



## The Rising Powers and Globalization: Structural Change to the Global System Between 1965 and 2005

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### Abstract

*This article critically assesses the increasingly prevalent claims of rapidly changing global power relations under influence of the 'rising powers' and 'globalization.' Our main contention is that current analyses of countries' degree of global power (especially for the BRICS) has been dominated by the control over resources approach that, although it gauges power potential, it insufficiently accounts for how this potential is converted into actual global might. By drawing on a unique and extensive dataset comprised of a wide array of political, economic, and military networks for a vast number of countries between 1965 and 2005, we aim to 1) reassess alleged changes in the structure of the world-system since 1965 and 2) analyze whether or not these changes can be attributed to globalization. We pay attention to the trajectories of the BRICS and to the possibly divergent structural evolutions of the political and economic dimensions that constitute the system. Our results show that despite a certain degree of power convergence between countries at the sub-top of the system, divergence continues to take place between the most and least powerful, and stratification is reproduced. Globalization is further shown to exacerbate this trend, though its effect differs on the political and economic dimensions of the system. Though the traditional 'core powers' might have to share their power with newcomer China in the future, this hardly heralds a new age in which the global system of power relations are converging to the extent that stratification is being undermined.*

**Keywords:** Sociology; Political Science; Global Studies; International Relations



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Recent developments have created the impression that the global power structure is shifting; new countries appear to be rising to prominence in the global system, while the traditional powers are stagnating or even declining. The economic and social transformations in the traditionally dominant Western powers, combined with the rise of the BRICS countries, including the spectacular rise of China, suggest that the era in which Western nations dominated the global system may be coming to an end, and that in the near future these countries may have to share power with these new rising powers (e.g., Cooper and Flesmes, 2013; Layne, 2009). Globalization is often identified as the primary cause of this alleged structural change (Friedman, 2005; Zakaria, 2008).

Globalization is employed here to denote a transformative process in which countries become more integrated and interdependent in the economic as well as political, social, and cultural subsystems. This process is said to cause countries to increasingly lose autonomy, to become more affected by domestic affairs in other countries, and to be more dependent on their relations with other countries. Scholarly communities and popular opinion contend that global power relations have changed irrevocably under influence of the globalization process and the subsequent rise of a number of non-traditional powers (e.g., Cooper and Flesmes, 2013; Friedman, 2005; Zakaria, 2008). Other authors, by contrast, maintain that this dominant perception insufficiently focuses on long-term stratification, the reproduction of hierarchy in global power relations, and the emergence of new inequalities (Cooper and Mo, 2013). World-systems scholars have found evidence confirming that, contrary to neo-liberal predictions, the processes associated with globalization reproduce existing inequalities in the world-system (e.g., Arrighi et al., 2003; Mahutga, 2006). Against the wide-spread allegations of large-scale change, the counterargument holds that globalization does not fundamentally challenge inequalities and in fact, may exacerbate them.

The BRICS countries are often seen as the prototypes of the new rising powers in the global system. The acronym refers to a set of countries (Brazil, Russia, India, China and (sometimes) South Africa) that all show a promise of rapid economic growth (Cooper, 2006; Cheng et al., 2007; Desai, 2007; Hancock, 2007), and that potentially may become important players in the global system. However, critics have already pointed to the enormous diversity amongst these five countries, not only regarding their current situation and history, but also with respect to their past economic growth rates and future prospects (Desai, 2007; Glosny, 2010; Armijo, 2007; Jacobs & Van Rossem, 2014). Economically, Armijo (2007) argues that what these countries share is economic size, not their economic growth, nor the opportunities for investments. This contention aside, these countries have all been regional powers for a while; Russia and China are global

superpowers, and all are quite active on the international scene. The potential of the BRICS countries is not exclusively economic but military and political as well.

The official statistics confirm that the economic trajectories of the BRICS countries vary widely. From the mid-20<sup>th</sup> century onwards, Brazil and India followed an import substitution industrialization strategy and have only recently become more free-trade oriented, while China had its initial industrialization following a communist economic strategy based on self-reliance. The Chinese economy only started liberalizing somewhat from the 1980s onwards when it started to pursue an export-led strategy. The Russian Federation also inherited an industrialized communist economy which shrank substantially in the early 1990s, experienced a dubious liberalization, and is now heavily dependent on the export of raw materials. Since 2000, all of the BRICS countries have experienced a higher average economic growth than the world as a whole. Where the world economy grew on an average of 2.7% each year over the period 2000-2014 (World Bank, 2016 & our calculations), China's economy grew by 9.7% and India's by 7.0% on average per year over this period. The three remaining BRICS countries, however, experienced less stellar growth rates over this period; Russia: 4.5%, Brazil: 3.3% and South-Africa: 3.2%. The BRICS countries' growing shares of world trade also show that their economies have become increasingly important in the global economy. In 2000, the 5 BRICS countries accounted for 6.34% of the total global exports in goods and services, and this increased to 16.48% by 2014. However, there are substantial differences among the BRICS, with China responsible for most of this gain. In 2000, China's exports accounted for 2.74% of total global trade, and by 2014 this had grown to 10.46%. By contrast, Brazil (from 0.87% to 1.12%) and South Africa (from 0.47% to 0.46%) saw their share of the global trade increase very little or not at all. The volume of trade does not determine the power a country derives from it, however, as trade flows may be sources of both power and dependency. Whether or not trade relations are a source of power or dependency, and to what extent, depends on the structure of a country's trade relations and how they are embedded in the global trade network.

The military potential of the BRICS also varies substantially. Russia, and to a lesser degree, China and India are nuclear weapons nations, while the other two BRICS countries are not. Russia is a former superpower that saw its military power decline substantially in the wake of the collapse of the USSR. Recently, however, Russia has started to rebuild its forces and has adopted a more assertive military strategy, not only towards NATO and neighboring countries, but also by involvement in international conflicts. Both its nuclear and conventional military capabilities remain strong (Xuetong, 2006; Hart & Jones, 2010). China's military power remains considerably weaker than Russia's, but the country has embarked on a process to modernize its forces (Sutter, 2003). Recently, China has become more assertive, establishing itself as a power in Asia and challenging both its neighbors and the USA (Holslag, 2015). India is a regional rather than a global

power (Sinha & Dorschner, 2010), and remains weak compared to the global military powers. Neither Brazil nor South Africa play any meaningful global military role. In 2011, China and Russia were placed 2nd and 3rd, respectively, in a ranking of 129 countries' military expenditures, accounting for 7.96% and 3.95% of worldwide military expenditures (SIPRI, 2012 & our calculations). The other BRICS countries also spend a lot on their militaries: India was ranked 8<sup>th</sup> (2.73%), Brazil was ranked 11<sup>th</sup> (1.94%) and South Africa was ranked 35<sup>th</sup> (0.30%). Note that the combined military expenditures of the BRICS are still dwarfed by those of the number 1 spender, the USA, which in 2011 accounted for 43.45% for global military expenditures. The BRICS are no match for the USA in terms of military expenditure. However, expenditures do not say it all. India and Brazil, for instance, may receive much less returns in terms of global military power than countries that spend far less, as they make little use of their military to project their power globally.

The BRICS' political power can be traced through the role played by these countries in international affairs. Both Russia and China are members of the UN Security Council, but they remained politically isolated for a long time because of their communist regimes. They only became more active on the international political scene after the collapse of the USSR and China's economic opening up to the world. Brazil and India, by contrast, have been politically prominent on the global scene, and stress their non-aligned position as advocates for the low- and middle-income countries. South Africa was politically isolated until the fall of the apartheid regime and after this started to play a more visible role on the international scene. All BRICS countries focus on international organizations to exert political influence. Brazil and India have been well-integrated since the mid-20<sup>th</sup> century, but Russia, China, and South Africa have only sought access to international organizations since the 1990s. All of them aim to mobilize regional blocs and developing nations to influence decision-making in these international organizations (Hart & Jones, 2010). Russia further attempts to restore its influence over the former Soviet states, while China attempts to assert its position in Asia and to establish ties with many African nations.

The available evidence confirms that the BRICS are a quite diverse lot. Economically, their performance and power varies widely, and they also differ substantially in military strength. They currently seem to follow similar strategies regarding their political power in the global system, although the economically and militarily stronger BRICS, Russia and China, also pursue more assertive strategies to gain political influence. However, these indicators are all based upon the possession of resources. This is especially the case for economic and military power. Although resources certainly can be sources of power, power also depends on how these resources are used. Systemic power is fundamentally a relational process, in which resources are used to create dependencies. The network approach to power and prominence stresses not only the relational

aspect of power but also the fact that each power relation is embedded in a structure of power relations.

Therefore, this paper examines whether and how globalization has affected the global power structure between 1965 and 2005. We question whether or not globalization impacts hierarchy and inequality in the global power structure, and what its impact is on mobility in this system. To weigh in on the above debate about the rising powers and the BRICS, we also aim to identify exactly which countries have benefited from globalization in terms of rising to power.

### **Prominence in the Global System**

Nobody will deny that the US is a more powerful country than Grenada, or that China is more powerful than Nepal. The structure of the hierarchical global power system reflects power differences among countries. This is the underlying idea behind the network studies of the world-system (Clark, 2010; Clark and Beckfield, 2009; Clark and Mahutga, 2013; Kick and Davis, 2001; Kick, McKinney, McDonald, and Jorgenson, 2011; Lloyd et al., 2009; Mahutga, 2006; Mahutga and Smith, 2011; Nemeth and Smith, 1985; Smith and White, 1992; Snyder and Kick, 1979; Van Rossem, 1996) that assume that more prominent countries are at an advantage compared to those that are less prominent or in the periphery.

Network studies conceptualize the world-system in a way that is quite unique and that differs from world-system analysis in some respects (e.g., Clark 2008; 2010; Clark and Beckfield 2009; Lloyd et al. 2009). Where world-systems analysis focuses on the type of production process in defining countries' position in the IDL and the world-system, SNA defines power and dependency by the patterns of power/dependency relations between countries, thus by partner dependency (Clark 2008; 2010). Notwithstanding these differences, Galtung's (1971) conceptualization of the "feudal interaction structure" (FIS) of the world-system illustrates how both are often strongly interrelated. The FIS is characterized by asymmetric and exclusive dependency relations between core and peripheral countries, symmetric and non-exclusive dependency relations among core countries, and the absence of relations among peripheral countries. This is also consistent with the idea that the power of A over B is relational in nature and stems from dependency of B on A, Emerson's (1962) arguments, and with arguments from organizational and open systems theory. These latter arguments are based on the contention that dependency stems from the ability of the other to create fluctuations which will have major effects on the functioning of the actor (Scott, 1992).

Inspired by Galtung's (1971) FIS, network analysis has proved to be a valuable tool in the study of the structure of the world-system. Due to the aforementioned differences, however, we refer here to the global system of power relations rather than to the world-system to denote the global network of dependency relations among countries.

The relationship between network prominence and power remains complex. It reflects power in the sense that it captures how power resources are converted into more stable (inter)dependency relations and thus create a global power structure. The position within this network can create advantages for countries. Following the FIS, for instance, core countries monopolize the flows of resources and information among peripheral countries, as the latter lack direct relations with each other. Such a brokerage position provides advantages (see Burt 1992). A diverse network of trading partners also limits vulnerability to the disruption of one or more of these relations. By strategically developing these dependency relationships, countries can punch above their weight in the global system. For instance, lesser developed countries (LDCs) have actively developed alliances and memberships to international organizations (IGOs) to improve their influence in the global system. Network prominence, therefore, reflects power as well as opportunities, visibility, and influence, and is the result of a country's resources and strategic action.

Following the (network) research tradition set forth by Snyder and Kick (1979), Kick and Davis (2001), and Van Rossem (1996), we include economic as well as military and political relations. Other world-system scholars have similarly pointed towards the need for more research into a multidimensional conceptualization of the world-system (e.g., Chase-Dunn, 1998; Kentor, 2000). Babones (2005) and Clark and Beckfield (2009) acknowledge that non-economic networks could be relevant in predicting a variety of (more non-economic) outcomes in the world-system. Thus, some states will rely more on economic power for global status or prominence, while others rely more on political and/or military power. It follows that a country's degree of power in the "global arena" can flow forth from its combined position on these various power networks, and countries' positions on these networks can vary substantially. These power networks must then be relatively autonomous and follow their own logic to a certain extent, though this does not imply that they are completely independent.

### **Globalization and the Global System**

Globalization is a catch-all term referring to a complex of interrelated transformations that affect practically the entire world and most of its population. Structurally, it refers to the increased flows and (inter)dependencies among countries and regions. These flows include people, trade, capital, information, communication, rules and regulation, etc. This implies that the networks connecting the countries become denser, stronger, and more multiplex as countries become connected in multiple ways. As part of the globalization process, countries become more integrated in the global system and more interdependent.

However, the question remains as to how this affects the structure of the global system. An often heard argument holds that globalization, or political and economic integration into the system, both directly and indirectly benefits countries' global economic and political positions,

and thus undermines stratification in the system (e.g., Friedman, 2005; Zakaria, 2008). By contrast, a considerable number of scholars, especially world-systems scholars, contest the above perspective that globalization undermines the stratified nature of the global system, and argue that it might in fact even reinforce systemic inequality (e.g., Arrighi et al., 2003; Clark and Beckfield, 2009; Mahutga, 2006; Wallerstein, 1974).

The dominant argument stemming from neo-liberal economics holds that growing interdependence through political and economic integration underpins development opportunities and economic growth (e.g., Dollar and Kraay, 2002; Dreher, 2006; Sala-i-Martin, 2002), whether it is because of greater trade openness (Frankel and Romer, 1999), economic liberalization (Collins and Bosworth, 1996; Sachs and Warner, 1997), or increased financial flows. The emergence of the new international division of labor (NIDL) (Fröbel, Heinrichs, and Kreye, 1980) and the expansion of neoliberal trade policy since the 1980s is especially believed to benefit developing countries. The relocation of production processes to developing countries, their ensuing industrialization, and inflow of foreign direct investments is expected to boost their domestic economies and facilitate integration into the global economy (e.g., Amsden, 2001).

Overall, globalization is said to decrease global income inequality (Firebaugh, 2003) and undermine the power hierarchy (e.g., Norberg, 2003) and centralization (Kim and Shin, 2002) in the world-system, ultimately “flattening out” the world (Friedman, 2005). Finally, scholars from the world polity tradition argue that integration of non-core countries into the world polity is causing stratification and core dominance in global political networks to decline (Beckfield, 2003, 2008; Boli, Loya, and Loftin, 1999; Meyer, Boli, Thomas, and Ramirez, 1997). The evidence here points towards a declining inequality in the world polity, at least regarding state intergovernmental organization (IGO) membership (Beckfield, 2003, 2008) and preferential trade agreements (Hafner-Burton and Montgomery, 2009).

The world-systems paradigm argues that the mechanisms inherent in the logic of the capitalist world-system reproduce the global hierarchy. The core’s ability to constantly shift to new and more innovative production processes that create more surplus value ensures core dominance. As the profitability of core-like processes decreases, these processes are relocated to the semiperiphery. Though this shift may underlie upward mobility for certain countries, especially in the semiperiphery, benefits do not accrue equally to all countries in the world-system. This process does not undercut hierarchy but sustains old forms of structural inequality. Wallerstein (2000, 2005) contends that what appears to be sudden, globalization-induced change, in fact reflects a combination of long term cyclical rhythms and secular trends inherent to the systemic mechanisms that underlie the workings of the world-system.

Arrighi et al. (2003), Mahutga (2006), and Mahutga and Smith (2011) focus on countries’ production processes to study the impact of globalization on structural inequality and economic

growth in the world-system. Arrighi et al. (2003) find that the mechanisms of both structural and ideological globalization (of the 1980s and 1990s) underlie the reproduction of the North-South income divide. Mahutga's (2006) analysis of commodity trade networks show that the core and a few semiperipheral countries benefitted disproportionately from the restructuring that began in the 1960s. These findings are compatible with other networks research on the world-system that find especially strong upward mobility of the middle tier states over those in the periphery (Clark, 2010; Mahutga & Smith, 2011). Indeed, most of the countries in the periphery or LDC's often lack the resources to exploit the globalization process to their own benefit.

Thus, to capitalize on globalization, countries do not only require the necessary infrastructure and resources, a stable political system, and a sufficiently well-educated population, but must also be integrated in the global system to a certain degree. Though all four BRIC economies have opened up to the global economy since the second half of the 20th century, the speed and degree to which they did varied significantly, as these four countries obviously possess very different material and relational resources. Both China's and Russia's communist systems largely isolated them from the international economy before the fall of the Soviet Union and the Chinese market reforms of 1978. The latter reforms were designed to achieve economic modernization through the gradual opening up to the global market economy (Geis & Holt, 2009). Underpinned by its enormous population size, China followed an export-oriented strategy to economic integration through large-scale industrialization and significant trade liberalization.

Though investment and consumer-driven demand are becoming increasingly important in Russia, the Russian economy is fueled by natural resources, including oil, natural gas, metals, and timber, which account for more than 80% of exports. This dependency on commodity exports and insufficient economic diversity leaves the country "vulnerable to fluctuations in world prices" (Cheng et al., 2007: 146). As Brazil and India are less industrialized than China, they rely much less on mass export as a means of domestic economic development and global economic integration. This translates into a significantly smaller share of the global economy and partially results from deliberate economic policy. Though Russia and China are permanent members of the UN Security Council, and their communist regimes restrained them to far more isolated, disadvantaged positions in terms of political power in the global system than was the case for Brazil and India as far back as 1965. Despite these differing starting points, all four countries followed similar strategies towards global political integration. These strategies include a combination of regional and south-south cooperation and cooperation within the BRICs to form political blocs within multilateral institutions and to promote opportunities for developing nations. We should not underestimate the political contradictions within these four countries, however, both in terms of competition for power on the world stage and in terms of their very divergent domestic political systems.

World-systems scholars do not deny the possibility of upward mobility, but this observed mobility is not seen to alter the inequalities in the system in any fundamental way. In fact, it is argued to even reinforce these inequalities and divides. Although some less prominent countries may benefit, the more prominent countries tend to benefit the most, reinforcing their dominance over the system.

In sum, the dominant focus on massive and large scale change and short term fluctuations (especially since the 1990s), has led the majority of scholarly research to disregard long-term continuity and stratification in the world-system; i.e. the persisting restraints experienced by the non-traditional powers and the reproduction of the structural hierarchy in the system. Although globalization may increase the density, strength, and multiplexity of the dependency relations among countries, it does not fundamentally challenge the dominance of the most prominent countries nor the FIS. Following the conflicting perspectives outlined above, this paper sets out to test the hypothesis that globalization reduced structural inequality in the global system between 1965 and 2005 by increasing the mobility of less prominent countries. The evolution experienced by the BRICS countries over this period is emphasized.

### **Measuring Global System Prominence**

Network analysis has been frequently used to operationalize the structure of and inequalities within the world-system. Most of these studies rely on blockmodel techniques that recover discrete strata with the global system (e.g., Nemeth and Smith, 1985; Smith and White, 1992; Snyder and Kick, 1979). More recently, several studies have started to use continuous measures of prominence, power, or centrality (e.g., Lloyd et al., 2009; Mahutga, 2006). For this paper we employ such a continuous prominence measure calculated on a series of dichotomous networks that capture economic, political, and military dependency relations among countries<sup>1</sup>. Each network tie represents a dependency relation between two countries. A tie from country B to country A implies B is dependent on A and that A, therefore, has some power over B. The rationale for these choices was taken from Van Rossem (1996). Dependent and overseas territories and colonies were considered dependent on their mother country for diplomatic relations, international alliances, and the presence of foreign troops. This method requires all network relations to be dichotomous.

*Economic relations* were operationalized using import and export dependency. Country B is considered import or export dependent on country A when the respective flow exceeds one percent of B's GDP. The rationale is that 1) the importance of a trade flow depends on the overall size of a country's economy, and 2) the trade flow must be substantial for it to constitute a dependency

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<sup>1</sup> Social network analysis often still assumes that relationships are dichotomous, either two nodes have a relationship, or they do not. All standard prominence, centrality, or power measures assume that the network is dichotomous and are based on the structure of present and absent ties among nodes. The prominence measure used here is no exception.

relation. For instance, Panama will be much more dependent on a country it exports one million dollars of goods to than the USA will be for the same amount. The data is based on both the IMF's Direction of Trade Statistics (IMF, 2010a) and the Correlates of War "International Trade" dataset (Barbieri and Keshk, 2012). We obtained GDP data from the World Bank's World Development Indicators (World Bank, 2011). Missing data was supplemented from the United Nation's Statistical Yearbook (United Nations, 2010) and from the IMF's Financial Statistics (IMF, 2010b). We imputed missing export flows from the corresponding import flow, and vice versa. As is the case with all official economic statistics, this data also underestimates both countries' real GDP and the real trade flows among countries. This is because the undocumented (illegal and informal) economy is not counted. Although all countries are vulnerable to such underestimation, one can expect this to be more pronounced in lower income countries. On the other hand, that the data collection is quite standardized is what makes the data quite comparable over countries and time.

For *political relations*, we included data on (1) diplomatic representation and (2) joint memberships of intergovernmental organizations. Diplomatic representation refers to the presence of an embassy of one country in another (Europa Publications, 2011). Many countries lack the resources to establish embassies in all countries with which they have diplomatic relations and will restrict themselves to establishing representation in countries that are politically most important to them. Joint membership of intergovernmental organizations was operationalized as the number of joint IGO memberships of two countries divided by the number of IGO memberships of the sending country (Pevehouse, Nordstrom, and Warnke, 2004). Countries with many joint IGO memberships are considered important by their partner countries not only due to their ability to exert a strong influence on global policy making, but also because they constitute important partners on the global political scene. As both IGO memberships and the presence of embassies are both quite public events, the quality of this data is excellent.

*Military relations* include (1) formal alliances, (2) the presence of foreign troops, and (3) trade in major weapon systems. The alliance data was obtained from the Alliance Treaty Obligations and Provisions Project (ATOP) (Leeds, Ritter, McLaughlin Mitchell, and Long, 2002), and the International Military Alliances Encyclopedia, 1648-2008 (Gibler, 2009). As with diplomatic relations, countries form alliances with others that are politically and strategically important to them. Though the presence of foreign troops in a country can either be hostile or peaceful and strategic, both instances represent dependency relations. The source of this data was the military balance (IISS, 1965 – 2005). Presence of troops as part of a United Nations peacekeeping force was excluded. Trade in major weapons systems refers to long term military relations between nations, as delivery of such systems often takes several years and usually requires government involvement and approval on both sides. Here, the country receiving arms was considered dependent on alter for weapons systems and thus for military support. The

information was collected from the yearly reports by the SIPRI (SIPRI, 1965-2005). To the extent that weapon deals, treaties, and the presence of troops are kept secret, these indicators will underestimate the military relations among countries.

### **Prominence Measures**

To operationalize *global system prominence*, we created a measure that would capture Galtung's FIS (1971). Hummel and Sodeur's (1987; see also Burt 1990) triad census method, which was originally developed to measure role equivalence, proved a useful starting point. Although originally used to estimate blockmodels of the world system structure (Van Rossem, 1996), the triad censuses can also be used to calculate prominence indicators. Triads are the smallest part of a network that still provide information about the structure of the network. In this study, prominence is operationalized as the scores on the first principal component of the relative triad censuses for all networks involved. Separate prominence indicators were generated for the economic, military, and political networks, as well as an overall global system prominence indicator. We validated these indicators by comparing them to other prominence or centrality measures.

Past research has relied on a wide range of network-based indicators to operationalize the structural inequalities in the world-, global or international system. The earliest studies relied mainly on blockmodelling approaches that placed countries in distinct positions or roles (such as core, semiperiphery and periphery) (e.g., Nemeth and Smith, 1985; Smith and White, 1992; Snyder and Kick, 1979; Van Rossem, 1996). One drawback of such methods is that the boundaries of the blocks are always arbitrary to a certain degree and that they ignore the often substantial differences in power and importance of countries within a given block. For instance, both the US and Luxembourg may be core countries, but few would argue that they are equally important in the global system. The use of continuous prominence or centrality measures overcomes this problem (e.g., Lloyd et al., 2009; Mahutga, 2006; Kim, 2010). However, common prominence or centrality measures (degree, betweenness, eigenvalue), like the blockmodels, are network specific and do not allow for easy comparison between networks or over time. Furthermore, these prominence measures are not easily extended to multiplex networks in which countries are related through multiple ties. The advantage of the triad census-based prominence indicators compared to others is that they allow comparison over time because the indicators are standardized over the entire period studied and can readily be used on multiplex networks. We operationalized mobility as the change in economic system or global system prominence between two consecutive years. The evolution of unequal integration in the world-system, which can also be interpreted as unequal spread of status or prominence relations between countries in the system, was studied by analyzing the standard deviations of the prominence measures over time.

## Globalization and Growth

Globalization is operationalized using the KOF<sup>2</sup> index, which offers countries' degree of social, economic, and political globalization for every year since 1970 (see Dreher, 2006; Dreher, Gaston, & Martens, 2008; KOF Swiss Economic Institute, 2015). These indexes combine indicators that measure the degree to which countries have been penetrated by (or their openness to) the world economy, polity, and society. In order to assess the overall intensity of globalization in the world in any given year, we aggregated the country-level scores to compute a global index of globalization. The economic globalization score was weighted by the GDP of the country, while the political and social globalization scores were weighted by population size. *World economic growth* was measured using the World Development Indicators' annual real GDP growth variable (World Bank, 2011).

## Overall Inequality

The results, presented in

Figure 1 and **Error! Reference source not found.**, confirm the stratified structure of the global system, with countries varying substantially in their level of global system prominence. The distribution of this global system is very skewed towards the higher end. The overwhelming majority of countries cluster around the lower end of the distribution, while only a few countries score towards the higher end. As the mean score on the global system prominence indicator for the period 1965-2005 equals 0 (with a SD = 1), the minimum score observed was -1.05 for Vanuatu in 1980, while the maximum score was 9.56 for the USA in 2004. The histograms in Figure 1 show a change in the distribution of the global prominence scores over time; a decline can be noted in the proportion of countries with the very lowest scores, where the proportion of those with slightly higher scores has risen. This is also confirmed by the Kolmogorov-Smirnov tests shown in Table 1.

The distribution of the global system scores in 2005 was significantly different from that in 1965. Note, however, that the most substantial change in this distribution took place in the earliest part of the period studied, between 1965 and 1975. No significant change was observed in any of the subsequent decades. In 1996, the top-10 countries were: 1) United Kingdom, 2) France, 3) United States, 4) German Federal republic, 5) Netherlands, 6) Italy, 7) Belgium, 8) Canada, 9) Japan, and 10) Denmark. In 2005, the top consisted of 1) United States, 2) Germany, 3) United Kingdom, 4) France, 5) Italy, 6) Netherlands, 7) China, 8) Belgium, 9) Singapore, and 10) Russia. Note that 7 of the 10 countries are the same in 2005 as in 1965.

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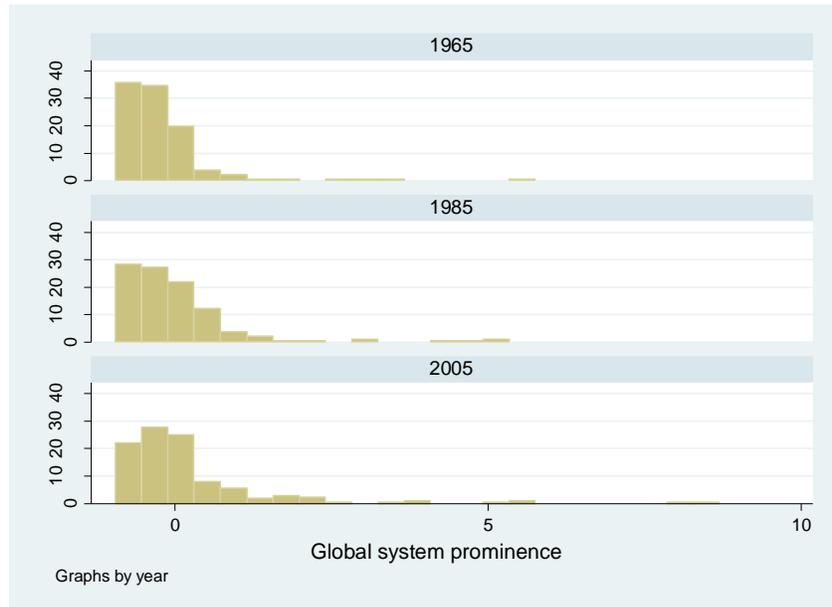
<sup>2</sup> KOF = "Konjunkturforschungsstelle", which means business cycle research institute

**Table 1: Kolmogorov-Smirnov Tests for Comparisons of System Prominence Indicators in Selected Years**

		Global system prominence	Political system prominence	Economic system prominence	Military system prominence
1965	1975	0.183**	0.253***	0.557***	0.161*
	1985	0.177**	0.202**	0.588***	0.192**
	2005	0.220***	0.263***	0.631***	0.272***
1975	1985	0.093	0.122	0.192**	0.149*
1985	1995	0.077	0.135*	0.161**	0.247***
	2005	0.088	0.103	0.469***	0.221***
1995	2005	0.109	0.123 <sup>§</sup>	0.443***	0.066

Significance: <sup>§</sup>:  $p < 0.100$ , \*:  $p < 0.050$ , \*\*:  $p < 0.010$ , \*\*\*:  $p < 0.001$

**Figure 1: Distribution of Global System Prominence, 1965, 1985, & 2005**



We attribute the finding that the UK and France are more prominent than the US early in the studied period to the importance of their (post)colonial networks. It is only in the second half of the studied timeframe that the importance of these networks decreases. Furthermore, several small, highly developed nations with an open economy and that value international relations, such as the Netherlands and Belgium, and more recently Singapore, also make it to the top. The bottom of the hierarchy mainly consists of dependent territories and small island nations.

The BRICS countries were mainly in the sub-top of the distribution as early as 1965, with the USSR ranked 20<sup>th</sup>, India 22<sup>nd</sup>, Brazil 27<sup>th</sup>, South Africa 45<sup>th</sup>, and China 70<sup>th</sup> out of 176. China was still relatively isolated from the global system, following a self-reliance strategy towards development. By 1985, however, China had climbed to the 18<sup>th</sup> position (out of 187), and by 2005, to place 7 (out of 212). The USSR (and later Russia) was also upwardly mobile, reaching a 9<sup>th</sup> place in 1985 and a 10<sup>th</sup> in 2005, i.e., behind China. India’s position in the hierarchy changed little over time, taking place 33 in 1985 and 25 in 2005. Little changed for Brazil, as it rose to place 22 in 1985, but dropped back to place 41 in 2005. The effectiveness of the international campaign against South Africa is demonstrated by the finding that by 1985 South Africa had dropped to a 123<sup>rd</sup> place, only to become reintegrated in the global system after the end of the apartheid regime, climbing to place 33 in 2005.

**Table 2: Correlation Matrix for Prominence Indicators (pooled over all years)**

Global system prominence	Political system prominence	Economic system prominence	Military system prominence

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Global system prominence	1.000			
Political system prominence	0.683	1.000		
Economic system prominence	0.898	0.425	1.000	
Military system prominence	0.872	0.373	0.740	1.000

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All correlations are significant at  $p < 0.001$

We conceptualize the global system is conceptualized as a multiplex network. Table 2 shows that the prominence in the three subnetworks, political, economic, and military, are all strongly correlated with the global system prominence; although, the correlation for political system prominence is somewhat lower than those for economic and military system prominence. Political system prominence also has only a medium-strength correlation with the prominence scores in the two other systems.

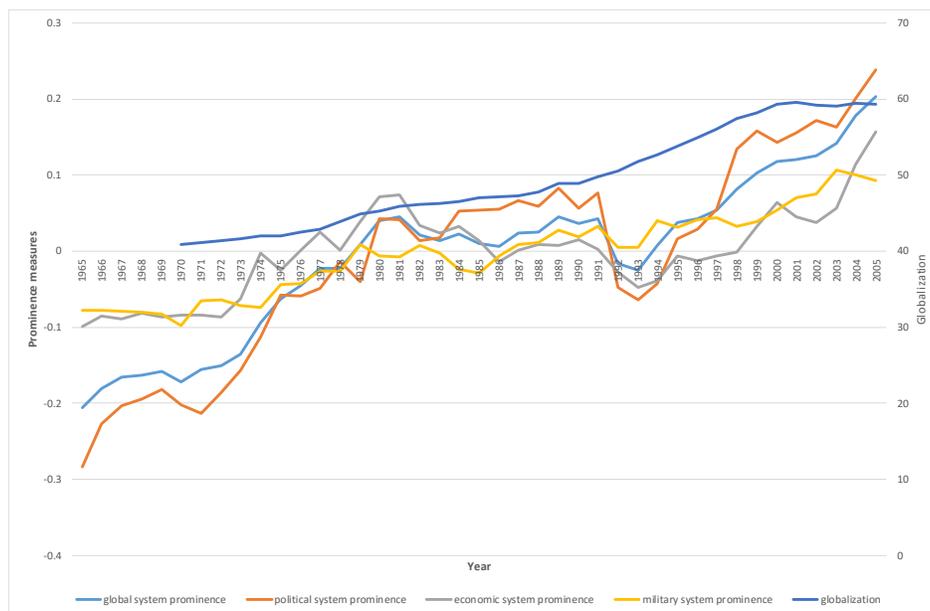
This indicates that the political system follows a somewhat different logic than the others. Economic and military system prominence are more directly related to resources (either in terms of GDP or population), while for the political system these resources are considerably less important, allowing smaller or poorer nations to pursue political prominence. Nevertheless, the different prominence indicators evolved in a quite parallel fashion over time (see **Error! Reference source not found.**).

The mean prominence increased at fairly constant pace from 1965 to 1980 and stagnated during the 1980s. A sharp drop in mean prominence is observed in the early 1990s, due to the dissolution of the USSR and the entry of former Soviet states in the system. The mean prominence scores—for the global as well as for the subsystem scores—increased again from the mid-1990s onward. **Error! Reference source not found.** illustrates, however, that the standard deviation increased over time alongside the mean prominence score, and that both follow similar patterns. Only the standard deviation for political system prominence remained fairly stable since the mid-1970s. This implies that the inequality in the global system increased rather decreased over time

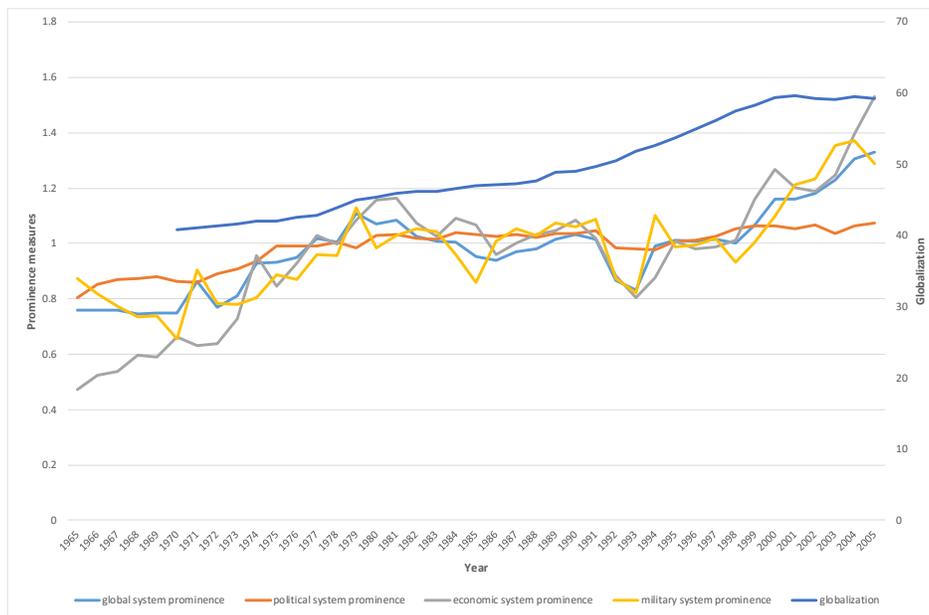
and certainly does not support the hypothesis that globalization will decrease the inequality in the global system.

Both **Error! Reference source not found.** and **Error! Reference source not found.** further show that globalization increased steadily from 1970 to 2005 and is strongly correlated with both the mean score and the standard deviations for all prominence indicators (see Table 3). Only the correlation with mean economic system prominence is smaller. These results suggest that because it causes stronger integration amongst countries in the global system, globalization may raise countries' overall level of prominence. Each country may be rendered somewhat more powerful in the global system; however, as certain countries benefit more from globalization than others, overall system inequality increases as well. Moreover, the partial correlations between globalization and the prominence indicators became non-significant after controlling for time. Accordingly, ongoing globalization and system prominence may well be two secular trends that might occur independently from each other.

**Figure 2: Evolution of Mean Prominence Scores (1965-2005) and Globalization (1970-2005)**



**Figure 3: Evolution of Standard Deviation of Prominence Scores (1965 - 2005) and Globalization (1970 - 2005)**



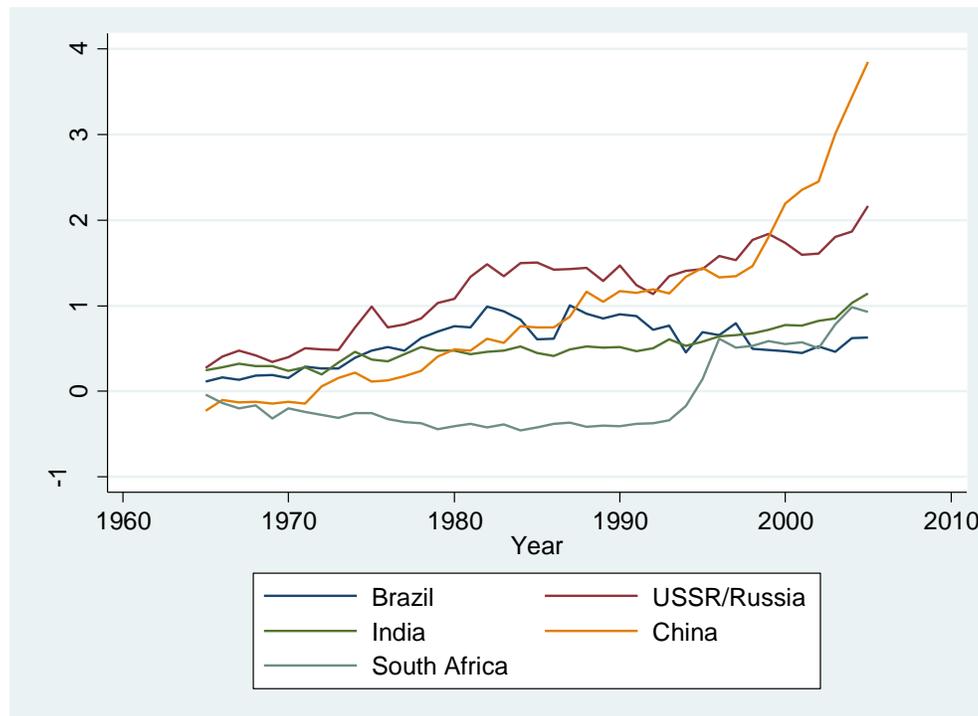
**Table 3: Correlations between the globalization index and the system prominence indicators (N = 36)**

	Mean	Standard Deviation
Global	0.864	0.703
Political	0.820	0.696
Economic	0.531	0.666
Military	0.920	0.701

All coefficients are significant at  $p < 0.001$

**The Paths of the BRICS**

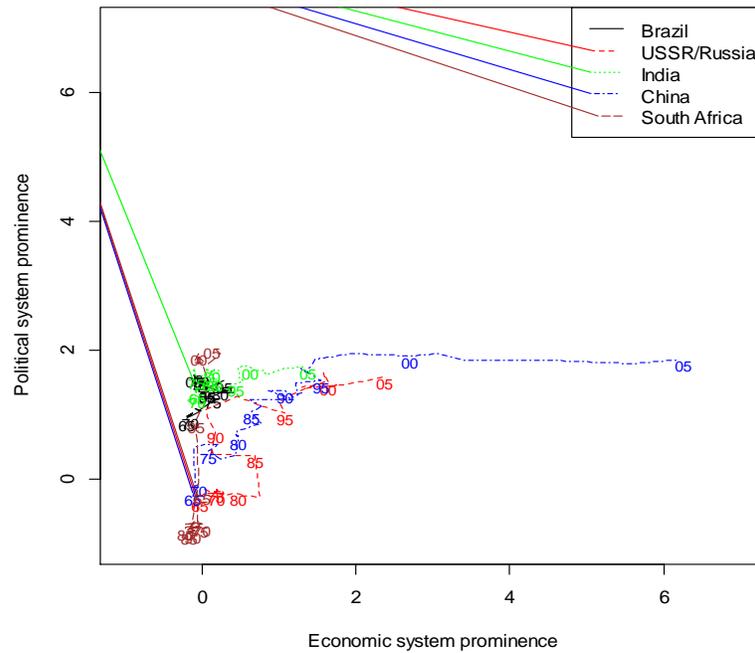
The BRICS are considered the up and coming countries. The results in **Error! Reference source not found.** only partially support this assertion.

**Figure 4: Evolution of Global System Prominence Scores for the BRICS Countries**

China shows strong upward mobility from a global system prominence score of -0.23 in 1965 to one of 3.85 in 2005. This steady increase in prominence was already present from 1965, but from 1998 on China's global system prominence scores skyrocketed. The USSR and, later on, Russia also steadily increased in prominence from 0.27 in 1965 to 2.16 in 2005, with only a small dip in the early nineties after the collapse of the USSR (its global system prominence score dropped from 1.47 in 1990 to 1.14 in 1992). For the other three countries, however, the picture is less optimistic. South Africa's global system prominence score increased from -0.04 in 1965 to 0.93 in 2005, but for most of the period studied, its prominence declined because of the international boycott on the country, which caused it to score below -0.40 in the late '80s and early '90s. Only after the end of the apartheid regime, did its global system prominence start to increase again. Although Brazil and India also both experienced an increase in global system prominence, their gains were relatively modest. Brazil's scores rose from 0.12 in 1965 to 0.62 in 2005, but had substantially higher scores in the late '80s and early '90s with a maximum score of 1.00 in 1987. Its global system prominence score kept declining throughout the 1990s, and only started rising again in the 2000s. India's ascent is much more stable from 0.24 in 1996 to 1.14 in 2005, and it is only in the last few years of the period studied that its mobility appeared to increase.

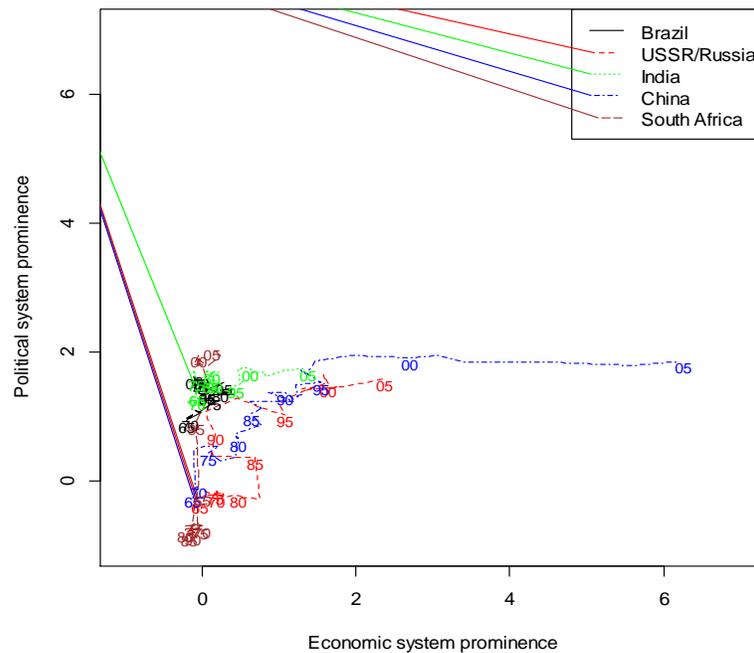
The evolution of the BRICS countries' levels of prominence in the subsystems are somewhat different.

**Figure 5. Evolution of Economic and Political System Prominence Scores for BRICS Countries**



shows the BRICS’ evolution in terms of economic and political system prominence between 1965 and 2005.

**Figure 5. Evolution of Economic and Political System Prominence Scores for BRICS Countries**



China's increase in political system prominence was fairly gradual throughout the entire period, and its rise in economic system prominence was initially equally gradual. From the end of the '90s on it increased rapidly, making China a major economic power. From 1965 to the mid-'80s, the USSR/Russia's political system prominence remained fairly stable. It was only with the introduction of the *perestroika* and *glasnost* policies that the USSR became a politically prominent player through its opening up to countries other than its traditional allies. Its increase in economic system prominence was fairly constant, except for a brief decline in the late 1980s and early 1990s. South Africa was a political outcast for most of the period studied, and only attained intermediary levels of economic prominence.

After 1994, South Africa really became a politically prominent country. In the economic system, however, South Africa's intermediary levels of prominence remained fairly stable throughout the period. Thus, South Africa's political integration in the global system was not accompanied by a similar economic integration. Both Brazil and India were already fairly prominent countries in the political subsystem, and their political system prominence only increased slightly throughout the period. Their economic system prominence remained at intermediary levels throughout the period, and this was especially the case for Brazil. India's economic system prominence started to increase from the mid-1990s onward.

### **Globalization and Mobility**

The BRICS countries show quite different paths and rates of mobility. Only China is rapidly climbing up in the global system hierarchy, although Russia is also steadily improving its prominence. The others, however, display less impressive mobility. An even larger variation in mobility is observed among the other countries in the system, although the overwhelming majority displays increasing prominence scores over time and all declines in prominence tend to be limited. Of the 173 countries that have data for both 1965 and 2005, 140 or 81% show an increase in scores and only 33 decrease. The top risers over this period are 1) Germany (+5.62), 2) the United States (+5.53), 3) China (+4.08), 4) Italy (+3.70), 5) Singapore (+3.32), 6) the United Arab Emirates (+2.49), 7) Belgium (+2.47), 8) the Netherlands (+2.44), 9) South Korea (+2.37), and 10) France (+2.19). Among these ten most mobile countries, six were also already part of the ten most prominent countries in 1965. The four remaining countries are rapidly developing countries that followed export oriented growth strategies (e.g., Haggard, 1990). The top 10 decliners over this period were: 164) New Zealand (-0.16), 165) Western Samoa (-0.16), 166) French Polynesia (-0.16), 167) Faroe Islands (-0.17), 168) American Samoa (-0.17), 169) Portugal (-0.17), 170) Greenland (-0.18), 171) Guadeloupe (-0.18), 172) Nauru (-0.19), and 173) Serbia/Yugoslavia (-0.20). Note that the decline over this period is quite modest even for these countries, and that often they experienced considerable fluctuations in their prominence scores over this period. Many of the decliners are quite small nations, but this top 10 does also contain some industrialized nations.

We ran a series of random-effects regressions to test whether or not some groups of countries benefit more than others from globalization and/or from the performance of the global economy. Table 4 shows the results for the random intercept regressions for change in global, economic, and political system prominence. Three models were estimated for each outcome variable: a base model (models 1, 4, & 7) with only the main effects of all predictors, a full model (2, 5, & 8) that also includes the interactions between system prominence and globalization and world economic growth, and a parsimonious model (3, 6, & 9) that contains only the effects significant at  $p < 5\%$ .

The results are very similar for global-system and economic prominence. A first question is whether or not globalization has an independent effect on mobility in the world-system, and whether or not this effect is more beneficial to more prominent countries. On average, more prominent countries experience higher economic and overall mobility (models 1 and 4), confirming claims that the core experiences mobility over time, rather than claims of especially strong semiperipheral mobility. The question remains of whether or not this mobility can be attributed to globalization. Globalization does not have a meaningful distinct effect on overall or economic mobility, providing evidence that becoming more intensely globalized cannot be considered an effective strategy for countries to achieve upward mobility. However, models 2, 3, 5 and 6 indicate that globalization provides a context in which certain countries can do better than others, and to a

certain extent, mobility (both overall and economic) depends on the degree of globalization. The interaction effects indicate that in periods of intermediate or high levels of globalization, more prominent countries experience higher overall and economic mobility than do less prominent countries. In periods of less intense globalization, by contrast, it is the less prominent countries that experience higher mobility. We must nuance these statements slightly with the finding that the effect of globalization is most conducive to upward economic mobility for countries in the sub-top of the spectrum, as indicated by the interaction term between globalization and the quadratic effect of economic system prominence (model 6).

The world-system paradigm would expect that world-economic contraction would benefit upward mobility for countries in the semiperiphery, or middle of the hierarchical spectrum. Our results show that world economic growth does not have an independent meaningful effect on overall world-system mobility, but has a quite strong effect on overall (or average) economic system mobility (see models 1 & 4). In periods of high global economic growth, all countries tend to experience higher upward economic system mobility than they do in periods of low global economic growth. As was the case with globalization, world economic growth provides a context in which certain countries can experience more overall and economic mobility than others. The effect of system prominence on mobility only becomes negative in times of low global economic growth.

**Table 4: Random-Effects GLS Regression Results for Change in Global, Economic and Political System Prominence, 1970-2005.**

b (s.e.)	Global system mobility			Economic system mobility			Political system mobility		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Constant	-0.0231 (0.0512)	-0.0399 (0.0485)	0.0130*** (0.0011)	0.0372 (0.0534)	0.0124 (0.0507)	-0.0161* (0.0067)	-0.1104** (0.0333)	-0.1159*** (0.0330)	-0.1338*** (0.0308)
Time									
Linear	-0.0005 (0.0008)	-0.0008 (0.0008)		0.0013 (0.0008)	0.0008 (0.0008)	0.0004* (0.0002)	-0.0019** (0.0005)	-0.0020*** (0.0005)	-0.0021*** (0.0005)
Quadratic	0.0000* (0.0000)	0.0000* (0.0000)	0.0001*** (0.0000)	0.0001*** (0.0000)	0.0001*** (0.0000)	0.0001*** (0.0000)	0.0000 (0.0000)	0.0000 (0.0000)	
System prominence <sup>1</sup>									
Linear	0.0118** (0.0041)	-0.1291*** (0.0291)	-0.1149*** (0.0004)	0.0201*** (0.0033)	-0.2087*** (0.0427)	-0.2087*** (0.0453)	-0.0068*** (0.0016)	-0.0213** (0.0070)	-0.0162*** (0.0029)
Quadratic	-0.0024 (0.0023)	-0.0234 (0.0173)		-0.0055 (0.0028)	0.0076 (0.0246)		-0.0124*** (0.0018)	-0.0281** (0.0096)	-0.0127*** (0.0019)

Globalization	0.0008 (0.0013)	0.0013 (0.0013)	-0.0014 (0.0013)	-0.0008 (0.0013)		0.0034*** (0.0009)	0.0035*** (0.0009)	0.0038*** (0.0008)
World economic growth	0.0011 (0.0012)	0.0014 (0.0010)	0.0055** (0.0020)	0.0057*** (0.0014)	0.0057*** (0.0015)	-0.0015 (0.0008)	-0.0013 (0.0008)	
System prominence <sup>2</sup>								
Linear		0.0019*** (0.0004)	0.0016*** (0.0004)		0.0026*** (0.0006)	0.0026*** (0.0007)	0.0002 (0.0001)	
Quadratic		0.0004 (0.0003)			-0.0002 (0.0003)	-0.0001* (0.0000)	0.0002 (0.0002)	
System prominence <sup>3</sup>								
Linear		0.0135*** (0.0021)	0.0137*** (0.0022)		0.0321*** (0.0048)	0.0320*** (0.0048)	0.0027*** (0.0007)	0.0025*** (0.0007)
Quadratic		0.0003 (0.0006)			-0.0002 (0.0026)		0.0012 (0.0010)	
R <sup>2</sup>	0.015***	0.046***	0.038***	0.030***	0.107***	0.107***	0.010***	0.013***
							0.010***	0.010***

<sup>1</sup>(t-1); <sup>2</sup>Interaction (t-1)\* globalization; <sup>3</sup>Interaction (t-1)\* world economic growth

Thus, in periods of low economic growth, less prominent countries experience less reduction in their mobility than those more prominent do. However, as the interactions with the quadratic terms were not significant in either (global/economic prominence) model, we cannot confirm the world-systems hypothesis that the semiperiphery especially benefits from world economic contraction. Finally, over all models, more prominent countries are much more sensitive to changes and fluctuations in the international environment (due to globalization and world economic growth) than less prominent countries.

The story regarding political system mobility is somewhat different. Where, on average, the more prominent countries experienced the highest overall and economic mobility, it is the countries in the middle of the spectrum that experience the highest political mobility (see model 7). On average, both the most and least prominent countries experience less political mobility than do those in the middle of the spectrum. Globalization has a distinct effect on upward mobility in the political system, though this was not the case for overall or economic mobility. On average, increased overall globalization is enabling all countries to gain in political prominence. Though world economic growth did not have a significant main effect, more prominent countries tended to experience a somewhat higher political system mobility in years with high global economic growth than did less prominent countries. As discussed earlier, overall inequality is increasing on this dimension, too, as certain countries get left behind in the political integration process. However, this trend is much more modest than for the other dimensions. Overall, the trends discussed here indicate that the political dimension is evolving towards a relatively more equal

structure as the majority of non-core countries (especially from the semiperiphery) seem to be catching up to the prominence levels of the core.

### **Conclusion and Discussion**

The BRICS countries are the most notable of a number of rising powers that aim to play a more influential role in international affairs. These countries advocate for a better integrated global regime that grants developing nations greater and more equal political recognition and economic opportunity. They have gained influence in regional and international organizations and, in some cases, have been able to significantly restructure existing ones or even create new regional institutions. The (alleged) rise of these countries on the global political, economic, and military scene has strongly contributed to the perception that the world is swiftly becoming multipolar, where almost equal amounts of power will have to be shared between the traditionally core countries and the rising powers. Moreover, scholars argue that the force underlying this rise, and thus, underlying change to the global structure of power relations, is globalization. This article tested whether or not the global power system has become more equal over the past few decades, and if this supposed change could be ascribed to the influence of globalization and the rise of a number of middle powers including the BRICS countries.

The results presented here certainly do not support the contention that the global power system has become more equal over time. On the contrary, the scores for global system prominence have become more dispersed over the studied period, indicating that prominence inequalities in the global system or its subsystems have increased rather than decreased. This view must be nuanced, however, as the mean prominence score also increased over the studied period. This indicates that on average countries gained in prominence, and thus, in power, within the global system. That may be due to globalization, as increased integration of countries in the system creates denser networks. Moreover, as non-core countries start forming more relationships with other non-core nations, the core loses some of its broker or go-between function for non-core to non-core relations, thus causing hierarchy in the FIS to become increasingly undermined. This may point towards an evolution in which the structure of the global system is changing from a system where dominance is based on countries' strategic location in the network of flows amongst countries to one where dominance relies more on the amount and strength of countries' relations.

Although there is considerable mobility in the global system, the position of the dominant countries does not seem to be immediately challenged. Countries that were prominent in 1965 are still quite prominent in 2005. However, this did not stop some new countries from rising to prominence. Of the BRICS, only China was able to gain prominence, while Russia had been a major power for decades. The other three BRICS countries all remained or became intermediate (or sub-top) powers. However, the attention paid to the BRICS may be excessive because China

was certainly not the only country to display substantial prominence gains. The focus tends to be on these countries because they are already regional powers and are often quite active on the international political scene. Moreover, they have an advantage of scale which allows them to sustain highly developed industries and regions. The real dynamic and upwardly-mobile countries that are increasingly rising to prominence seem to be smaller countries.

Our results also confirm that the already prominent countries, i.e., those in the core, were the most mobile over this period. Thus, these countries were able to capitalize on their existing advantageous positions, further exacerbating overall inequality in the global system. Increased globalization benefits the more prominent countries more than less prominent ones in terms of upward mobility. This supports the world-system argument that globalization is not a transformative force, but reproduces and intensifies existing inequalities and power differences. Because of their location in the network of relations among countries, more prominent countries are better positioned to exploit the opportunities awarded to them by the globalization process. Though industrial production may be relocated to countries in the (semi-)periphery, the more profitable activities remain in the core, and those in the core also remain at the center of the global trade network despite increased trade among less prominent nations. The emergence of newly prominent countries in the global system does not threaten the existing structure of the global system therefore, as it may simply reflect a circulation of elites instead of actual structural change.

Interestingly, globalization had a direct and positive effect on political prominence. The middle powers have benefitted from their increased integration in the global political system, which endows them with a greater degree of agency than would be expected purely based on their economic clout. These findings raise questions on the fungibility of power resources and thus, on countries' ability to convert their political presence into more general global might. In any case, we must not overlook the fact that the perception that the world will be a different place in the future has contributed in no small way to certain countries being treated like rising powers. As the yearly BRICS summits and the establishment of the "New Development Bank" have made especially clear, this has been real in its consequences.

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Any conflicts of interest are reported in the acknowledgments section of the article's text. Otherwise, authors have indicated that they have no conflict of interests upon submission of their article to the journal.

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