Área Temática: Globalização e Internacionalização de Empresas

Strategic Groups within the BRIC's Oil & Gas Industry: A Cluster Analyses Approach

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Abstract
This paper deals with a study of similarities regarding firm strategy, management style, organizational structure and performance within the BRIC´s Oil & Gas industries, from the point of view of strategic group analysis. Groups formed considered key dimensions reflecting firms' strategic orientations. In general the recent literature analysis BRIC´s multinationals like a group of companies with the same strategies and that they are under the same competitive conditions. Here we contest this fact and we try to show through the concept of strategic groups and regional multinational that the common analysis of BRIC companies could be wrong. We use data from 34 oil and gas companies listed in Fortune 500 to make clusters analysis from revenues, profit, employee number and stockholder equity; also we use cases analyses of nine BRICs companies in this group to understand the strategic behavior. The results show that 1) BRIC companies do not belong to a unique strategic group although they have very similar performance; 2) BRIC oil and gas companies are not global multinational but they are more like regional companies according Rugman´s theory.
Key-words: strategic group; regional strategies; BRIC´s Oil & Gas industries

Introduction
Seventy of the largest 500 firms in the world come from emerging-countries, and among them 20 companies relate to the energy industry, nine actually coming from BRIC´s operating globally (Fortune Global 500, 2007). Despite a large literature exploring the global success of emerging markets firms, and in particular from BRIC's countries, a question remains: why does evidence suggest that most operate regionally? Using data for country, revenues, assets, employees, profits, and stockholder's equity, we try to find out why most large BRIC's firms appear to have firm-specific advantages (normally state-owned) which are based in their home region. We offer a framework to show the relationship between internal and abroad sales by means of cluster analysis metrics, that suggest that BRIC´s oil & gas industry companies tend to operate predominately in their home regions.

Theoretical Background
Strategic Groups

Recent research shows that firms within an industry (e.g. oil & gas) converge to a limited number of strategic positions (SHORT et al., 2007). Strategic groups are viewed as groups or subsets of firms within an industry pursuing similar strategies and having similar resources (HATTEN; HATTEN, 1987). While individual firms may differ in their strategies, such differences are not significant enough to prevent the development of firms within homogenous groups (THOMAS; VENKATRAMAN, 1988). Grant (2005) argues that strategic groups are "the group of firms in an industry following the same or a similar strategy along the strategic dimensions". These strategic dimensions might include product range, geographical scope, choice of distribution channels, level of product quality, degree of vertical integration, choice of technology, and so on. By selecting the most important strategic dimensions and locating each firm on its place, it is possible to identify groups of companies that have adopted similar approaches to compete within the industry sector.

The study of strategic groups started in the early 1970s at Harvard, by Hunt (1972), with an initial work on the areas of domestic appliances and brewing industries, which were heterogeneous with regard to some elements of their structure and/or strategy, such as cost structure, degree of product differentiation and diversification. However the underlying theory was only developed later by Porter (1976, 1979) and Caves and Porter (1977). The earliest work view strategic groups as a dimension of industry structure that could enrich traditional models of industrial organization. They were mostly concerned with the effects of competition among groups on profitability.

According to Porter (1979, p.215), a strategic group is defined as a set of companies within an industry pursuing strategies that are similar to each other and different from firms outside the group on one or more key dimensions of their strategy. For Porter, strategic groups are persistent structural features of industries that are bounded by inter-group barriers. Porter extended Hunt's original idea to include indirect effects leading to different strategies between firms, notably the existence of market entry barriers (PORTER, 1976; PORTER, 1979). Strategic groups are likely to remain stable over time due to 'mobility barriers' which limit the movement of firms across strategic clusters (CAVES; PORTER, 1977; NEWMAN, 1978; PORTER, 1979). Mobility barriers (a generalization of the concept of entry barriers) limit followers and late comers to enter the group (CAVES; PORTER, 1977; PORTER, 1979). Based on market conditions and operational or financial resources, mobility barriers may be understood as the absolute costs of moving between groups, or as the operating or variable cost penalty that new entrants must face (McGEE, 1985). Barriers are often asymmetric, the entry barriers into some strategic groups may be easier than into others, and entry barriers may be quite different from exit barriers (HATTEN; HATTEN, 1987). Porter (1979) suggests that the presence of groups within an industry increases the amount of rivalry (HUNT, 1972; NEWMAN, 1978). Another definition by Cool and Schendel (1987), describes a strategic group as "a set of firms competing within an industry on the basis of similar combinations of scope and resource commitments"; this means that firms in a strategic group compete and adopt similar strategies and resources, leading to intra-industry segmentation.

Porter (1979, p.218) also considers the presence of groups within an industry a moderator for rivalry at industry level. (DRANOVE; PETERAF; SHANLEY, 1998). The extent of this homeostatic regulatory effect depends, in turn, upon three factors: first, the number and share distribution of groups in an industry: the greater the number of groups and the more equal their shares, the greater the rivalry among them; second, the 'strategic distance' between strategic groups: the greater the 'strategic distance' (i.e. the different groups differ along key dimensions), the greater the rivalry at industry level; and finally the level of 'market interdependence': the greater the 'market interdependence' (the degree to which groups target the same customers) the greater the rivalry at industry level.

A key assumption within this view is that rivalry between groups is more intense than rivalry within groups because of opportunities offered for (tacit or otherwise) cooperation and/or coordination between group members.

In the 1990s strategic management research focused on the internal resources and competences of firms over industrial structures to explain sustained competitive advantage; and moreover there is still considerable debate as to how strategic groups are to be identified (SHORT et al., 2007), and even whether they exist at all, That may explain why following developments in resource-based theories of the firm, strategic group theory was relatively neglected. Nevertheless, some researches continued and were focused on exploring patterns of intra-industry competition on main sectors of World Economy. This paper is a contribution to this area.

Regional Strategies

Conventional internalization theory suggests that international sales is mostly due to firm-specific advantages (FSAs), i.e., proprietary knowledge, which can be exploited profitably across national borders, whether through exports, foreign direct investment, market contracts, or hybrid modes. Moreover in the context of market-seeking investment, internalization advantages, in the sense of comparatively higher efficiency of hierarchy vis-à-vis other entry modes, are critical to understand foreign direct investment and the establishment of foreign subsidiaries. Finally, country-specific advantages (CSAs) are important regarding precise location of international expansion (DUNNING, 1993; RUGMAN, 1981, 1996).

However, at least until recently, the largest 500 multinationals were located across the triad economies of NAFTA, the EU, and Japan/Asia; and actually 198 had headquarters in NAFTA countries, 156 in the EU, and 125 in Japan/Asia. (RUGMAN, 2000, with data from Fortune 500, 1999)

Yet, very few MNEs may be considered ‘global’ firms, able to sell the same products and services around the world. The challenge of selling standardized products and services across borders, as originally advocated by Levitt (1998), has been considered in most of the mainstream IB literature. It is now widely recognized that benefits of integration resulting from global scale economies can only be reaped if they go together with strategies of national responsiveness, guided by both external pressures for local adaptation and internal pressures for requisite variation. What is unfortunately not correctly understood is that, irrespective of MNEs’ efforts to increase their alleged non-location bound FSAs with a location bound component, no balanced geographical dispersion of sales is achieved in most cases. Instead, the data indicate that most MNEs were regionally based in their home triad market (RUGMAN, 2003).

Data on the US’ 25 largest multinationals shows that they are mostly home-region based. Of the US’ 25 largest MNEs 22 have more than 50 per cent of their sales in their home region of North America. None of these US MNEs are “global”. For example, Wal-Mart has 94.1 per cent of its sales in the North American Free Trade Area; GM has 81 per cent – and so on. Indeed, the average intra-regional sales figures for all the 185 US MNEs is 77.3 per cent. With well over two-thirds of their sales in North America, these are home-triad based MNE. So much for the globe-girdling US MNE (MOORE; RUGMAN, 2003)

While it could be argued that there is more to globalization than sales dispersion, for example, foreign assets and foreign employment have sometimes been used together with foreign sales to build up a ‘transnationality index’, it should be recognized that only sales dispersion refers to a true performance measure at the output level (RUGMAN, 2003)

MNEs when decide to venture into other regions, they may face a liability of regional foreignness, including several additional risks that were absent in the host region and may be of an economic, cultural, administrative or geographic nature (GHEMAWAT; 2001)

One explanation is provided by internationalization theory, Johansson and Vahlne (1977 and 1990). This theory argues that MNEs expand first in geographically proximate markets and engage in modest resource commitments. As experiential learning is built up, firms venture into more distant markets and engage in more complex and more far-reaching resource commitments. The problem with internationalization theory is that it lacks serious conceptual grounding and has problems to generalize, especially regarding what exactly constitutes geographic proximity or experiential learning, and the mechanisms through which these concepts influence FDI decisions and the geographic scope of operations and sales.

Following traditional TCE theory (WILLIAMSON, 1996), modern TCE theory of the firm suggests that the scope of geographic expansion is determined by the MNE's ability to link its FSAs with location advantages abroad, which seems a more useful explanation of regional MNE activity. International success does not simply follow from proprietary knowledge, but from the MNE's ability to adapt successfully the deployment of its existing FSAs to the specific circumstances of foreign markets (RUGMAN; VERBEKE, 2001; BIRKINSHAW, 2001; BIRKINSHAW, HOOD e JONSSON, 1998).

In relation to resource-seeking or strategic asset-seeking FDI (Dunning, 1993), foreign locations may require location-specific linking investments from the MNE; and all relevant parties, such as foreign suppliers, workers, and acquired companies must themselves engage in reciprocal commitments to make these investments worthwhile (RUGMAN, 2004). Each foreign location requires location-specific linking investments to meld existing FSAs with CSAs. It is, ceteris paribus, the extent of these adaptation costs, taking into account the redeploy ability of the resulting additional knowledge in the relevant locations that explains why most MNEs expand first in their home region, and may face great difficulty expanding to other regions.

More specifically, many so-called non-location-bound FSAs can only be exploited profitably within the home region, without the need for substantial, location-specific adaptation investments. In addition, location-bound FSAs developed in the home country or in other countries in the home region can be "tuned up" to be fully deployable in the entire region, with low-linking investments required, if the countries involved are subject to a low institutional and economic distance among themselves, in the spirit of Ghemawat (2001). Hence, these FSAs can easily be made 'region-bound', to the extent that linking investments with high institutional and economy-related specificity can be avoided. In other words, it can be efficient for an MNE to expand within its home region; it does not actually need to go global (RUGMAN, 2004)

Regional scope decrease transaction costs. Li (2004) argues, using data from U.S. service firms, that a global strategy, which implies dealing with multiple foreign environments and organizational structures simultaneously, will lead to high bureaucratic costs and stretch managers' execution capacity and absorptive capacity, thereby may have detrimental effects on performance.

Yin and Choi (2004) study globalization versus regionalization, taking China as an example. One useful observation is that investment from proximate locations in Asia clearly experiences less difficulty in achieving proper linkages between FSAs and location advantages in China, than investment that has a more distant origin.

Grosse (2004) in his study of the largest financial institutions in the world observes that a broader geographic scope leads to the need to select unique market segments. Indeed, bounded rationality problems and the danger of sub-goal pursuit, impose a trade-off between coordinating and controlling efficiently a geographically dispersed network of operations; that is to say seek for a distinct market segment only, versus providing a broader scope of services, but within much more restricted geographic boundaries.

Based on these considerations we seek to answer if oil and gas companies from BRIC countries are regional, too. The main theory of regional multinationals is results of studies with triad countries. The question that we expect answer is: does BRIC countries have the same behavior?

Methodology

Sample

Table 1: Sample of Oil & Gas in BRICs (n=9)

Country	*Ranking Global 500*	*Company*	*Datamonitor Profile*
Brazil	65	Petrobras	May'06
China	17	Sinopec	Feb'05
	24	China National Petroleum	Apr'06
India	336	Hindustan Petroleum	Jun'06
	135	Indian Oil	Oct'05
	269	Reliance Industries	Aug'05
	325	Bharat Petroleum	Apr'05
Russia	323	Rosnet Oil	Sep'05
	110	Lukoil	Jul'06

Of the 500 companies in Fortune Global 500, 34 refer to the gas & oil industry that will be used for our cluster analyses; of these 9 correspond to BRICs countries (Brazil, Russia, India and China), and will be considered in our case study (table 1, column *Company*). The profile for these companies comes from the Datamonitor (table 1, column *Datamonitor Profile*). This base is necessary for matching the date of the financial information of the companies in the sample.

Measures

A typical information inside the rankings (e.g. Fortune 500 or Fortune Global 500) for each company, provides profits, rank per profits, percent change in profits from earlier year, assets, rank per assets, stockholder's equity, rank per stockholders' equity, market value, rank per market value, profits as percent of revenues (percentage and rank), profits as percent of assets (percentage and rank), profits as percent of stockholders' equity (percentage and rank), total return to investors, and so on .

In this paper we used the following variables: country, revenues, employees, profits, assets and stockholders' equity. Revenues: the money that is received by a business usually from goods or services; Employees: the total number of full-time, or permanent, persons who is paid to work in a company; Profits: the money that a company make in business or by selling things, especially after paying the costs involved; Assets: a thing of value that a company owns, such money or property or the right to receive payment of a debt; Stockholder's equity: the same of shareholders' equity. The value of a company as shows by its financial records (assets minus its liabilities).

Based on these variables by means of a strategic analysis of each company in oil & gas industry from the BRICs, this paper seeks to find out whether these companies operate in the same strategic groups, or else the performance of these companies is similar without necessarily belonging to the same strategic group.

Analysis Method

In this paper, we offer a theoretically-based empirical approach to detect group-level effects in Oil &Gas Industry within a sample of companies with headquarters in BRIC´s countries.

To start Datamonitor profiles are common for all companies in the sample: SWOT Analysis, Top Competitors and Business Description; and after the firm identifies the segments in which is will compete, then determine how it will compete, and with what rivals. Defines scope, and segment as part of its competitive intelligence initiative. Actually a great deal will depend upon the firm's internal capabilities and how its competencies will fit with the competitive requirements of each segment.

Strategic group analysis identifies the set or sets of rivals competing in the industry and/or segments, using the same or similar strategies, along specific strategic dimensions. Strategic group analysis may then provide information to the firm along the five structural components of the Porter Model:

Strategic Groups tend to follow similar strategies and play "off of each other". The variables to be considered are: the degree of market interdependence and overlap; the degree of product differentiation among the groups; the number of strategic groups and their relative size in proportion to the entire market; the strategic distance among the groups, or their divergence.

Strategic Group Analysis could also help determining the firm's strategic posture. Should it be on the offense, defense, expansive, take initiative, innovate, retaliate, wait and see, be a predator, take an entrepreneurial stance, etc. Analysis of strategic groups provides a "roadmap" for where to shift competition, take advantage of lesser rivals in more focused segments; race to integrate supplier, and so on.

All of the industry analysis assists the firm in positioning itself relative to the existing competition. In a First Mover advantage, the firm sets the rules. Otherwise, it must understand the rules in each segment and group in which it competes. All of which is irrelevant if the firm is not organized to take advantage of competitive opportunities, and ward off threats. That is when internal capability and resource analysis is critical.

Case Studies

This section shows the profile of the companies in the sample for a better analysis. The data was structured in four short descriptions of the companies with the name and country of origin (Brazil, Russia, India or China), a short profile, the headquarters, financial and market information, a short description of strengths and opportunities form each company and finally the main competitors.

Petróleo Brasileiro, Petrobras, is a state-owned petroleum company in Brazil. The company has become a large global oil and gas MNE through expansions and acquisitions. High reserves, continuously being discovered, give the company a significant competitive advantage in the global oil and gas industry. It is engaged in the exploration, production, refining, transportation and distribution of oil, gas and related products. It´s well recognized by its deep sea level exploration technology. Headquarters are in Rio de Janeiro, Brazil and employs over 53,600 people. The local market represents 77.9% of its revenues. The unit of supply business represents 59.9% of the revenues, distribution 27.8%, international 6.5%, gas and energy 3.4% and exploration and production 3.3%. The company recorded revenues of $74,065 million during the fiscal year ended December 2005, an increase of 42.6% over 2004. The unit business that more grew in 2005 in relation to 2004 was the supply 54.8%, following by distribution 51.5%, gas and energy 24.9%, exploration and production 24.6% and international 18.2%. Its strengths are: strong reserves, advanced deep sea technology, high revenue growth and downstream operations. As opportunities has: growing demand for LPG, expanding Columbian and Paraguayan market and increasing demand for ethanol in Japan. Its main competitors are companies of the countries where it is present as: ConocoPhillips, PetroChina Co Ltd., Royal Dutch Shell PLC, Chevron Corporation, BP Plc and ExxonMobil Corporation.

China National Petroleum Corporation (CNPC) is a government-owned petroleum and petrochemical group company. CNPC is China’s largest producer and supplier of crude oil and natural gas. Its operations cover the following segments: exploration and production, refining and marketing, petrochemicals, natural gas and pipelines, field operations and technical services, engineering and construction, equipment manufacturing and supply and auxiliary services.. CNPC’s domestic petroleum exploration and production operations are primarily carried out by its largest listed subsidiary, PetroChina. In addition to its domestic oil and gas exploration and production operations, CNPC is engaged in 20 overseas petroleum exploration and development projects in 12 countries that includes Sudan, Algeria, Chad, Ecuador and Nigeria. The company headquartered in Beijing, China and employs over 260,000 people. During the financial year ended December 2004, the company generated revenues of $41,800 million, an increase of 13.4% on 2003. Net income rose 38.5% to $8,800 million. Its strengths are: leading petroleum producer, global operations and strong financial growth. As opportunities has: new discoveries and deepening links with central Asian, oil producers, high demand potential, joint ventures with foreign partners. The major competitors are: Chinese Petroleum Corporation, ExxonMobil Corporation, Chevron Corporation, CNOOC Limited, Sinopec Shanghai Petrochemical Company Limited.

Petrochina, Chinese company, headquarter locate in Beijing, China and employs over 446,290 people. It is a *subsidiary* of state-owned *China National Petroleum Corporation (CNPC)*. It is engaged in a broad range of activities related to petroleum and natural gas, including exploration, development and production of crude oil and natural gas; refining, transportation, storage and marketing, including import and export, of crude oil and petroleum products; production and sale of chemical products; and transmission, marketing and sale of natural gas. Grows through domestic market, local market representing 96.6% of its revenues. The unit refining and marketing business represents 72.4% of the revenues, exploration and production11.9%, chemical and marketing 10,8%, Natural gas and pipeline 4.8% and others 0.1%. The company recorded revenues of $88,361.40 million in 2006. In 2006 had an increase of 24.8% in relation to 2005. The unit business that more grew in 2006 in relation to 2005 was the natural gas and pipeline 56.6%, following for the refining and marketing 26.1%, exploration and production 23.3% and chemical and marketing 8.1%. Its strengths are: dominant player in China, integrated oil and gas operations, robust financial performance and competitive returns. As opportunities has: increasing demand for oil, natural gas, and petrochemicals in China, potential of forest bio-fuel development and overseas expansion. Its main competitors are companies of the countries where it is present as: BP lc, ENI S.p.A., ExxonMobil Corporation, Gazprom, Royal Dutch/Shell Group, Sinopec, Shanghai Petrochemical Company Limited, Sinochem, China National Petroleum Corporation (CNPC), CNOOC Limited and Chevron Corporation.

Sinopec Shanghai Petrochemical Company Limited. Chinese company, headquarter locate in Shanghai, China and employs over 25,481. It is engaged in oil refining; petrochemical processing; and the manufacturing of plastics and synthetic fibers. Its growth through domestic market. The unit of Petroleum products business represents 40.5% of the revenues, resins and plastics 30.5%, intermediated petrochemicals 14.3%, syntetic fibers 10.4% and others 4.3%. The company recorded revenues of $5,696.70 million in 2005. In 2005 had an increase of 16.6% in relation to 2004. The unit business that more grew in 2005 in relation to 2004 was the petroleum products 36%, following for the others 30.9%, resins and plastics 15.3%, intermediate petrochemicals 10.9% and synthetics fibers 0.1%. Its strengths are: strong market position, integrated operations, diversified portfolio. As opportunities has: the strong automobile growth in China, growing demand of petrochemicals in China, government's tighter credit policy. Its main competitors are companies of the countries where it is present as: ExxonMobil Corporation, Mitsubishi Chemical Corporation, PetroChina Co Ltd., Mitsui Chemicals, Inc., Petroliam Nasional Berhad, Royal Dutch Shell PLC, Chevron Corporation, ExxonMobil Corporation and Royal Dutch Shell PLC.

Bharat Petroleum Corporation Limited Company. India company, headquarter locate in Mumbai, India and employs over 12,029. It is engaged in the refining, processing, and distribution of petroleum products. Its Grows through domestic market. The company recorded revenues of $14,714.6 million in the fiscal year ended March 2005. In 2005 had an increase of 17.3% fiscal year. The company saw a net income of $352.2 million in fiscal 2005, a decrease of 32.6% over fiscal 2004. Its main competitors are companies of the countries where it is present as: Indian Oil Corporation Limited, Reliance Industries Limited, Hindustan Petroleum Corporation Limited, Chennai Petroleum Corporation Limited, Hindustan Oil Exploration Company Ltd.

Hindustan Petroleum Corporation **(HPC)** A state owned company, engaged in the refining of crude oil and marketing of oil products. The company together with other state owned companies, Indian Oil Corporation and Bharat Petroleum Corporation, dominates the petroleum sector in India. The company operates primarily in India. It is headquartered in Mumbai, India and employs over 10,500 people. The company recorded revenues approximately of $13,144.9 million during the fiscal year ended March 2005, an increase of 17.7% over 2004. The operating profit of the company was approximately $354.1 million during fiscal year 2005, a decrease of 46.1% over 2004.The net profit was approximately $283.3 million in fiscal year 2005, a decrease of 32.9% over 2004. Its strengths are: strong market position, sturdy retail infrastructure and product pipelines. As opportunities has: increasing demand for refined products, developing upstream presence, growing demand for premium fuels, strong branding. The major competitors of Hindustan Petroleum Corporation Limited are: Indian Oil Corporation Limited, Oil & Natural Gas, Corporation Limited, Reliance Industries Limited, Kochi Refineries, Bharat Petroleum Corporation Limited, ExxonMobil Corporation, Castrol India Ltd. and Chennai Petroleum Corporation Limited.

Indian Oil Corporation Limited **(IOC)** is India's largest oil company. It controls 10 of India's 18 refineries and operates a network of crude oil and petroleum product pipelines in India. The company operates in the India, Sri Lanka and Mauritius. It is headquartered in New Delhi, India and employs about 31,000 people. The company recorded revenues were approximately $30.1 billion during the fiscal year ended March 2005, an increase of 16.1% over 2004. The operating profit of the company during fiscal 2005 was approximately $1.8 billion, a decrease of 27.8% from fiscal 2004. The net profit was approximately $1.3 billion, during fiscal year 2005, a decrease of 24.7% from 2004. IOC generates revenues through its two business divisions: petroleum products (91.7% of total revenues during fiscal 2005) and other business activities (8.3%). During the fiscal year 2005, the petroleum products division recorded revenues of approximately $28.1 billion, an increase of 13.8% over fiscal 2004. The other business activities division recorded revenues of approximately $2.4 billion in 2005, an increase of 20.2% over fiscal 2004. Its strengths are: large scale of operations, robust business growth and extensive R&D capabilities. As opportunities has: foray into the gas business, setting up of polymer units, acquisitions and mergers and growth in Asia Pacific region. The following companies are the major competitors of Indian Oil Corporation Limited: Reliance Industries Limited, Mangalore Refinery & Petrochemicals Ltd, Royal Dutch Shell PLC, Bharat Petroleum Corporation Limited and Hindustan Petroleum Corporation Limited.

Reliance Industries Limited **(RIL).** India's largest private sector company. Its activities include the exploration and production (E&P) of oil and gas, oil refining and marketing, petrochemicals, textiles, financial services, insurance, power and telecom. The company is headquartered in Mumbai, India and has a workforce of 11,358 employees. The company recorded revenues of approximately $16.8 billion during the fiscal year ended March 2005, an increase of 30.1% over 2004. The increase was primarily attributable to strong growth in refining and petrochemical business. The operating profit during fiscal 2005 was approximately $24.4 billion, an increase of 36.2% over 2004. The net profit was approximately $1.73 billion during fiscal year 2004, an increase of 46.7% over 2004. Its strengths are: leading market share, strong operating performance and strong operational efficiency. As opportunities has: natural gas finds, growth in Indian textile market and strategic acquisition. The following companies are the major competitors of Reliance Industries Limited: Eastman Chemical Company, Indian Oil Corporation Limited, Bharat

Petroleum Corporation Limited, Hindustan Petroleum Corporation Limited, Mitsui Chemicals, Inc., ExxonMobil Chemical and Indian Petrochemical Corporation Limited.

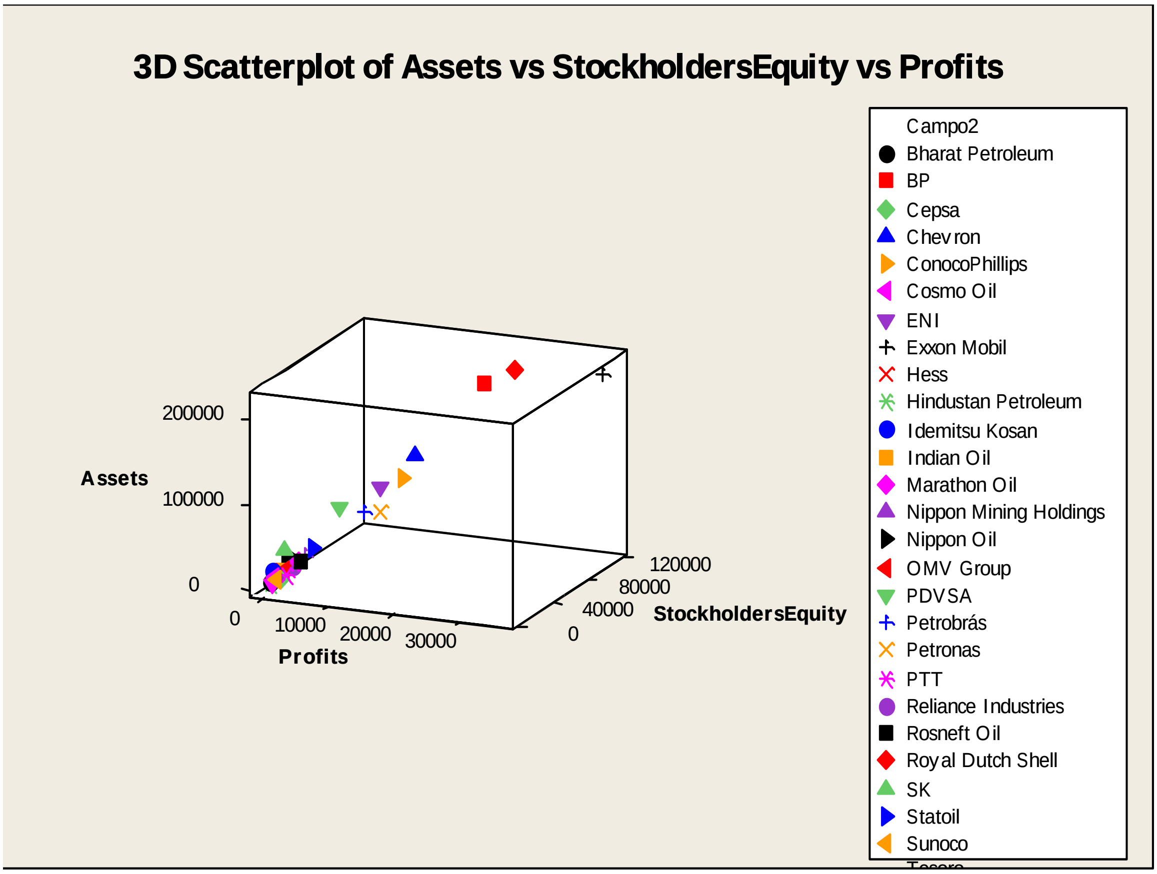
OAO Lukoil **(Lukoil)** One of the world's leading oil and gas companies. It is engaged in exploration, production, refining and marketing of oil and gas. It has the second largest oil reserves in the world. The company operates primarily in Europe and the US. It is headquartered in Moscow, Russia and employs about 150,000 people. The company recorded revenues of $55,774 million during the fiscal year ended December 2005, an increase of 64.8% over 2004. The operating profit of the company was $9,388 million during fiscal year 2005, an increase of 55.6% over 2004. The net profit was $6,443 million in fiscal year 2005, an increase of 51.7% over 2004. Its strengths are: large oil and gas reserves, increasing oil and gas production and strong refining operations. As opportunities has: strategic partnership with ConocoPhillips, demand for refined products in China and expansion of global airline fleet. The following companies are the major competitors of OAO Lukoil: BP Plc, Chevron Corporation, ExxonMobil Corporation, Norsk Hydro, Occidental Petroleum Corporation, TOTAL S.A., Unocal Corporation, Imperial Oil Limited, OJSC Surgutneftegaz and Petrobras (Petroleo Brasileiro S.A.).

Rosneft is a state-owned oil and gas company. It is involved in exploration and production activities throughout Russia. The company is headquartered in Moscow, Russia and employs about 12,883 people. For the fiscal year ended December 2004 Rosneft generated revenues of $5,275.4million, an increase on 2003's revenues of $3,641 million. Net income for 2004 totaled $837.3 million. The following companies are the major competitors of Rosneft: OAO Lukoil, OJSC Surgutneftegaz, Yukos Oil Company and TNK-BP.

Result Analysis

The cluster analysis (Chart 1) shows that, regarding wealth (profit, assets and stockholders' equity) companies may be divided into three unbalanced groups. Top companies are the elite or traditional first movers (Exxon Mobil, Royal Dutch Shell and British Petroleum), and form the first cluster. Clearly none of these companies belong to BRICs countries.

Chart 1: Stockholder's Equity Value vs. Assets vs. Profits

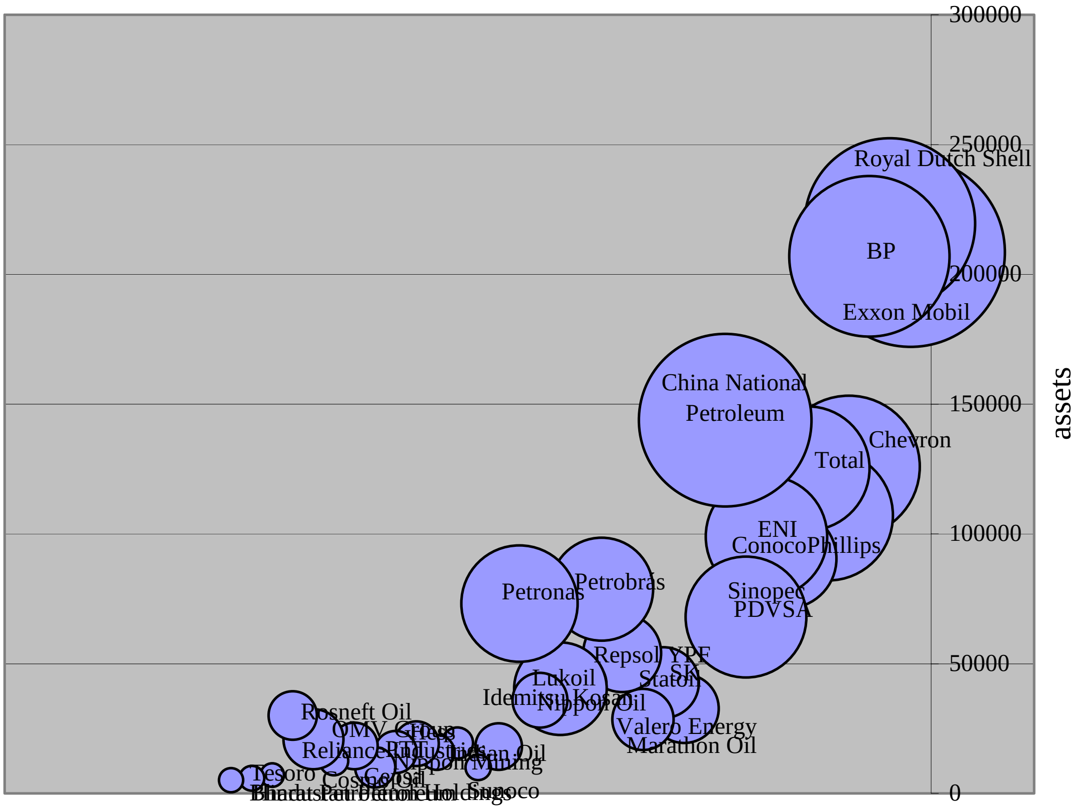


Made by authors - data from Fortune Global 500 - 2007

The second cluster, second place in value of wealth created in the business of oil & gas shows six companies: Chevron, Conoco, ENI, Petronas, Petrobras and PDVSA. Here only Petrobras belongs to the BRIC´s; and it's interesting to observe that although CNPC has a stockholders' equity and size higher than Petrobras (chart 2), CNPC workforce is too large and becomes not competitive.

Thus, except for Petrobras oil & gas companies from BRIC´s show the same pattern in terms of creating wealth . This seems to supports the initial premise that their companies belong to the same group strategy. However, examining a strategic group requires that the strategic contingencies are equivalent, as if the geographical scope of action is equivalent. Actually, although they have offices around the world, such as Petrobras in twenty-seven countries, its international operations are basically characterized by a strong local geographic concentration as the table 2 below. Some of the companies not even show their international sales due to its little significance in the overall aggregate revenue of the company.

Chart 2: Stockholders' Equity Value x Assets



Source: Made by authors - data from Fortune Global 500 - 2007

Table 2: Revenues x Geographic Scope

Geographic Scope	**Companies**	%
	OAO LUKOIL	
Local/Regional Market	USD 38.951,00	45.4
International Market	USD 46.899,00	54.6
	RELIANCE	
Local/Regional Market	USD 11.200,00	66.3
International Market	USD 5.700,00	33.7
	Petrobras	
Local/Regional Market	USD 57.669	77.9
International Market	USD 16.396	22.1
	CNPC	
Local/Regional Market	USD 85.320,50	96.6
International Market	USD 3.040,90	3.4
	Sinopec Shanghai	
Local/Regional Market	USD 5.191,90	100
	Bharat Petroleum	
Local/Regional Market	USD 14.714,60	100
	HINDUSTAN	
Local/Regional Market	USD 13.144,90	100
	INDIAN OIL	
Local/Regional Market	USD 30.100	100
	ROSNEFT	
Local/Regional Market	USD 5.275,40	100

Source: Made by authors - Data from Datamonitor 2006

A cut of the main subsidiaries in terms of value and contribution of overseas investment shows that companies from the BRIC act regionally and not compete in the same market (table 3). Except the Chinese CNPC and the Russian OAO Lukoil representative with subsidiaries in USA, the other companies have its main subsidiaries in regional markets and not converging.

Table 3: Main Subsidiaries around the World

Company	Head Office	Subsidiaries	Subsidiarie	Subsidiarie	Subsidiaries
Petrobras	Brazil	Argentina			
CNPC	China	Nigeria	USA	Sudan	Venezuela
Petrochina	China				
Sinopec S	China				
Sinopec Z	China				
Bharat	India				
Hindustan	India	Bangladesh			
Indian Oil	India	Sri Lanka	Mauritius		
Reliance	India				
OAO Lukoil	Russia	Siberia	USA		
Rosneft	Russia				

Source: Made by authors with data - Data from Datamonitor 2006

So BRIC´s companies besides belonging to the same cluster regarding creating wealth , also share the same characteristic, of working mostly on their countries of origin or in regional markets located geographically closely. Global operations of BRICs companies are not considered to be large in volume. However, by working locally do not compete with each other in most cases, and hence are not characterizing as working in strategic groups. As a matter of fact table 4 shows that companies from BRICs do not compete with each other, neither have the same competitors.

Table 4: Main Competitors

Petrobras	**CNPC**	**Petrochina**	**Sinopec**	**Bharat**
ConocoPhillips	Chinese Petroleum	BP	ExxonMobil	Indian Oil
PetroChina Co Ltd	ExxonMobil Corporation	ENI	PetroChina	Reliance
Royal Dutch Shell PLC	Chevron Corporation	ExxonMobil Corporation	Mitsubishi Chemical	Hindustan
Chevron Corporation	CNOOC Limited	Gazprom,	Mitsui Chemicals	Chennai
BP Plc	Sinopec	Royal Dutch/Shell Group	Berhad	
ExxonMobil Corporation		Sinopec	Royal Dutch Shell PLC	
		Shanghai Petrochemical	ExxonMobil Corporation	
		CNPC	Chevron Corporation	
		CNOOC Limited		
Indian Oil	**Reliance**	**Hindustan**	**Lukoil**	**Rosneft**
Reliance	Eastman	Indian Oil	BP	Lukoil
Manglarole	Indian Oil	Reliance	ExxonMobil Corporation	OJSC
Royal Dutch Shell PLC	Bharat	Kochi Refineries	Chevron Corporation	Yukos
Bharat	Hindustan	Bharat	Norsk	
Hindustan	Mitsui	CNPC	Unocal	
	ExxonMobil	ExxonMobil	Petrobras	
			OJSC	

Source: Made by authors with data - Data from Datamonitor 2006

Regarding value chain operations (Table 5) all of them, except Rosneft, show downstream activities in the chain. Upstream activities are developed by only 60% of the group companies of BRICs. On the other hand there is a no pattern among the BRICs companies in terms of the activities performed. Activities of refining and distribution industry are common by a large majority of companies, but only slightly more than half of the firms have activities of exploration and production. These are the same companies of the group formed by Petrobras, CNPC, Petrochina, Reliance, Lukoil and Rosneft; however activities of processing, transportation and distribution are performed only by one or two companies. Hence regarding value chain activities the hypothesis of a group formed by the strategic BRICs doesn't stand by itself.

Table 5: Value Chain of the Companies

Business	Petrobras	CNPC	Petrochina	Sinopec S	Sinopec Z	Bharat	Hindustan	Indian Oil	Reliance	OAO Lukoil	Rosneft
Exploration	Y	Y	Y						Y	Y	Y
Production	Y	Y	Y		Y				Y	Y	Y
Refining	Y	Y	Y	Y		Y	Y	Y	Y	Y	
Marketing		Y	Y		Y		Y	Y	Y	Y	
Processing				Y		Y					
Transportation	Y		Y								
Distribution	Y					Y					
Business	Petrobras	CNPC	Petrochina	Sinopec S	Sinopec Z	Bharat	Hindustan	Indian Oil	Reliance	OAO Lukoil	Rosneft
Upstream	Y	Y	Y		Y				Y	Y	Y
Downstream	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	

Source: Made by authors with data - Data from Datamonitor 2006

Regarding SWOT strategic drivers for companies in the BRIC there is a huge difference as far as competitive capabilities of enterprises and their weaknesses as well as the influence of competitive context on companies. Table 6 shows that the opportunities and threats are very different and same happens with strengths and weaknesses. This means that the strategic behavior of companies differ sharply which contradicts the assumption of similar strategic behavior of companies belonging to same strategic groups.

Table 6: SWOT Analysis for companies in the sample.

PETROBRAS	
Strengths Strong reserves High revenue growth Downstream operations	**Weaknesses** Decline in operating margins Loss making gas and energy division
Opportunities Growing demand for LPG Expanding Columbian and Paraguayan market Increasing demand for ethanol in Japan	**Threats** Uncertainty in Bolivia Increasing lifting costs Fall in oil prices in the medium term
CNPC	
Strengths Leading petroleum producer Global operations Strong financial growth	**Weaknesses** Corporate governance Poor relationship between petroleum giants Penetration into eastern and southern China
Opportunities New discoveries and deepening links with central Asian oil producers High demand potential Joint ventures with foreign partners	**Threats** Adverse competition post-WTO Volatility in petroleum prices Government regulation
PETROCHINA	
Strengths Dominant player in China Integrated oil and gas operations Robust financial performance Competitive returns	**Weaknesses** Lack of operations in eastern and southern China Operating loss of refining and marketing division Weak efficiency level
Opportunities	**Threats**

Increasing demand for oil, natural gas, and petrochemicals in China Potential of forest bio-fuel development Overseas expansion	Volatility of prices for crude oil and refined products Government regulations and control Environmental laws and regulations Competition post WTO
Sinopec Shanghai Petrochemical Company Limited	
Strengths Strong market position Integrated operations Diversified portfolio	**Weaknesses** Dependence on few customers and suppliers Weak financial performance
Opportunities Strong automobile growth in China Growing demand of petrochemicals in China Government's tighter credit policy	**Threats** High feedstock prices WTO regulations Falling product prices
HINDUSTAN PETROLEUM	
Strengths Strong market position Sturdy retail infrastructure Product pipelines	**Weaknesses** Lack of scale Lack of vertical integration
Opportunities Increasing demand for refined products Developing upstream presence Growing demand for premium fuels Strong branding	**Threats** Intense competition High crude oil prices Uncertainty over ownership
INDIAN OIL CORPORATION LIMITED	
Strengths Large scale of operations Robust business growth Extensive R&D capabilities	**Weaknesses** Huge replacement costs Declining profitability Government interference in decision-making
Opportunities Foray into the gas business Setting up of polymer units Acquisitions and mergers Growth in Asia Pacific region	**Threats** Deregulation of petroleum products Fluctuations in crude oil price Government influence on retail petroleum prices
RELIANCE INDUSTRIES LIMITED	
Strengths Leading market share Strong operating performance Strong operational efficiency	**Weaknesses** Ownership dispute Poor corporate governance Government linkages
Opportunities Natural gas finds Growth in Indian textile market Strategic acquisition	**Threats** Security threat Petroleum and petrochemical prices Proposed sharing schemes
OAO LUKOIL	
Strengths Large oil and gas reserves Increasing oil and gas production Strong refining operations	**Weaknesses** Heavy dependence upon Transneft's pipeline system Weak marketing network
Opportunities Strategic partnership with ConocoPhillips Demand for refined products in China Expansion of global airline fleet	**Threats** Fall in oil prices in medium term Rising steel prices Increasing importance of renewable energy

Source: Made by authors with data - Data from Datamonitor 2006

Therefore, the case analysis of companies in oil & gas industry shows that, concerning creating wealth, the BRIC's companies seem to be part of a specific group of global companies. However, the analysis of strategic groups and international operations of these type of companies shows that the assumption of strategic groups of companies in oil & gas industry is not valid according to the theories of strategic positioning; moreover neither is valid the assumption of global companies of a global industry; on the contrary results give support for these group of companies to the idea of a policy of regionalization of multinational companies.

Final Remarks

The question 'Do strategic groups (really) exist?' is, of course, legitimate (BARNEY; HOSKISSON, 1990; DRANOVE et al., 1998; HATTEN; HATTEN, 1987). For sure, the question cannot be resolved with a cluster analysis. Cluster analysis will always detect groups, whereby the grouping results are predetermined by the variable selection (which is indeed from time to time haphazard within the strategic groups' research).

The results from oil and gas companies show that swot, value-chain activities, rivalry of competitors do not explain a strategic group like performance measure would support. Then the analysis of BRIC´s oil & gas companies would not be made in a group. The regional strategies of multinational companies from this industry support the argument that oil & gas companies have differentiated strategies because in fact they are not global companies. The oil gas companies according Rugman´s theory are regional companies and the strategies are restrict to institutional and environment competitive context. These companies are monopolies and oligopolies normally state-owned. Then, they are not subject to a group analysis as adopted by much of the literature on emerging countries.

This results support the thesis of regional multinational and it claims attention for BRIC analysis like companies of the same group with the same strategies and competitors. It is not true for oil and gas companies and it is necessary the development of new studies with the same character to support or note the thesis that BRIC analysis can be a false strategic analysis.

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