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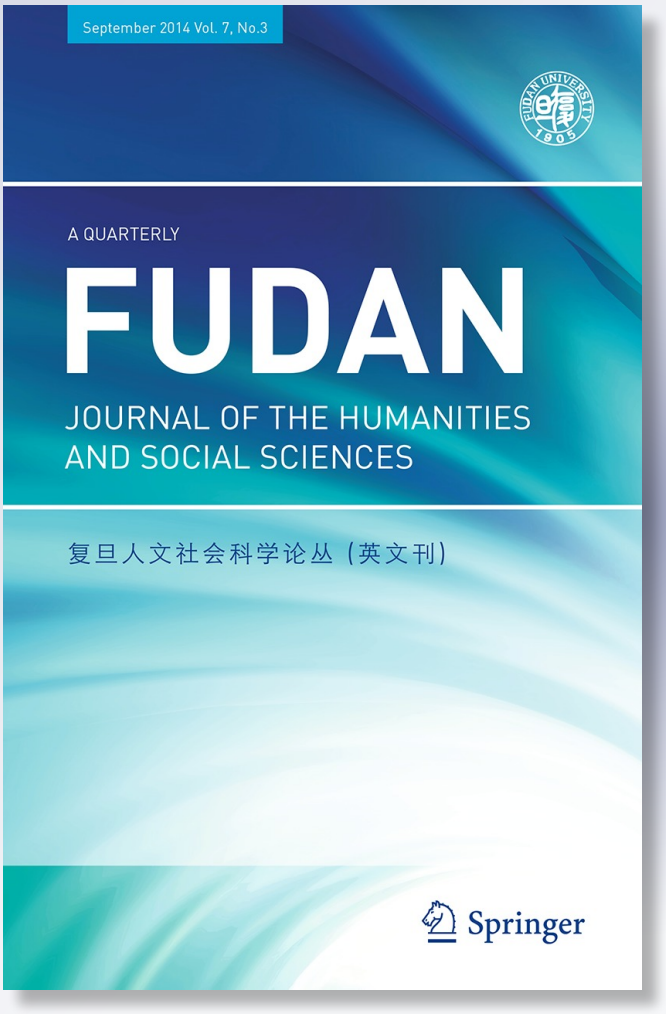

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RESEARCH ARTICLE

Dilemmas and Obstacles: Multilateral Energy Cooperation Among BRICS Countries

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Abstract Multilateral energy cooperation among BRICS countries remains largely at the stage of initiatives with few substantial actions that have been taken so far. Three main reasons can account for it. One is a contending concern of energy security that constrains energy cooperation between energy producing countries and energy consuming countries. The second is energy diplomacy with self-help logic as the main principle, which discourages BRICS countries from taking collective actions to secure their energy security. The third one is the international energy system that conditions BRICS countries to participate in the international energy cooperation. As a result, multilateral energy cooperation is of secondary importance in the agenda of BRICS countries, and the degree of their involvement in global energy cooperation is relatively low.

Keywords BRICS · Multilateral energy cooperation · Energy security · Energy diplomacy

1 Introduction

BRICS is a combination that consists, by nature, of five energy producing and consuming countries in the world. It stands for an emerging energy producer Brazil, a traditional energy empire Russia, and two rising energy consumers—India and China—and South Africa. It seems reasonable and desirable for BRICS countries to engage in multilateral energy cooperation actively among them.

Indeed, energy cooperation has always been a topic in BRICS that summits and attracts the attentions and concerns of all the member countries. In the first summit of

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BRIC (South Africa was not included at the time) held in Yekaterinburg Russia 2009, the idea of strengthening cooperation among member states in the energy field was formally written in its Joint Statement, as it states that "(w)e stand for strengthening coordination and cooperation among states in the energy field, including amongst energy producers and consumers and transit states, in an effort to decrease uncertainty and ensure stability and sustainability. We support diversification of energy resources and supply, including renewable energy, security of energy transit routes and creation of new energy investments and infrastructure." At the 2010 Brasília summit, the leaders reached some consensus in the field of energy by reiterating their support of the international cooperation in energy efficiency. BRIC countries agreed to work together to facilitate the use of renewable energy through the international cooperation and the sharing of experiences and knowledge on renewable energy, including biofuel technologies and policies. The third summit of BRICS was held in Sanya in 2011, during which the significance of enhancing the cooperation on the development and the use of renewable energy resources was highlighted in the *Sanya Declaration*. The leaders also called for strengthening international cooperation to stabilize commodity prices, including energy prices. During the Delhi Summit in 2012, BRICS leaders cautioned the risk of energy price volatility. It is stressed in the *Delhi Declaration*, that increasing energy production capacities and promoting producer–consumer dialogue are crucial means to help restrict such price volatility. In the fifth summit held in Durban 2013, energy as a new area of cooperation among BRICS countries was articulated in the *Durban Action Plan*.

As is seen in those summits, BRICS leaders, besides their appealing to cooperation in improving energy efficiency and developing new energy, have also expressed the desire of cooperation in traditional energy fields or fossil energy, including stabilizing petroleum prices, encouraging dialogue among energy producing countries, and consuming and transiting countries. All that said, however, a multilateral cooperation framework in the field of fossil energy has not come into being up to now since the first declaration issued in 2009. The idea of energy cooperation among BRICS countries still remains in rhetoric, and has not yet been put into real action by the member countries.

There are at least three aspects that may contribute to the constraints of cooperation in traditional energy field among BRICS countries. One is about BRICS countries themselves, the second one is energy relationships among them, and the last one is their coordination at an international level. Obstacles emerging from the three aspects discourage BRICS countries from not only their coaction in energy acquisition and upstream area, but also their engagement in global energy cooperation and governance. In the following sections, the article will examine and analyze these obstacles in three levels, respectively, energy security and energy diplomacy, energy relationship among BRICS countries, and the international energy system.

2 Contending Concerns of Energy Security Among BRICS Countries

Energy is a strategically vital commodity, and access to energy is a necessary element of a state's security. Energy security is widely conceived to have three main

components: reliability of supply, affordability of supply, and friendliness to the environment (Shaffer 2009, p. 91; Elkind 2010, pp. 119–148). Energy security could be achieved through several means: diversification of energy sources and suppliers, stockpiling of fuel, creation of redundant infrastructure, and promotion of flexibility in fuel use. Energy security has a wide range of components. Different states conceive and understand the notion of energy security from their own interests. Enhancing energy supply security is on the agenda of energy-importing state's national security, while assuring a stable energy market can be a major concern of energy-exporting states.

Definitely, energy security has become one of the main issues for most states in the world, and there is no exception for BRICS countries. In energy security strategies, despite apparently the same key word of diversification, consumers and producers of BRICS countries are not actually matched with one another. Their strategies for energy security are virtually competing, and even opposing. For China and India, the two main energy consumers, it is about maintenance of sufficient energy supplies, prices commensurate with purchasing power, and guaranteed safe delivery of energy resources. For energy suppliers like Russia, however, it is about maintenance of sufficient energy demand, prices conducive to national revenue growth, and guaranteed control over export of energy resources. In one word, what the consumers care about is energy supply security, while the producers care about energy demand security.

Most BRICS countries take energy security from the perspective of national strategy. For China, having stable and sustainable access to energy supply is of vital importance to its economic growth. Became a net crude oil importer in 1996, China has been reassuring its energy security from a level of strategic vision since the early years of the twenty-first century. Energy security in China has become an issue of the "high politics" of national security, not just the "low politics" of domestic economic policy (Kenneth and Herberg 2006, p. 13). India's energy strategy is shaped by a shortage of energy and the scarcity of indigenous reserves. Achieving energy security to guarantee the current trajectory of its economic growth is one of the strategic themes with greatest impact on India's search for its place in the emerging international balance of power (Pant 2009, p. 19). India's energy policy above all focuses on securing energy sources to meet the needs of its growing economy. For Russia, the Energy Empire, oil and gas are not only importance sources of Russian fiscal revenue, but also strategic tools for pursuing its powerful position again in the world (Sun 2010a, pp. 104–116). Russia views its petroleum resources as a strategic resource, and a policy tool to promote its economic growth and striving for its geopolitical interests. Russian government takes an energy policy of resource nationalism, which means it emphasizes and maintains Russian sovereignty in energy cooperation with the International Oil Companies (IOCs), and squeezes the share of IOCs in Russian energy exploration projects.

Unlike Russia, Brazil mainly views its energy resources as economic resources. The Brazilian government has not endowed as much political and strategic implications in energy resources as the Russian government has done. It tends to view foreign investment in Brazilian energy resources from the perspective of economic interests. In this sense, Brazil may act as a promoter for BRICS countries'

energy security, but its role in promoting multilateral energy cooperation among BRICS countries is limited, since it has just turned itself as an energy producer and exporter in recent years, and its energy cooperation with China has just initiated.

Conceptually, the relationship between consuming and producing countries is interdependent, and the unfolding of energy cooperation between them is anticipated to be desirable. But in reality, it is not the case as expected. Their contending notions and divergent concerns of energy security frequently affect the energy relationship between the two sides. This mismatch usually leads to mutual miscalculations and even mistrust between energy consumers and suppliers. The situation may turn more unfavorable if the energy suppliers continue to choose the emphasis of governments' controlling on upstream investment and energy export. An unstable and strained relationship between the suppliers and consumers would make energy cooperation among BRICS countries even harder. Consequently, despite the fact that there exists energy interdependence among BRICS countries, it is not definite for them to construct a multilateral energy community.

Even among the consumers themselves the concerns on energy security are different to some extent. Except for their common interests in stabilizing supply of energy, reasonable price, and safety transportation, the consumers have little agreements especially in getting more energy supply and sharing equity oil. In terms of relative gains in energy cooperation, the interests of the consumers are divergent fundamentally. There are even circumstances in which the consumers would rather sacrifice their economic interests to secure an energy supply. Taking Asian Premium as an example, some Asian countries, like China, Japan, and South Korea, have to pay an Asian Premium as they import oil from the Middle East, but there is no coaction for them to form a buyer alliance in negotiation with the Middle Eastern oil-producing countries. They tend to take more concern about the oil supply than the over-charged oil price. It is very difficult for them to cooperate in order to protect their collective energy security, and the degree of their multilateral cooperation is unavoidably low in terms of energy acquisition.

3 Energy Diplomacy Principles and Activities

A state's principle of energy diplomacy and its behavior are determined by its cognition of its energy security. Most of the producers and consumers in BRICS perceive their energy security as high politics with strategic interest, and follow a self-help logic to ensure their energy security.

Self-help is a prudent concept in international politics. To achieve their objectives and maintain their survival, as structural realist Kenneth Waltz argues, units in a condition of anarchy—be they people, corporations, states, or whatever—have to rely on the means they can generate and the arrangements they can make for themselves. Self-help is necessarily the principle of action in an anarchic world (Waltz 1979, p. 111). Its logic is self evident not only in international politics in general, but also in international energy politics in particular. In terms of energy security, the self-help logic signifies that a country relies on itself to secure its overseas energy acquisition mainly through bilateral governmental contracts with

oil-producing countries, rather than through the international oil market and multilateral energy institutions. Obviously, multilateral energy cooperation for collective energy security, such as energy cooperation in the framework of the International Energy Agency (IEA), does not belong to the self-help category.

Taking China, the largest consumer in BRICS, as an example. Self-help logic has been a guiding principle for China in pursuing its energy security in the international energy cooperation, as far as energy acquisition is concerned. Regardless of political and diplomatic rhetoric, the self-help logic has shaped China's stance in international energy cooperation. China primarily relies on its cooperation with energy producers for fossil energy acquisition. This approach to energy diplomacy is not only rooted in China's tradition of self-sufficiency but also constrained by the international energy market and international community. Moreover, national oil companies, acting as main executors for exploring overseas oil and gas resources, reinforce China's self-help behaviors in acquiring fossil energy. Despite the fact that the Chinese government has been gradually embracing the notion of international energy cooperation and has accepted the idea of liberalist win–win logic, China has not yet abandoned self-help logic as its energy diplomacy principle.

China is clear that it must rely on every possible means at her disposal to acquire overseas energy resources and maintain its energy security. It looks into its energy relations with both producers and consumers from more realist perspectives. In terms of acquisition of fossil energy, China thus perceives all producers as potential partners and all consumers as competitors. Taking China's energy policy in 2005 as an example, most of China's strategic partners were energy producers, countries with energy production potential, and transit nations, e.g., Russia, while consuming states were not mentioned as energy security partners.

Collaboration directly with producing countries has long been China's principal approach to securing its access to overseas energy resources. After 2 decades of executing going-out strategy, China has established bilateral energy cooperation with almost 40 countries in the world. China's arrangements with individual energy suppliers—Azerbaijan, Brazil, Indonesia, Iran, Kazakhstan, Russia, Saudi Arabia, Sudan, and Venezuela—are all promising to meet China's demand for fossil energy. Although China also buys oil in international markets, and has cooperated with India, an energy consuming country, in exploiting oil in Kazakhstan and jointly entering into the Sudan oil exploitation project (Xu 2007, p. 5), direct energy relations with oil-producing countries are of strategic importance for China's energy security, simply because such producers have what China needs. According to Chinese energy diplomacy principle, only Russia and Brazil, not India, in BRICS are of strategic importance for China's energy security. For China, energy cooperation with Russia and Brazil could increase China's energy acquisition reliability and diversification. In other words, China's energy security could be achieved by cooperating with Russia and Brazil, respectively, rather than through working with India to take collective action or form buyer alliance.

The Chinese government takes state-owned national oil companies (NOCs) as strategic tools in implementing its energy diplomacy and executing its going-out strategy, for which China's NOCs get diplomatic and economic support from the

Chinese government. To achieve its petroleum security, China has been encouraging its three giant state-owned oil companies—PetroChina, Sinopec, and CNOOC—to seek overseas resources (Wu 2009, pp. 38–43). With Chinese governmental support, the three NOCs have invested heavily in oil exploration ventures in Iran, Iraq, Kazakhstan, Kuwait, Nigeria, Peru, Russia, Syria, Sudan, Venezuela, Brazil, etc. In turn, their commercial interests drive China's NOCs to prefer bilateral energy cooperation with energy producers because they can easily secure the Chinese government's diplomatic and financial support (Downs 2007, pp. 42–68). Chinese national oil companies, as important executors of China's energy diplomacy, also push for China's bilateral cooperation with energy producing countries and reinforce China's self-help approach to energy security.

In order to guarantee its energy security, particularly its access to overseas fossil energy resources, China has conducted intensive energy diplomacy that features self-help logic as the general guideline, bilateral cooperation with fossil energy producers as the primary channel, and NOCs as important executors. In other words, China usually does not rely on collective actions or energy consumer alliances but on self-help logic and exclusive bilateral channels in seeking its fossil energy acquisition security. And this is equally applicable to India and other consumers. Understandably, the self-help logic is not merely used to explain China's approach in securing energy security, it is also embraced by India, which largely relies on its direct cooperation with energy producing countries and has its national oil companies functioning as main instruments in exploring overseas energy resources.

For Russia, the principal approaches of securing energy security are maintaining governmental control over the production of oil and gas resources, the transit transportation, and the market. The Russian government adopts many ways to acquire energy security. For example, maintaining its influence over transit states to ensure Russian control of energy transportation, investing in extremely expensive infrastructure that circumvents central Asian states to prohibit potential competitors to enter the European market, and creating tremendous obstacles to both private and foreign producers. Russia relies on its state-controlled companies to master the exploring, transporting, and exporting of its oil and gas resources. Russian state-controlled pipeline company, Transneft, controls oil export from Russia. In the natural gas arena, the state-controlled company Gazprom dominates production and controls distribution and export (Shaffer 2009, p. 117).

Russia utilizes its energy resources from a strategic perspective and takes its advantage of energy exporter over importers in Northeast Asia, as well as in the European Union. Energy acts as Russia's main trump card in its relationship with other countries in the region. This has been translated into a much more vigorous approach toward diversifying markets and pipeline routes (Lo and Rothman 2006, p. 15). To consumers, Russia is an important oil and gas supplier, but an unreliable energy supplier. For example, Gazprom cut gas supplies to Georgia and Ukraine in the winter of 2006, suspended oil supplies to the Druzhba pipeline through Belarus in the winter of 2007, and interrupted gas supplies to Ukraine in 2009.

4 Factors Restricting BRICS Countries from Engaging in Multilateral Energy Cooperation

Energy cooperation among BRICS countries is directly conditioned by their senses of energy security, principles of energy diplomacy, and their behaviors in energy cooperation.

1. A state's strategic consideration of its energy security determines its principle of energy diplomacy and its behavior in energy cooperation. As mentioned above, the energy security concern of the producer is usually in discordance with that of the consumer, and this is the main factor that restricts energy cooperation between producers and consumers among BRICS countries.

The energy relationship between Russia and China is a typical example. It shows how divergent energy security concerns may generate energy competition between the producer and the consumer. Since the Russian government regards energy not only as an economic resource but also as strategic leverage useful in gaining advantage over other countries in the region, Russia tries to avoid a scenario of a buyer's monopoly market in its energy cooperation with consuming countries. In other words, Russia is more interested in how to develop its relationship with consumers individually, instead of working with them collectively. Definitely, Russia does not want to see the consumers form a buyer alliance in its negotiation with them on energy issues. The Putin administration clearly attempted to enjoy its ability to interpret Northeast Asian regional order geopolitically as a tool to maximize its own benefit by playing China and Japan off each other (Itoh 2008, pp. 79–98; Buszynski 2006, pp. 287–303). With regard to the scrambling between China and Japan for Russia's East Siberia oil pipeline, the Russian government abandoned both Angarsk-Daqing line with China and Angarsk-Nakhodka line with Japan, and replaced them with the ESPO, which enhanced Russia's strategic presence in Northeast Asia. The Sino-Russia energy relationship shows that the course of energy cooperation may be bumpy due to their contesting for strategic interests, since the energy security concern of the producer is inconsistent with that of the consumer. It could be induced that energy interdependence among BRICS countries does not definitely result in multilateral energy cooperation among them, because the energy security concerns of main producers and consumers in BRICS are competing and even opposing each other.

Brazil as another producer has exerted its influence on pushing energy cooperation among BRICS countries, though its influence is very limited now. Since Brazil is just a newly rising oil and gas producer, Brazilian deep-water oil exploration needs huge investment that could not be made solely by Brazil's state-controlled energy company, Petrobras itself. It is far away for Brazil to become a real great energy producer. According to the estimation of IEA, the cost of Brazilian oil resource exploration is much higher than that in the Middle East and Russia as well. It is anticipated by IEA that Brazil would cripple its production of oil in 2035, which needs an annual investment of $90 billion. The role Brazil plays in shaping energy relations among BRICS countries has been very weak by far.

Moreover, the way of Brazilian energy cooperation with foreign countries could not be duplicated by Russia. The Brazilian government views its energy resources as an economic source, not a strategic tool for pursing power advantage over other countries as Russia has done. Compared to Russia, Brazilian policy to foreign investors is more favorable and liberal than Russia. For example, as a state-controlled and publicly traded energy company in Brazil, Petrobras has worked alongside Anadarko, Devon, Exxon-Mobil, BG group, Petrogal, Reposol, Shell, and UK Gas Company to prospect and produce oil and gas from immense pre-salt reserves (Langevin 2010). Brazil has also cooperated with China smoothly on its upstream oil field. In October 2013, two Chinese oil companies, CNOOC Limited and CNPC, together with Royal Dutch Shell and Total, formed a consortium, and led by Brazil's state-run Petroleo Brasileiro Petrobras, obtained exploration and mining rights in the Libra oil reserves. It is the first time for Chinese oil companies to participate in exploring Brazilian oil resources. So, the Brazilian approach of energy cooperation to foreign investors could not be duplicated by Russia. Furthermore, Russian strategic perspective on its energy resources and its behaviors in energy diplomacy is a strong determinant that impedes its energy relationship with other BRICS countries. Sino-Russian energy relationship is the most telling case, reflecting the competition and instability of energy cooperation. If the Russian energy relationship with other consumers could not be managed properly and effectively, it would become the biggest obstacle in BRICS energy cooperation.

2. A potential competition on energy resources also lies between India and China. As rapidly growing energy consumers and importers in Asia and in the world, China and India have some common concerns on their energy security, which could both increase opportunities of coordination as well as competition between them. However, the fact that BRICS has the two big consumer members is not sufficient for pushing multilateral energy cooperation among BRICS countries. Since both are large energy consumers and importers, there are some contradictions and competitions between them (Ma 2010, p. 8). The two countries have held dialogue to coordinate their relations and manage their competing interests in energy exploration in Central Asia, and also cooperated in Sudan. However, it is hard to say whether this kind of cooperative attitude is out of concern for relative gains or just an expedient measure. The two consumers' pursuit for energy security might be a potential source of competition and conflict.

First of all, there exists strategic distrust between China and India to some extent. Despite some improvements, the Sino-India relationship still remains competitive. China sees India as its major medium to long-term strategic competition in Asia. It is argued that India possesses an ambitious, belligerent, and expansionist strategic culture. India's perceived expansion of its strength and reach of its maritime capabilities makes the Chinese more wary of Indian intentions, which in turn deepens strategic mistrust between the two countries.

Secondly, the overseas energy sources of both India and China are becoming more and more similar, and that increases the risk of energy competition between the two nations, especially in overseas upstream energy resources exploration. With

a constantly rising demand from India and China for imported oil and gas, concerns for energy supply security drive the two nations to acquire overseas equity oil. Overseas energy sources of the two nations are becoming more and more similar. China has gotten stable energy supply sources, respectively, from Central America, South America, Sub-Sahara Africa, South-East Asia, and Central Asia. India is now the fourth largest energy consumer in the world, and the sixth liquefied natural gas (LNG) importer. High dependence on imported oil and gas impels India to diversify its overseas energy supply. To this end Indian national oil companies have purchased equity stakes in overseas oil and gas fields in South America, Africa, and the Caspian Sea region to acquire reserves and production capability. India follows Chinese paces entering into almost the same overseas upstream energy sources. The scramble for energy sources between China and India in Southeast Asian, South Asia, and Central Asia, would make a tense Sino-Indian relationship. In 2005, for example, Myanmar reneged on a deal with India and instead signed a 30-year contract with China for the sale of 6.5 trillion cubic liters of natural gas. The two countries are currently not in direct conflict, but there are several areas, such as energy security, in which both sides hold them as their strategic interests and may turn them as sources of their potential clashes with one another.

Thirdly, China's security activities in the Indian Ocean could inevitably raise Indian strategic alertness. India's reaction would in turn increase Sino-Indian competition in the ocean as well as tensions of their relations. Energy security considerations are already driving China and India to purchase equity stakes in energy fields, and evolving competitions are increasingly being supported by military capabilities leading to the potential for heightened tensions and even conflict (National Intelligence Council 2008, p. 63).

The Indian Ocean historically has been a major transit route, bringing crude oil from suppliers in the Persian Gulf and Africa to markets in Asia. Today, more than 40 % of China's imported oil comes from the unstable Middle East and North Africa, and over 85 % of it is transported through the straits of Malacca, Hormuz and Suez. Any serious disruption in transportation could damage China's energy security. And since almost all China's imported oil from the Middle East and North Africa has to be shipped back through sea-lanes in the Indian Ocean, high reliance on the Strait of Hormuz and the Gulf of Eden at the source and the Strait of Malacca in transit represents a strategic vulnerability for China. Piracy off the coast of Somalia has been a serious threat to sea-lane communication. Security experts have warned that possible terrorist attacks against tankers transiting the Strait of Malacca may interdict the busiest supply route in the world (Ziegler 2006, p. 9). Chinese former President Hu Jintao once called this problem China's "Malacca dilemma" and considered it the key to China's energy security (Zweig and Bi 2005, p. 34).

Central to China's efforts to mitigate its "Malacca dilemma" have been sustained initiatives to strengthen Chinese economic, diplomatic and strategic ties with states along the Indian Ocean littoral, together with a more long-term effort to enhance the People's Liberation Army's Naval capacity to undertake missions in support of "far sea defense." While motivated primarily by defensive motivations related to its energy interests, Chinese activism in the Indian Ocean has inevitably stirred Indian fears of Chinese encirclement. These fears have in turn spurred India to cultivate

closer ties with the United States and its allies, for instance, the US-Indian 123 civil nuclear agreement provides a convenient platform for India to simultaneously pursue its energy security interests while hedging against China's rise (Phillips 2011).

The sea power of India and China is asymmetrical. Possessing a strategic advantage over China, India has a large and growing navy, and dominates the sea-lanes which are must use routes for most Chinese oil supplies ships and thus are vital for China's energy security. India can affect China's energy supplies but China cannot do the same to India to the same degree (Ryan 2012, p. 46). Moreover India's geographic location makes it an ideal place for containing China by the US in concert with other allies (Tellis 2004, p. 141).

Finally, if taking Russia into consideration, the competition in Sino-Indian energy relationship would be much worse, and it could become a factor jeopardizing BRICS multilateral energy cooperation. Since Russia tends to take its energy resources as strategic tools, and two rising energy consumers—China and India—follow the self-help principle in seeking their energy security and devoting to exploring upstream resources, an involvement of Russia into Sino-India energy competition may duplicate a scenario of a triangular energy competition among China, India and Russia as has been seen among China, Japan and Russia in Northeast Asia. The energy relationships among BRICS countries would turn to be twisted and more complicated then.

Although China and India have common interests in securing imported energy, it is difficult for them to transfer them into the motivation of taking collective actions in pursuing their energy resources. Fundamentally, Chinese energy security policies follow the principle of self-help logic. The same logic is also applicable to India and Russia. The concerns of relative gains would lead both China and India to view their cooperation in energy acquisition as a zero-sum game. If both China and India follow the logic of self-help and emphasize relative gains in dealing with their energy relationship, competition for overseas upstream resources exploration would be a major determinant that affects the Sino-Indian energy relationship.

3. China's role in promoting BRICS multilateral energy cooperation is very limited.

Taking self-help as its primary approach to energy security, China is reluctant to make commitments in building BRICS multilateral energy cooperation. In the last 2 decades, constrained by the pattern of the international petroleum market and the international community, China had to seek a self-sufficient way to secure overseas energy access, and preferred to rely on bilateral relations and long-term contracts with oil-producing countries rather than on multilateral mechanisms. And Chinese national oil companies had to turn to some unsavory regimes, such as Sudan, Iran, and Myanmar, which are shunned by many international oil companies but enjoy a relatively good relationship with China (Kong 2010, p. 133). Since the early 1990s, by investing in and deepening on the political relations with energy producing countries around the world, China has steadily made progress in the petroleum business, including upstream exploration, pipelines, and refinery facilities in a number of countries. More recently, it has secured several long-term purchasing

agreements in Sub-Sahara Africa, the Middle East, Southeast Asia, and South America. For China, bilateral cooperation with energy producers is more preferable than engagement with them in a multilateral energy regime.

On energy acquisition, China's inability in building BRICS multilateral energy cooperation lies in its weakness as a fossil resource hunter. Although China enjoys more fruitful energy cooperation with Russia than its competitors, such as India in BRICS and Japan and South Korea in Northeast Asia, for example, the Chinese energy relationship with Russia is arguably ambivalent, complex, and instable and asymmetrically in Russia's strategic favor. China's achievements in energy cooperation so far are not sufficient to be scaled up into a multilateral institution. China–Russian bilateral cooperation on energy acquisition is hardly able to serve as a building block in this regard. As Itoh observes, that the energy relationship between Russia and China has been underachieving is partially due to Russia's deep-rooted geopolitical concerns about China and Beijing's mistrust of and frustration with Moscow. Russia fears that fueling China's rise would enhance China's potential threat to Russian interests in the Far East region. A dramatic expansion of Russian energy exports to China will undoubtedly heighten fears in Russia about its truly becoming a "resource appendage" to China—an unwelcome development that, in the minds of some Russians, would cement Russia's status as the junior partner in the bilateral relationship (Itoh 2011, p. 1). Despite the 2009 groundbreaking "loans-for-oil" deal, the development of China–Russian energy relationship is likely to continue in a slow and bumpy way. The two countries also have disputes over natural gas issues, such as gas pricing formula, delaying the construction of a cross-border natural gas pipeline. Some commentators even predict pessimistically that the Sino-Russian energy cooperation in the future will probably sustain a "one step forward, two steps back" pattern (Danchenko et al. 2010, pp. 14–15). Owing to its unfavorable status in its energy ties with Russia, it is not easy for China to scale up energy cooperation with Russia into a multilateral one among BRICS countries. In other words, it is difficult to transfer a bilateral Sino-Russia energy relationship into a strong base for multilateral cooperation among BRICS countries.

4. BRICS countries' energy security mainly depends on the markets outside of BRICS members.

The main energy suppliers and energy consumers of BRICS are countries outside of BRICS. The majority of Indian oil imports come from the Middle East and the majority of gas imports come from Qatar, which is India's sole long-term supplier of LNG. China has already constructed a diversified oil and gas supply network. In terms of natural gas, two gas pipelines have been built, one is the Sino-Manama natural gas pipeline built in October 2013 and the other is the Central Asia pipeline. Together with LNG, respectively, from Russia, Australia, and the Middle East, China has realized its object of diversifying gas supplies, and therefore increased its energy security to some degree. However, the Russian natural gas pipeline is not in the network of China's gas supply. Russia's traditional gas-exporting markets are European countries. Brazil's traditional oil exporting market is the U.S.A. The United States imports approximately 60 % of Brazil's current oil exports, with

volumes expected to rise in the next decade (Langevin 2010). Therefore, either energy importers or exporters in BRICS primary rely on energy markets outside BRICS to guarantee their energy security. The supply–demand relationship among BRICS countries is loose, and it implies that BRICS countries secure supply security and demand security through channels outside of BRICS members. Although there are great energy producing countries and rising oil-producing countries, and two great energy consumers within BRICS, both willingness and demand of BRICS countries to build a regime for common energy security is insufficient.

5 International Energy System Constraining BRICS Countries Involving in Multilateral International Energy Cooperation

At a global level, the energy consumption, volumes, and production capacities of BRICS are asymmetrical to their positions in the international energy market. BRICS countries are comparatively weak actors in the international energy system with little discursive power in international energy institutions. These, among others, restrict BRICS countries from involving themselves in international energy cooperation.

1. Rules of international energy market restrict BRICS countries from involving in multilateral energy cooperation.

International oil price is primarily fixed by international futures markets, located in London, New York, Singapore, and Dubai separately. Oil price is also fluctuated by the quota policy of OPEC. In the international oil market, the spot price is determined by the futures price. In terms of international energy politics, western countries and their major international oil companies (IOC) play a dominating role in setting up the rule of game (Sun 2010b). The dollar has become the main unit of account and means of payment for the international crude-oil transactions since the first oil crisis in 1973 (El-Gamal and Jaffe 2010, p. 121).

Nevertheless, BRICS countries have little voice in oil-trading rules, especially in oil pricing. It is asymmetrical to the volumes of their oil consumption and production. On the consumption side, the world's energy consumption is set to grow an estimated 40 % by 2040, and BRICS' rising economies will be responsible for most of that growth. As one of the biggest consumers in BRICS, China is not only a weak energy resource hunter, with high dependency on imported oil, but also a compulsory rule taker of international energy trading rules with little impact on them. In the international petroleum market, China has little say in petroleum trading, pricing, producing, and reserving. Being a newcomer of the international petroleum market, China was not well accepted, nor comfortable to work with western oil majors. In 2003, both CNOOC and Sinopec were blocked from participating in the development of an oil field in the Caspian Sea after the existing partners decided to increase their own stakes. The obstacles, put in place by the international community reacting to China's pursuit of its offshore oil and gas, put Beijing on the defensive (Zha 2006, pp. 179–190). China has to depend on its own

national oil companies and assist them by developing close diplomatic ties with oil-producing states, such as Iran and Venezuela, which pursue foreign policies contrary to U.S. and European interests or preferences. On the production side, Russia, a giant oil producer and exporter in the world, has also little say in the international oil market. It threatened to change the international oil-trading rule, but failed in vain in 2008 (Sun 2010a, pp. 104–116). Therefore, it can be argued that neither Russia nor China has little discursive power in oil pricing at the international oil market. Moreover, Chinese Yuan, Indian Rupee, Russian Ruble, or Brazilian Real are not international oil-trading currency so far.

Both the oil importers and exporters in BRICS are victims of the volatility of international oil prices. Rising oil price is a loss for consumers, and also a hit for the producers fundamentally. If the international oil prices keep rising in the following decades, China and India may take a burden of high cost in energy consuming and sacrifice their economic growth. Definitely, Russia and Brazil as producers would gain an energy treasure boom, but will suffer the constraints of world economy in the end. However, as a price taker not a setter, and a rule follower not a leader of the international oil market, BRICS has almost no voice in the international oil pricing, not to speak of constructing a mechanism favorable to their economies by affecting oil price volatility.

In the aspect of natural gas, Russia is threatened by the international gas market. Russian natural gas covers about a quarter of Europe's gas needs through long-term pipeline contracts, which tie gas price to oil price, and a principle of "take-or-pay". But, nowadays gas has been increasingly traded in spot markets. With the boom of North America's shale gas and a rise of the LNG production from Qatar sent to Europe, Russia's traditional gas export market, Russia's gas monopoly Gazprom is under pressure from its customers to amend existing long-term contracts and the "take-or-pay" principle (Kolyandr 2013).

2. The relationship with international energy institutions restricts BRICS countries from engaging in multilateral international energy cooperation.

Despite the fact that it is the greatest consumer in BRICS, China is not in a position to push multilateral energy cooperation forward. As some commentators put it, China is still a "junior partner," lacking sufficient discursive power in global energy organizations, even though it is one of the biggest energy markets in the world (Guan and He 2007, pp. 45–53). China has been refrained itself from engaging as a full participant in most global international energy organizations. Prior to 1993, when China became a net petroleum importing country, those developed countries as energy consumers had already participated in the IEA, a relatively mature multilateral energy institution, aiming to strengthen international energy security. China has been a special observer at the IEA committee meetings, but not a member of the IEA, because it is not a member of the OECD, a dominant player in the global oil market. It is difficult for China to meet the 90-day emergency stock obligation recommended by the IEA. At present, China's Strategic Petroleum Reserve (SPR) is available for about 30 days, far less than the standard recommended by the IEA. It is also difficult for China to commit some shared goals of collective international actions to respond to energy emergencies, which require

China to give up some sovereignty over use of its strategic petroleum reserves (Kohl 2010, pp. 217–219). The relationship between China and the IEA is still limited to communication and dialogue. It is less likely for China to join the IEA in the foreseeable future. The relationship between China and the Energy Charter Treaty (ECT) is similar to the one between China and the IEA. As a weak resources hunter in the international energy system, with high reliance on imported oil and gas and without any influence on the international energy trading rules, China has to act as a passive accepter, not an influencer or rule maker, of international energy trading rules.

Similarly, being the second-largest producer and exporter of petroleum in the world, Russia is neither a member of major international energy organizations, nor a rule maker of the international energy trading. Furthermore, Russia has been striving for dominating the rule for international gas trading, but remains outside of the OPEC, and is not likely to become its full-fledged member at any time in the foreseeable future (Elass and Jaffe 2009, p. 7). Russia's relation with Energy Charter Treaty (ECT) is also complicated and has not ratified the treaty yet. The reason for Russia's refusal to do it lies in its political unwillingness to accept an EU-sponsored Treaty (Belyi 2009, p. 4). Russia is apt to cooperate with Central Asian countries bilaterally, but not multilaterally with EU in the framework of ECT. Russian President Vladimir Putin has been devoted to constructing a gas OPEC and frame a principle of setting naturel gas price, but this has yet to be realized. In 2008, Russia together with Iran and Qatar agreed to form an OPEC-style organization for gas-exporting countries to control gas prices, which would give Russia a greater say in the international markets of natural gas. Russia does not identify itself with the international energy institutions but intends to construct a gas OPEC and dominate the international gas rule.

As a giant consumer, China involves itself in multilateral international energy cooperation in a very limited way on the ground as it has been restricted structurally by the rules of both the international energy market and international energy institutions. As for the greatest producer, Russia is not interested in joining the international energy institutions, because its national interests are incompatible with the international multilateral energy cooperation. Moreover, both India and Brazil are vulnerable to act in international energy markets and institutions. India is just one of the emerging economies highly relying on overseas energy resources. Brazil is a newly emerging energy producer, and has a painstaking path for her to become a main producer in the world. BRICS countries are in urgent need of a stable international energy market, but their engagement in the international multilateral energy cooperation is discouraging, and their impact on the international energy pricing is relatively little.

6 Conclusion

The internal energy dilemmas of BRICS discussed above make for a multilateral cooperation mechanism, especially with cooperation on energy acquisition, a secondary importance in BRICS countries' agendas. The external energy dilemmas

make BRICS a weak group in the international energy market as well as with the international energy institutions. As BRICS countries' energy consuming and producing volume is asymmetrical to their positions in the international energy market and organizations, which have been dominated by developed countries, it is necessary to enhance energy coordination among BRICS countries and their involvement in global energy governance. BRICS should also integrate their energy resources, technology, investment and market within BRICS at first, and then participate in global energy governance. Only by overcoming and surpassing the zero-sum competition for energy resources and self-help logic in energy cooperation, could BRICS countries achieve multilateral energy cooperation. To fulfil this target, effective management of the competitive logic is a prerequisite for BRICS countries to explore the great potential for their energy cooperation.

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