a state wields can be measured considering a series of factors or “elements of national power”. Power, according to this view, takes the form of a “possession” held by the actors, in this case, the states. Morgenthau (1948: 131-198), for example, considered that the elements of national power were: geography, natural resources (food and raw materials), industrial capacity, military preparedness (technology, leadership, quantity and quality of the armed forces), population (distribution and trends), national character, national morale, quality of diplomacy, and quality of government. In turn, Waltz (1979: 193-4) claimed that in order to determine the position of a country in the global power structure it was necessary to identify: size of population and territory, resource endowment, economic capability, military strength, and political stability and competence. More recently, Mearsheimer (2001: 55) pointed out that power has two large components: latent power – which basically includes economic wealth and population – and military power, which is mainly determined by the size of the army. In general, all these authors agree on the fact that the distribution of power among the major world powers could be calculated by considering all the different elements of power held by these world powers.

Other authors have proposed a relational definition of power and have stressed the need to take into account the effects of power when trying to measure it (Baldwin, 2002: 178; Zartman and Rubin, 2002: 6-7). Robert Dahl is perhaps the most well-known advocate of this view, since – from the political science – he put forward a definition of power that has been widely accepted: “A has power over B to the extent that he can get B to do something that B would not otherwise do” (Dahl, 1957: 202-3). This definition had a far-reaching impact on other disciplines. In the field of

international relations, for example, Jeffrey Hart defined power as a “state’s ability to ensure that another state behaves according to the interests of the former, even when this action is contrary to the interests of the ‘victim’ state or it is not envisaged in that state’s political agenda” (Hart, 1976).

In spite of the efforts made by the advocates of the relational view, the elements-of-power approach is still deeply rooted in the literature on international relations. As we will see in the following sections, most of the authors who have analysed the changes occurred in the global economic power structure over the last years have aligned themselves (explicitly or implicitly) with the elements-of-power approach, and therefore have focused their analysis on the changes occurred in several of the indicators of economic capability shown by different states. The fact that researchers have preferred to measure power through its elements can be explained by the simplicity of this technique for data collection and comparison and by the tautological nature of the relational definition (Zartman and Rubin, 2002: 8; Mearsheimer, 2001: 60).

The analysis conducted herein also follows the elements-of-power approach. As a starting point, we will identify and select a series of elements of economic power. We will also take into account a generally neglected element, which is of paramount importance in our research study: a state’s levels of autonomy to let them act beyond the influence of the power exercised by other states. This aspect is present, for example, in the conception developed by Max Weber, who considered power as “any chance to attain one’s will in a social context in spite of resistance” (Weber, 1964). In the field of international relations, the levels-of-autonomy issue can be traced back, for example, to the definition given by Kenneth Waltz, who considered that “an agent is powerful to the extent that he affects others more than they affect him” (Waltz, 1979). In terms of economic power – which we particularly explore herein –, Paola Subacchi (2008) states that in the era of globalization, in which new actors have become part of the global economic wheel, economic power is not synonymous with exercising influence on others but rather with autonomy, i.e., the capacity to act in a world where numerous state and non-state actors coexist.

Different authors and research projects have proposed a wide variety of indicators to measure and analyse the evolution and reconfiguration of economic power at global level (Tellis, 2000; Subacchi, 2008; Treverton and Jones, 2005; Wade, 2011; Cooper, 2004; Haass, 2008; among others). For the purposes of this study, from that group of indicators, we have selected those that were considered to be the most appropriate to measure the two dimensions of economic power mentioned above: i) the capacity of a state to impose its own will on others through different means (threats, coercion, seizures, etc.); and ii) the capacity of a state to protect itself through an increased autonomy/self-sufficiency against the attempts of another state to impose its own will upon the former. After doing that first selection, we have identified those indicators of the group for which there were publicly available series both for the whole period under study (1980-2011) and for all the countries and blocs included in the analysis. Lastly, the indicators selected were classified into four categories according to the different elements of economic power they can measure: a) market share; b) self-financing capacity; c) innovation and technology; and d) capacity for self-sufficiency in natural resources. The variables selected are listed below, under the corresponding category:

- Market share and domestic market (3.1):
 - GDP by PPP
 - population
 - GDP per capita
 - share in the imports of goods
- Self-financing capacity (3.2):
 - current account balance
 - international reserves
 - share in world exports
- Innovation and technology (3.3):
 - patents granted in the USA
- Self-sufficiency in raw materials (3.4):
 - food trade balance
 - oil trade balance

Although the literature reviewed herein mentions other variables – such as quality of education, participation of the knowledge-producing sectors or government spending in research – which are relevant for a study like this one, the difficulty in gathering complete and consistent series of data led us to limit our analysis to the abovementioned indicators.

In the following sections, we present the series of each of the indicators selected, we provide a brief explanation of why we decided to include them, and we compare their performance during the period under analysis.

3. Empirically verifying the hypothesis on multipolarity: the indicators of economic power and their performance over the last 30 years

3.1. Market share and domestic market

The category “market share” includes those indicators which show the share each state has in the international economy. The impact of this variable on the relative power of a state is mainly related to the size of their domestic market and is channelled through two forms. First, the size of the domestic market largely determines a state’s capacity to influence other states: the larger a state is, the more attractive it will be for other states and, therefore, either the promise to open the market to foreign exporters or the threat to close it will be more influential on the decisions taken by other governments (Drahos, 2003: 82). Second, the relative size of the domestic market makes it possible to assess the level of autonomy a country has to implement policies that limit the evil effects of foreign shocks, such as those suffered, for example, by Latin American countries in the eighties and some South-East Asian countries in the late nineties.

3.1.1. GDP by Purchasing Power Parity (PPP)

Almost all the literature reviewed in this study highlights the importance of the size of the economy as a crucial variable when it comes to measuring the economic power. We have chosen

to analyse GDP by PPP because it makes it easier to compare the GDP of different countries, since it takes into account different exchange rates, thus providing a more accurate approximation than the GDP measured on the basis of the relative income level.

As can be observed in Table 1, over the last 20 or 30 years, most developing countries grew faster than developed countries, which resulted in a change in the relative composition of world GDP. In fact, the evolution of GDP by PPP shows that between 1980 and 2011 the share of emerging countries went from 31% to 49%, whereas that of the G7 fell from 56% to 38%. In that sense, IMF forecasts point out that, in 2013, for the first time in modern history, the share of emerging countries in GDP by PPP will be greater than 50% and it would reach 55% in 2017.

Table 1 | Share in world GDP based on PPP
in percentage

	USA	Germany	Japan	India	Brazil	China	Russia	Indonesia	UNASUR	MERCOSUR	EU27	ASEAN 5 (*)
1980	24.6	6.7	8.8	2.5	3.9	2.2	n.a.	1.0	7.7	5.3	31.1	2.4
1990	24.7	6.2	10.1	3.2	3.3	3.9	4.2	1.2	6.3	4.3	28.5	2.9
2000	23.5	5.1	7.7	3.7	2.9	7.1	2.7	1.2	5.8	3.8	24.9	3.1
2011	19.1	3.9	5.6	5.7	2.9	14.3	3.0	1.4	6.0	3.9	20.1	3.6

(*) Indonesia, Malaysia, Philippines, Thailand and Vietnam.

Source: CEI based on IMF

Furthermore, according to the OECD (OECD 2012), during the next 50 years, developed countries would lose 22 percentage points of their share in world GDP. This share in world GDP would be capitalized by China and India, which, taken together, would have a share of 46% in the year 2060. In turn, the share of the rest of the world would remain constant at around 11% during that year (see Table 2). As a result of these changes in the composition of GDP, the GDP per capita of different countries will tend to converge: China's and India's GDP per capita would increase seven-fold over the next 50 years.

Table 2

Share in world GDP based on PPP

	2011	2025	2060	Change 2011 vs. 2060 in percentage points
China	17%	28%	28%	11
India	7%	11%	18%	11
China + India	24%	39%	46%	22
USA	23%	18%	17%	-6
Japan	7%	4%	3%	-4
Eurozone	17%	12%	9%	-8
Others OECD	18%	15%	14%	-4
Total OECD	65%	49%	43%	-22
Rest (*)	11%	12%	11%	0

* Argentina, Brazil, Indonesia, Russia, Saudi Arabia and South Africa.

Source: CEI based on OECD

3.1.2. Population

Another indicator – closely linked to the size of the domestic market – is the number of inhabitants, which should be taken into account when measuring a state's degree of economic independence. This indicator is also mentioned in almost every study which intends to measure the relative power of states. As early as 1957, Hans Morgenthau pointed out that, although it is not correct to consider that a country is powerful only because its population is larger, it is nonetheless true that no state can become a leading power if it is not one of the most densely populated in the world (Morgenthau, 1957: 160).

As can be observed in Table 3, the relative share of developed countries in the world's population has fallen as a result of a decline in birth rates. Evidence of this is the fact that only three of the 20 countries with larger populations – and which, taken together, account for 70% of the world's population – are industrialized countries, namely, the United States, Japan and Germany.

In 2010 more than four-fifths of the world's population lived in emerging countries and, within this group, China and India jointly accounted for one third of it. Even though China ranks first in this indicator, UNCTAD projections point out that China will be surpassed by India by 2021.

Table 3

Share in world population
in percentage

	1950	1960	1970	1980	1990	2000	2010
China	21.8	21.7	21.7	21.7	21.2	20.4	19.1
India	14.7	14.7	15.0	15.7	16.5	17.2	17.8
USA	6.3	6.2	5.7	5.2	4.8	4.7	4.6
Indonesia	3.0	3.0	3.2	3.4	3.5	3.5	3.5
Brazil	2.1	2.4	2.6	2.7	2.8	2.8	2.8
USSR/Russia	7.1	7.1	6.6	6.0	5.4	2.4	2.1
Japan	3.2	3.0	2.8	2.6	2.3	2.1	1.8
Germany	3.4	3.0	2.6	2.1	1.5	1.3	1.2
UNASUR	4.4	4.9	5.2	5.4	5.6	5.7	5.7
MERCOSUR	3.0	3.2	3.4	3.5	3.6	3.6	3.6
ASEAN	6.8	7.2	7.7	8.1	8.4	8.6	8.6
Eurozone	10.0	8.9	7.9	6.8	5.6	5.1	4.8
Developing countries	73.9	75.8	78.0	80.4	82.9	84.2	85.1
Developed countries	26.1	24.2	22.0	19.6	17.1	15.8	14.9
World	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(*) Indonesia, Malaysia, Philippines, Thailand and Vietnam.

Source: CEI based on UNCTAD

3.1.3. GDP per capita

The analysis of the GDP per capita throws some light on domestic demand conditions. During the last two decades – though more noticeable as from 2000 – the significant increase in the GDP per capita of most developing countries resulted in improved domestic market conditions.

As can be observed in Table 4, whereas the GDP per capita of developed countries grew above the world average in the eighties, it went down in the nineties and fell even deeper in the last ten years. In this sense, the case of China stands out, since its GDP per capita has grown above 9% on average over the last three decades. As a result of this, China's GDP per capita increased 30-fold, leaping from just over USD 200 in 1980 to more than USD 6,000² in 2012. Although with much less weight at global level than that of China, the case of Indonesia is also outstanding, since, in the first decade of the 21st century, Indonesia's GDP per capita increased by 14.5% on average, thus soaring from USD 585 to USD 3,492 over the whole period under study (1980-2011).

² As estimated by IMF as from October 2012.

Table 4

GDP per capita

Average annual growth rate and value

	Average annual percentage change				Current dollars				
	70-80	80-90	90-00	00-10	1980	1990	2000	2010	2011
Brazil	5.7	0.9	1.2	2.6	1,256	3,172	3,762	11,089	12,276
Germany	2.8	2.0	1.2	1.0	10,750	19,593	23,020	40,513	43,484
USA	2.4	2.7	2.5	0.8	12,249	23,198	35,252	46,811	47,708
Indonesia	5.3	3.5	2.7	14.5	585	634	800	2,981	3,492
China	3.9	9.2	9.5	10.2	205	341	946	4,423	5,241
India	0.9	3.3	4.0	6.4	266	384	465	1,370	1,566
Japan	2.8	3.9	0.8	0.8	9,312	25,140	37,304	42,863	46,105
USSR/Russia	3.9	2.8	-1.6	5.7	n.a.	576	1,775	10,408	12,890
Eurozone	2.9	2.0	1.5	0.8	9,935	19,149	19,825	36,597	39,299
ASEAN	4.7	2.5	3.3	4.1	558	814	1,159	3,146	3,608
MERCOSUR	4.4	0.4	1.5	2.9	1,803	2,939	4,359	10,267	11,857
UNASUR	3.6	0.1	1.5	3.0	1,917	2,510	3,834	9,283	10,330
Developing countries	3.4	1.4	3.1	4.6	781	958	1,456	3,703	4,222
Developed countries	2.6	2.6	2.0	1.0	9,700	19,308	25,705	39,456	42,071
World	1.9	1.5	1.4	1.5	2,679	4,207	5,293	9,178	9,998

Source: CEI based on UNCTAD and IMF

3.1.4. Share in the imports of goods

As mentioned earlier, the amount of market share in the imports of goods is of paramount importance when it comes to trade relations, since the bargaining power is directly linked to the share a country has in a particular market.

As from 1990, developing countries have had a greater share in world imports and this tendency has been reinforced in the last decade. And, although the USA continues being the first importer, its relative share has decreased, as has that of Europe and Japan. In contrast, some developing countries have gained relevance. While the cases of China and India stand out, the cases of Russia, Indonesia and Brazil – which have increased their relative share in world imports over the last decade – are also worth mentioning (see Table 5).

Table 5

Share in world imports
in percentage

	1950	1960	1970	1980	1990	2000	2011
USA	15.0	11.9	12.9	12.4	14.4	18.9	12.3
China	0.9	1.9	0.7	1.0	1.5	3.4	9.5
Germany	5.0	9.0	10.6	10.0	9.6	7.4	6.8
Japan	1.5	3.3	5.7	6.8	6.6	5.7	4.6
India	1.7	1.7	3.0	0.7	0.7	0.8	2.5
USSR/Russia	2.3	4.1	0.7	3.3	3.4	0.7	1.9
Brazil	1.7	1.1	0.9	1.2	0.6	0.9	1.3
Indonesia	0.7	0.4	0.3	0.5	0.6	0.6	1.0
UNASUR	6.1	4.4	3.0	3.2	1.6	2.3	3.2
Eurozone	22.9	27.8	34.3	34.3	34.8	28.5	25.1
ASEAN	4.6	3.4	2.5	3.2	4.5	5.7	6.3
MERCOSUR	3.6	2.2	1.5	1.8	0.8	1.3	1.8
Developing countries	32.2	30.0	23.0	27.9	26.1	30.3	43.3
Developed countries	67.8	70.0	77.0	72.1	73.9	69.7	56.7

Source: CEI based on UNCTAD

Whereas China is playing an increasingly leading role as world importer, the United States is losing its relative share. Evidence of this is the fact that in 1980 China was the main export destination for 1% of the countries, whereas in 2010 it was the main destination for 10% of them. In contrast, the USA was the most important market for 28% of the countries in 1980, while in 2010 it was so only for 20% of them (see Table 6). This indicator – which was not found in the literature reviewed – shows that China's bargaining power has increased considerably, since gaining access (or not) to its market is something that affects a growing number of countries.

Table 6

China and USA: Importance as destination of third countries' exports

Year	Percentage of countries whose first export destination is China or the USA		Percentage of countries that exported to these destinations	
	China	USA	China	USA
1980	1%	28%	59%	94%
1990	0%	29%	72%	96%
2000	2%	27%	85%	96%
2010	10%	20%	95%	98%

Source: CEI based on COMTRADE

3.2. Self-financing

Holding foreign currency to finance those imports which are crucial for setting the economy in motion – such as energy, inputs or capital goods – provides a country with greater freedom of manoeuvre to implement economic policies. Whereas the indicators mentioned in the previous section refer to both aspects of economic power, namely, i) the capacity of a country to influence others and ii) the capacity to act independently, the indicators described below are exclusively related to the latter.

3.2.1. Current account balance

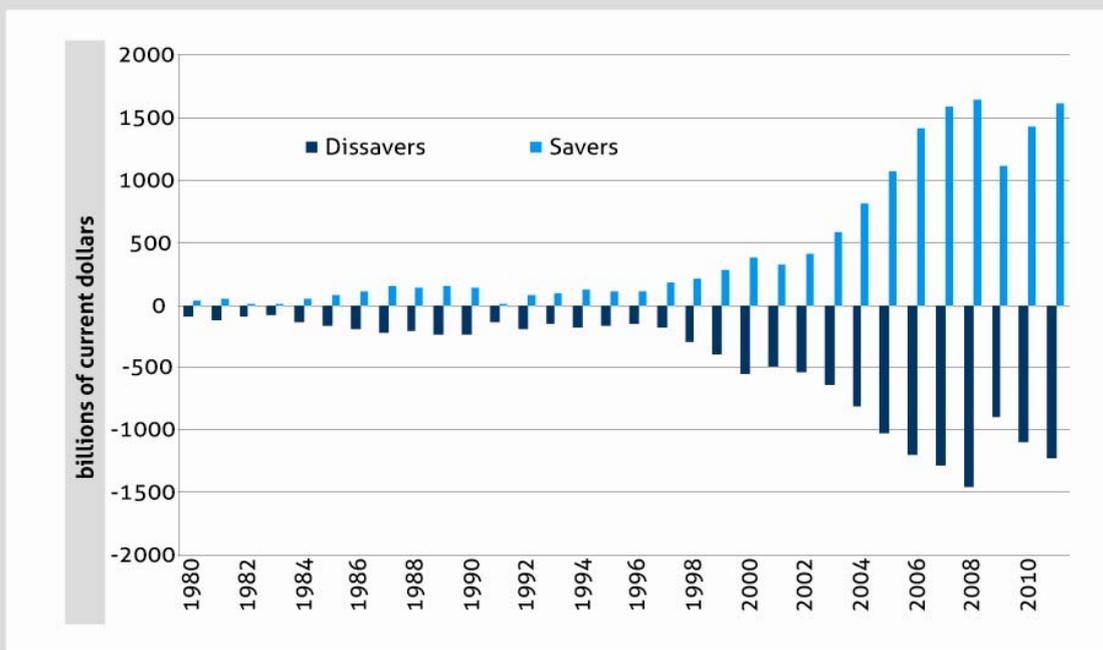
The current account mirrors a country's foreign savings: a deficit indicates dissaving with respect to the rest of the world, while a surplus indicates a creditor position against third countries. A prolonged imbalance throughout time reduces economic authorities' freedom of manoeuvre, since it is usually necessary to resort to external financing to bridge the gap.

The USA and many European countries (taken together) are economies which over spend on goods and services at global level, whereas Germany, the oil producing countries, China and Japan have become major savers in the world economy over the last decades. The gradual increase in both household and government indebtedness in deficit economies has financed the increase of expenditures.

The growing imbalances in the international savings scheme show that countries facing constant current account deficits are increasingly dependent on external financing, because those deficits have a direct impact on both public and private indebtedness. High levels of indebtedness, such as those the USA, Japan and most of the Eurozone countries have, restrict the room for manoeuvre to implement autonomous policies, since part of future revenues is allocated to debt service payment. The cases of Greece, Spain, Portugal and Ireland are paradigmatic.

Graph 1

Aggregate current account
in billions of dollars



Source: CEI based on IMF

Table 7

Aggregate current account
in billions of dollars

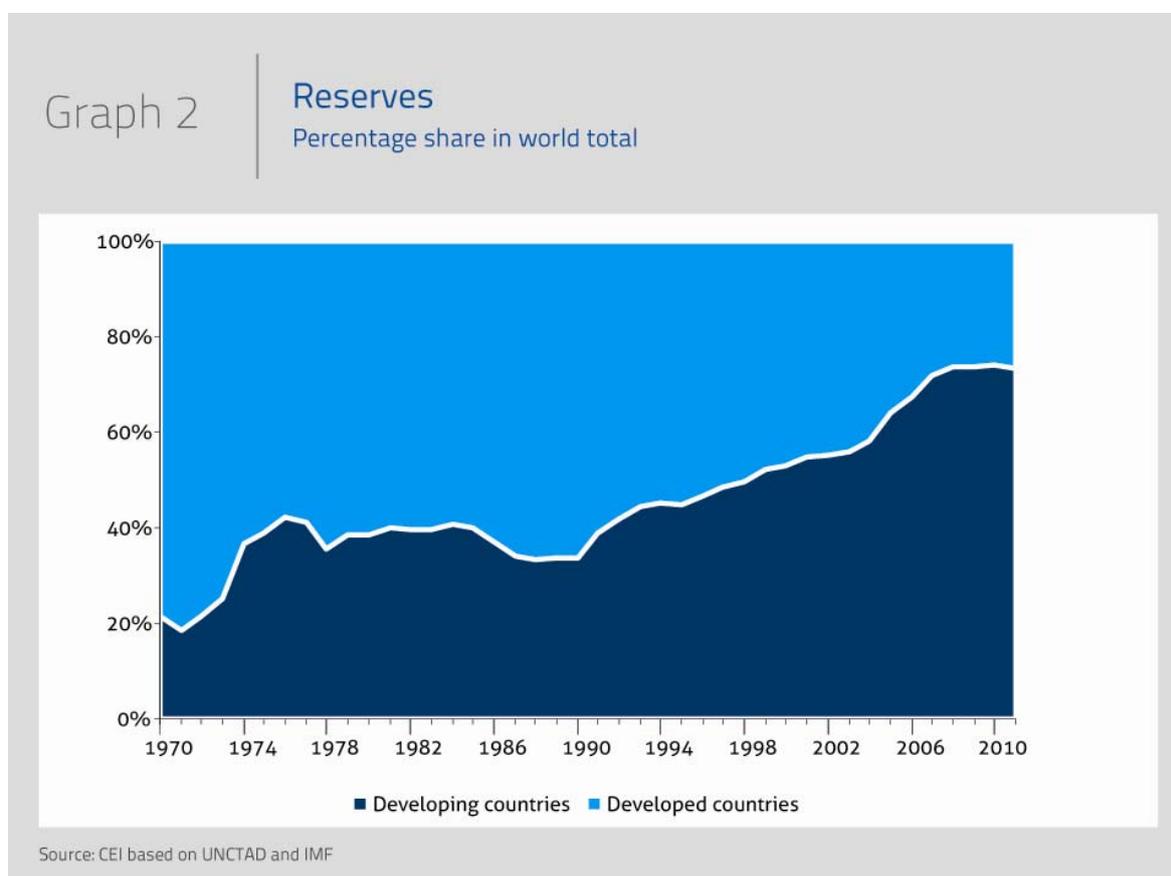
	1980	1990	2000	2010	2011
Germany	-14	45	-33	200	204
China	0	12	21	238	202
Japan	-11	44	120	204	119
Russia	n.a.	-1	47	70	99
Indonesia	3	-3	8	5	2
Brazil	-13	-4	-24	-47	-52
India	-2	-8	-5	-52	-63
USA	2	-79	-416	-442	-466

Source: CEI based on IMF

3.2.2. International reserves

International reserves reflect the stock of foreign currency available in the hands of economic authorities, whose freedom of manoeuvre to implement autonomous monetary and exchange rate policies is partly determined by these reserves.

Over the last four decades there has been a sustained increase in the reserves developing countries have and, in particular, in those of China, which accounts for 30% of the total of those reserves (Graph 2). Moreover, the reserves as a share of GDP have increased in some countries with large energy reserves (Saudi Arabia and Russia), as well as in those countries which have suffered the effects of the crisis whose epicentre was South-East Asia (Korea, Singapore, Taiwan).



Over the last three decades, protected by its condition as a reserve currency issuer at world level, the USA has implemented a reserve reduction policy, which led reserves to drop from 15% of GDP in 1970 to slightly above 1% of GDP in 2011. This situation allowed the USA to maintain a current account deficit over the last three decades, since in order to finance said deficit it only needs to issue debt. Although this started to be a subject of debate when the euro was launched (and, to a lesser extent, when the yuan popped up as a result of the Chinese economic boost), it still constitutes a cornerstone of the US global dominance.

It is very likely that the US dollar will continue being the global reserve currency and, whereas this situation remains unchanged, the USA will continue enjoying a privileged position with respect to the rest of the world. Yet, the size and the dynamism of the Chinese economy suggest that the yuan will eventually gain greater relative weight. In this sense, the World Bank's Global Development Horizons 2011 report forecasts that the most probable scenario towards 2025 will be a "multi-currency" system based on the US dollar, the euro and the yuan.

3.2.3. Share in world exports

The share in world exports has an ambiguous effect on a country's economic power. On the one hand, as was mentioned above, a large domestic market makes the economic performance within

national boundaries less vulnerable to external shocks, since the domestic market serves to mitigate the consequences of steep falls in global aggregate demand. In this sense, being largely dependent on exports may imply a sign of weakness.

On the other hand, however, the closure of export markets may work as an important international instrument of pressure (international embargos constitute the most typical example). Moreover, exports provide a country with the amount of foreign currency they require to import inputs and capital goods, which are necessary to walk along the path of economic development. Consequently, having a significant share in world exports may also be a sign of strength.

As can be observed in Table 8, during the last decade, China has become the world's leading exporter of goods, thus displacing Germany from that position. In turn, the USA, which had lost the leading position in the eighties, gradually reduced its share in world exports to 8% in 2011, that is, half of the share it had in 1950. Japan and Germany have also lost relative weight. In this sense, it is worth highlighting that, after having fallen to 23.6% of total world exports in 1970, developing countries' exports accounted for 47.3% in 2011, implying a growth of 24 percentage points over the last four decades.

Table 8 | Share in world exports
in percentage

	1950	1960	1970	1980	1990	2000	2010	2011
China	0.9	2.0	0.7	0.9	1.8	3.9	10.3	10.4
USA	16.2	15.1	13.6	11.1	11.3	12.1	8.4	8.1
Germany	3.9	10.5	12.2	10.3	11.8	8.5	8.2	8.1
Japan	1.3	3.1	6.1	6.4	8.3	7.4	5.0	4.5
USSR/Russia	2.9	4.3	4.0	3.8	3.0	1.6	2.6	2.9
India	1.9	1.0	0.6	0.4	0.5	0.7	1.5	1.7
Brazil	1.8	1.1	0.9	1.2	0.6	0.9	1.3	1.3
Indonesia	0.7	0.4	0.3	0.5	0.6	0.7	0.9	1.0
UNASUR	7.8	5.0	3.7	3.2	2.5	2.6	3.7	3.7
Eurozone	18.8	28.1	33.4	30.8	35.2	29.7	25.6	25.6
ASEAN	6.1	3.6	2.0	3.6	4.1	6.7	6.8	6.8
MERCOSUR	4.6	1.9	1.5	1.5	1.3	1.3	1.9	1.9
Developing countries	37.2	29.2	23.6	33.7	27.6	34.2	46.1	47.3
Developed countries	62.8	70.8	76.4	66.3	72.4	65.8	53.9	52.7

Source: CEI based on UNCTAD

3.3. Innovation and technology

Although the variables that serve to assess the relative weight of a certain country in the world economy (GDP, GDP per capita, current account, etc.) are the most frequently mentioned in the literature, several authors (Treverton and Jones, 2005; Tellis, 2000, among others) claim that

economic power has to be measured not only by taking the market share into account but also the capacity for innovation.

Given the difficulty in finding time series that measure public spending on research and development – an indicator generally used to assess a country’s capacity for innovation –, we have chosen to compare the origin of the patents granted in the USA. This indicator, which is also usually used in the specialized literature, provides us with data for the whole period under analysis.

3.3.1. Patents granted by the USA

Although, as Table 9 shows, the USA maintains its leading role when it comes to registering patents according to origin, there has been a sharp increase in Japan’s share – over 20% patents registered in 2011 – and, to a lesser extent, in South Korean’s share. It is also worth highlighting the relative growth of China, which – despite not having an outstanding share in the total of patents – went from practically having no register at all to accounting for 1.4% of the patents registered in 2011.

Table 9 | Share in total of patents by origin and by year of grant in percentage

Origin	1963	1970	1980	1990	2000	2011
USA	81.4	73.1	60.4	52.4	54.0	48.4
Japan	0.9	4.1	11.5	21.6	19.9	20.6
South Korea	0.0	0.0	0.0	0.2	2.1	5.5
Germany	5.1	6.9	9.4	8.4	6.5	5.3
Taiwan	0.0	0.0	0.1	0.8	3.0	3.9
Canada	1.3	1.7	1.8	2.1	2.2	2.2
France	1.9	2.7	3.4	3.2	2.4	2.0
United Kingdom	4.0	4.6	3.9	3.1	2.3	1.9
China	0.0	0.0	0.0	0.1	0.1	1.4
Israel	0.0	0.1	0.2	0.3	0.5	0.9
Subtotal	94.6	93.0	90.6	92.2	92.9	92.1

Source: CEI based on U.S. Patent and Trademark Office

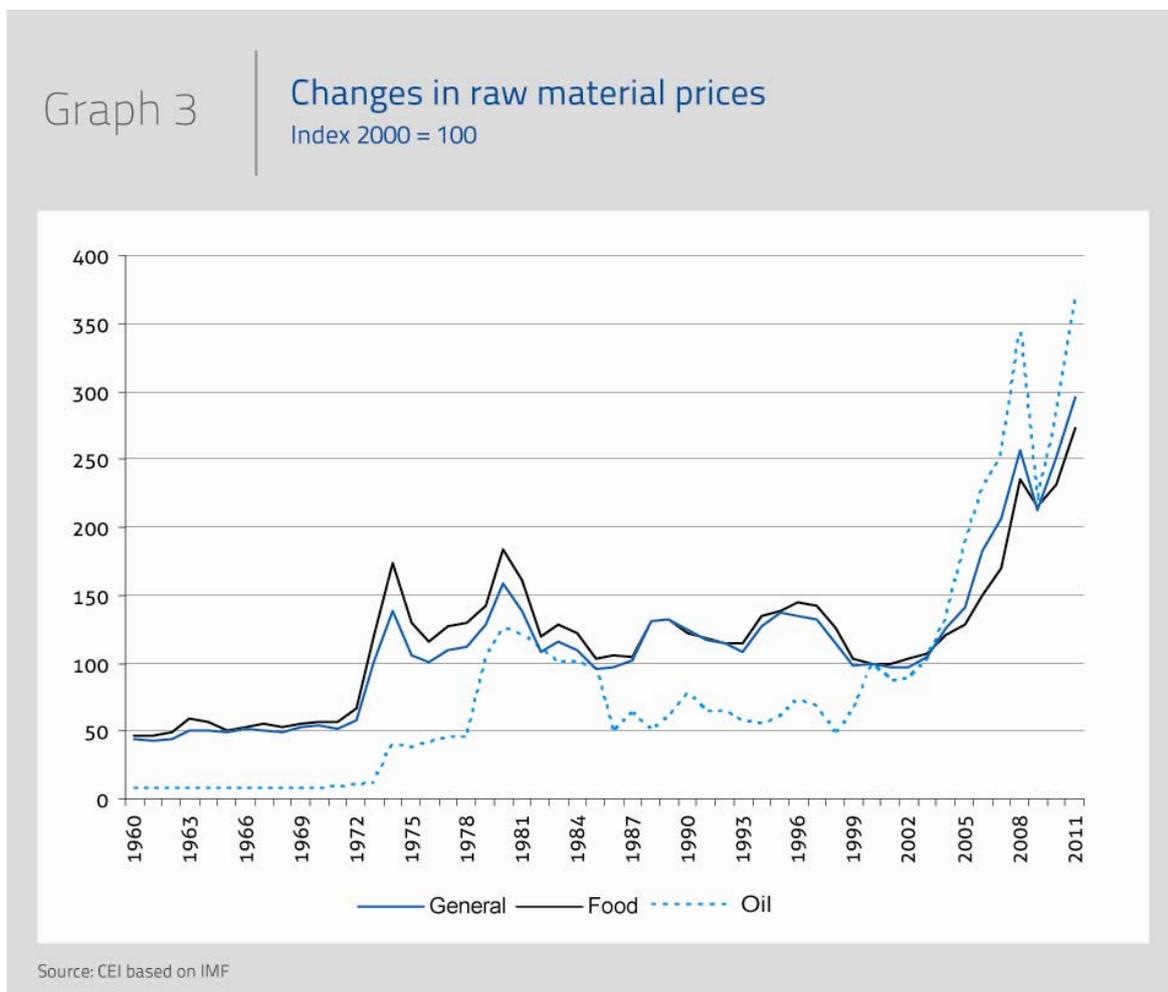
On the other hand, it is striking that among the first 20 origins of patents registered in the USA only two of these origins are emerging countries (China and India). In any case, it is clear that the technological gap – at least as measured by this indicator – is still very large in absolute terms.

3.4. Self-sufficiency in raw materials

Although technology has changed over time and, as a consequence, certain raw materials have acquired greater importance than others, countries have always strived for being self-sufficient in those goods. Most of the authors who have paid attention to this aspect of power seem to

coincide in the importance of two raw materials: food and oil. Therefore, we will focus our analysis on both food and oil in order to measure the capacity for self-sufficiency.

Over the last decade – especially during the last five years – there was a marked increase in the prices of raw materials (Graph 3), which has left those countries which depend on imports for their food supply in a more vulnerable position. Evidence of this were the recent famines in some African and Asian developing countries.



3.4.1. Food trade balance

The food trade balance has been used as an approximation to food self-sufficiency.

Of the twenty countries having the largest average food trade surplus, only four of them are developed countries (namely, the USA, Australia, New Zealand and Norway), and Brazil and Argentina rank first in this group. In contrast, the EU, Russia and Japan recorded an average food trade deficit over the last three decades (Table 10).

Table 10

Food trade balance

in billions of dollars

	1980	1990	2000	2010	2011
Brazil	6.9	6.6	9.1	52.4	67.1
Argentina	4.6	6.8	10.2	32.3	42.5
Thailand	2.5	4.9	7.2	16.4	20.6
USA	18.8	12.4	3.1	15.0	17.2
Indonesia	0.3	1.7	2.2	14.2	16.1
India	1.2	2.0	3.1	5.9	11.8
Germany	-12.6	-15.9	-10.9	-12.2	-15.5
Saudi Arabia	-4.1	-3.0	-4.9	-13.6	-15.7
Rep. of Korea	-0.9	-1.8	-5.1	-14.2	-19.2
EU	-21.5	-15.6	-8.5	-19.2	-20.2
Russia	n.a.	n.a.	-2.9	-20.5	-20.4
China	-0.1	3.2	4.5	-15.4	-21.3
Japan	-15.1	-32.4	-46.4	-59.3	-74.3

Source: CEI based on WTO

It is worth highlighting that China recorded a food trade surplus until 2008 when, along with a sharp increase in raw material prices, it recorded a food trade deficit. Thus, among all the variables analysed herein, this is the only one that shows an unfavourable trend for China.

3.4.2. Oil trade balance

Over the last decade, the relative importance of hydrocarbons has gradually decreased as compared to that of other types of energy. Nevertheless, oil continues being of paramount importance in the current world's production system. It is for this reason that oil self-sufficiency has become one of the areas of the distribution of economic power that cannot be neglected.

Global oil reserves are highly concentrated: 78% of them can be found in only eight countries, of which seven are located in Asia (Saudi Arabia, Russia, Iran, United Arab States, Qatar, Kuwait and Iraq), and one in Latin America (Venezuela).

China and India, the two states which have more strongly emerged in the world economic scene, are not only lacking in the necessary oil market share, but also the gap between their oil production and consumption levels has increased as their industrialization process has moved forward. The same phenomenon can be observed in some of the most developed countries in the world: Germany, Japan and the USA have also recorded a growing oil deficit (Table 11).

Table 11

Oil foreign trade balance

in billions of dollars

	1980	1990	2000	2010	2011
Saudi Arabia	101	40	71	215	318
Russia	n.a.	n.a.	36	206	278
Iran	n.a.	n.a.	n.a.	85	120
United Arab Emirates	19	17	27	75	112
Qatar	5	3	11	73	105
Kuwait	19	6	18	62	97
Venezuela	n.a.	n.a.	27	61	87
Iraq	n.a.	n.a.	n.a.	48	74
Algeria	13	12	21	56	72
Brazil	n.a.	3	7	22	32
Indonesia	-13	-4	-2	9	18
India	-7	-5	-14	-63	-85
Germany	-24	-16	-29	-79	-88
Rep. of Korea	-6	-6	-25	-69	-101
Japan	-61	-44	-58	-134	-182
China	3	-2	-14	-143	-211
USA	-72	-55	-108	-283	-349

Source: CEI based on IMF

4. Towards a multipolar world?

Graph 4 intends to schematically present a qualitative synthesis of the behaviour shown by eight countries and the European Union/Eurozone considering the indicators analysed in the foregoing sections. The signs ▲, ▼ or = point out what the recent trend of each variable is for each country.

The table reveals that Germany, the USA, Japan and the EU are losing part of their share in all or almost all the indicators considered. In contrast, developing countries – with certain nuances – seem to be gaining, little by little, a greater share in those indicators.

In particular, the analysis presented in the foregoing sections shows empirical evidence that China and, to a lesser extent, India could gain, over the last three decades, a greater market share to the detriment of developed countries. Although China shows an unfavourable trend in terms of self-sufficiency in raw materials (oil and food), this can be explained by two factors: i) the demand of increasing amounts of energy as a result of its rapid industrialization; and ii) the introduction of animal proteins into the diet of its population, which encourages the consumption of food.

Graph 4

Summary

	GDP ppp	Population	GDP per capita	Imports	Exports	Food	Oil	Reserves
Germany	▼	▼	▼	▼	▼	▼	▼	▼
Brazil	=	▲	▲	=	▲	▲	▲	▲
China	▲	=	▼	▲	▲	▼	▼	▲
USA	▼	▼	▼	▲	▼	▲	▼	▼
Japan	▼	▼	▼	=	▼	▼	▼	▼
India	▼	▲	▲	=	▲	▲	▼	▲
Indonesia	▼	=	▲	▲	▲	▲	▲	=
Russia	▲	▼	▲	▼	=	▼	▲	=
EU/Eurozone	▼	▼	▼	▼	▼	▼	n.a.	n.a.

Source: CEI

Yet, these incipient changes in the distribution of global economic power do not seem to have a noticeable impact on the decision-making process of international economic institutions. Organizations such as the International Monetary Fund and the World Bank still reflect the post-war power structure. In other words, these changes in the distribution of global economic power – from a unipolar to a multipolar configuration – are not being accompanied by a greater multilateralization of the global economic decision-making process.

Developing countries, however, insist on the fact that the increasing participation of emerging economies leads to rethinking the configuration of global economic governance mechanisms. Thus, one of the major challenges of developing countries in the forthcoming years will be, precisely, to increasingly allow the post-war economic institutional structure to acquire a greater weight in the world economy so that it can adjust itself to the new configuration of global economic power.

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