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China, Oil, and the World

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Chancellor's Honors Program

Senior Project

University of Tennessee

December 8, 2006

At the outset of the new millennium oil continues to prove itself as a global hot topic in many ways. Economically, it plays a major role in almost every country, for some it even determines their quality of life. Environmentally, the effects of consumption and production have caused concern for individuals and governments alike. Politically, the industry has affected the way governments interact with each other and with their constituents as well. Personally, the availability of oil as well as the cost of fuel touches the lives of billions around the globe. But as much as these issues pervade the rest of the world, no country has experienced more changes in relation to oil than China, a nation becoming famous for their phenomenal economic growth. Many of the 1.3 billion Chinese (about one-fifth of the world's population) have seen their lives changed by the prospering economy and its byproducts. Of course there are myriads of new experiences that China is experiencing as it continues to grow, but one particular aspect of the Chinese economic boom is causing a ripple effect that is reaching to the four corners of the world. Oil as a way of life is nothing new for many countries. For some, its production provides for the government and its people. For others, its consumption is a part of everyday life. But never before has a country as large as China so suddenly entered into the oil picture, and it will be very interesting to see how the world will adjust to the fallout.

There are two major ways in which China is experiencing an oil boom. One half of it is the result of China's emergence as a manufacturer of cheap exports. Almost everybody around the world would have to look no further than their closet, desk, kitchen, or office to realize this. Many of these manufacturers, as well as companies in other industries, are growing as a result of their success. And for those who depend on fuel to run their operation, this growth also means they will need lots of extra fuel to keep up. The other half of the boom is happening on the consumer side. More than ever before the Chinese have the opportunity to purchase products of

all different varieties. Many of the products they are buying require fuel. The main example of course is the automobile, one of the world's most recognizable modern conveniences. But there are other examples as well, and along with the rapid industrial growth, especially in manufacturing, China has become an oil consuming giant. And when a giant is born, seldom does it go unnoticed. As China explodes the rest of the world is adjusting. The fallout from the East is being experienced all over the world. It is changing the way China and the world interact as well as changing the way the world looks at oil. Governments, companies, and individuals have all dealt with the fallout already, but there are still many questions left unanswered. How will the world continue to change as a result of China's tremendous growth? Who are the winners? Who are the losers?

Before the discussion of the oil issue continues, an examination of how China arrived at this point is in order. In the last 25 years there has been a major shift in China's economy. Prior to the shift the economy was very centralized in addition to being closed off to international trade. China struggled to grow in and of itself, and in order to stimulate expansion the government gradually began to reform their policies and relax their controls. One way in which the Chinese government began to allow this transformation was opening up industry to privatization. In addition to allowing more foreign investment, the privatization process that China has gone through has stimulated growth tremendously. As more industries are opened to private competition, the scope of private ownership has grown and more of China's assets are moving from being state-owned to privately-owned. Even until recently China has continued to open up more sectors to private ownership, such as infrastructure, financial services, and utilities. Privately-owned companies are now responsible for over half of the nation's GDP, and they employ millions of Chinese people. There are other factors that helped to stimulate China's

economic system. In the 1970's agriculture gradually began to be decentralized. The liberalization of pricing, increasingly autonomous state-controlled companies, fiscal decentralization, the implementation of a robust banking system, and the introduction of the stock market all played a role in the turnaround. Of course, none of these reforms were implemented overnight, but gradually over the past few decades they have come together to bring about the growing economy that is China's. China continues to make positive changes even now. Another boost in the Chinese system came in 2004, when changes to China's constitution gave state and private assets equal protection. Also in 2005 China's largest state banks have sold equity to foreign investors, and they have also made improvements to the foreign exchange and bond markets.

The changes that China has instituted have made their mark. GDP is ten times what it was in 1978, just over a quarter of a century ago. Last year alone China's economy grew by an amazing 9.9%. On a purchasing power parity basis, China stands as the world's second largest economy, just behind the United States. However, that is not true on a per capita basis. In this regard China still has a long way to go. Despite the impressive success that it has experienced, there are still many reasons why China could benefit from even more reform and more successes. Of the 1.3 billion Chinese, 150 million of them (just under 12%) fall below the poverty line. China is considered a lower-middle income country and they still must work to improve the situation for many of the interior regions that have experienced much less of the growth than many of the coastal cities and regions. And despite the positive work that the government has done over the years there are plenty of ways in which they are still lacking. For example, corruption and economic crimes continue to stifle the system at certain points. Recently, the world economic community has been frustrated by China's valuation of the yuan, and has

accused them of manipulating the markets for their benefit. Also, the government has struggled with unemployment issues. In 2004, the official count stated urban unemployment at 9%. However, in 2005 an official Chinese journal reported the unemployment rate to be 20% when rural areas are factored in, which have much higher levels of unemployment than the industrial urban areas. It is estimated that somewhere between 100 and 150 million rural workers float between the rural and urban areas looking for part time work to sustain themselves, which they sometimes find but for which they receive low wages. Another major area that the nation is struggling with is the environmental and social consequences of such rapid growth, to be discussed later. An additional threat to continued growth is the one-child policy, which is causing China to become an older country demographically. As time passes, the Chinese government and its people must learn to adjust to the changes occurring domestically to insure their future success.

As the economy goes, so goes the oil. As the boom continues, the need for oil continues to grow. China's oil demand has grown by 7% every year since 1990. Currently they are second in consumption only to the United States, using 6.4 million barrels per day, and some experts believe that they may catch up to the U.S. in the next couple of decades. Industries like coal and ore mining and processing, metals, machine manufacturing, armaments, and transportation equipment manufacturing will all require more fuel as they continue to gain business. And of course the electronics, textiles, and consumer goods industries China is becoming known for as an exporter also require their share of energy to operate. The consumers, who during the day (or night) are the employees of the prospering companies, are reaping the benefits in the form of growing wages and salaries. And as the wallet gets fuller and the bank account swells, so does the desire and the capability to buy.

One item that the Chinese are buying more of every day is a personal automobile. In the past three years the amount of privately owned automobiles has doubled to 23 million. Analysts project that by 2030 there will be 130 million privately owned vehicles in China, which represents just below 25% annual growth in ownership. And although the average Chinese person still only consumes a fraction of the energy that the average American consumes on a daily basis, that gap will continue to close over time as well. As one could imagine, the automobile industry is hungry to gain a presence in the massive market. Even as they struggle in their home country, the big three U.S. automakers have set their sights on the potential for a boost in China. But they are not the only ones. From all over the world they are bearing down on the Chinese; and each of the more than 100 foreign and domestic car companies will compete with each other to gain a foothold.

Each year, China's passenger vehicle sales have made enormous jumps, from a half million in 1998 to over 3 million in 2005. In the United States, about 17 million automobiles are sold each year. Some industry executives have said that it is possible in the next ten to fifteen years that Chinese consumers will buy 20 million automobiles a year. This market growth has served to heat up the level of competition in the country, and has forced many of the world's largest automakers to shift their strategies to meet the demand. Even while they reduce the number of vehicles they offer and the number of people they employ in their home countries, companies like Ford Motor Co., General Motors Corp., DaimlerChrysler AG, and Volkswagen AG are beefing up their work forces in China as well as the amount of vehicles they have for sale. These companies are doing whatever they can to gain brand loyalty and acquire customers while the boon continues in anticipation of the day when the market will slow down and those lagging behind will be forced out. DaimlerChrysler has even used the major AutoChina show to

demonstrate their strategy to expand sales of their U.S. brands Jeep, Dodge, and Chrysler. Instead of debuting their best selling Corolla in Los Angeles or Tokyo, Japanese auto maker Toyota did so in Beijing. Toyota, the second largest auto maker worldwide, has big plans for expansion in China. Their goal is to increase sales by 30% next year. Unfortunately for the car companies, the hyper competition is causing a downward trend of prices, consequentially cutting into profits. But many of the company leaders and industry analysts believe that over time consolidation will occur, and those few lucky winners who can hang on will have China as a long term component of their growth and profitability. The example of the automobile industry is just one of many that demonstrate the tremendous impact that China's growth is having on the world of business, and emphasizes how the oil industry will be affected as well.

To keep up with all of this economic growth the Chinese government has had to work very hard, especially when it comes to obtaining the energy it needs to power the country. In the past they did not have to depend entirely on others. China was an oil exporter until 1993. Before then they were producing oil for consumption in their own country as well as to sell to other countries. The Daqing oil fields, discovered in the Manchurian grasslands in 1959, were for a long time thought of as never-ending sources of oil for the Chinese people. Twenty years later, more oil was discovered in the South China Sea and the Bohai Gulf. These two sources were enough to sustain China's oil consumption for many years, and the Chinese people and government saw no need to depend on any other for their fuel needs. However, that all began to change as China's economy began its incredible ascent. Chinese companies and consumers began to use more and more of the oil all of the time. As more Chinese bank accounts grew, more automobiles and other fuel consuming modern conveniences were purchased. Unfortunately for Beijing (and the rest of the world's oil consumers), China's output of oil was

not nearly high enough to sustain all of this growth. As the production at China's oil fields began slowing, hope dwindled out for producing at any other Chinese locations. The petroleum pools beneath the Tarim Basin in western China are considered uneconomic to drill, and some believe that the oil is not high quality enough to be used anyway. And although China has the world's largest coal reserves, they are still forced to acquire more and more petroleum all of the time. Traditionally coal power provides for most of the energy needs China has, but with so much industrial and consumer use of items requiring the use of oil, coupled with the environmental concerns of coal burning, the shift to petroleum was inevitable. So the Chinese government has been forced to look outside of itself to quench the thirst for oil that the nation has developed. More importantly, they have put forth much effort in acquiring oil for the future. It is obvious to them as well as to the rest of the world that China will continue to grow for at least a while. Despite the fact that the growth must stop or at least slow down at some point, there are very few people predicting that right now.

In recent years Chinese leaders have traveled the globe in search for help in satisfying the growing demands its nation has for oil. Now that it cannot sustain itself by its own production, China has reached out to oil exporters near and far. And although they must depend on other oil exporting countries at least in part, China's desire is not to depend on others for its oil. Rather than do that they want to invest in their own oil supply projects thereby nullifying the risks of being exposed to the volatile world oil market. They do not want to be in the same situation as countries like neighboring South Korea, who is subject to the sometimes erratic prices of oil because of their dependence on others. They want control. To obtain it, they have been wheeling and dealing all over the world. In 1997, Premier Li Peng voiced his encouragement concerning this issue to the oil companies of China, telling them to look abroad for investment

opportunities. They have been successful in coming to terms on numerous deals, only a few of which are included here.

In 2002, the China National Offshore Oil Corp. (CNOOC) struck a deal with Indonesia to produce 2 million barrels a day in that country. The next year they made plans with Australia to produce natural gas there. In 2004, President Hu Jintao visited Gabon to look for opportunities in Africa. He made a trip to Uzbekistan to explore possibilities there. The President has also met with Russian President Vladimir Putin and discussed China's oil needs and the possibilities for cooperation between their two mega nations. Jintao pressed for Putin's approval of billion dollar deals, including a pipeline that would run from Siberia to the Chinese mainland.

The pipeline would terminate in the northeast city of Daqing, and would provide China with two positive outcomes. The first is that it would decrease the dependence on the Middle East and other unstable regions of the world for oil and gas supply. The second is that it would eliminate the need to use sea lanes for transport, many of which are controlled by the U.S. military. China would like to eliminate the hassle of dealing with the U.S. in regard to sea transport, a country which has many tensions with China. In addition to the sea lanes, this oil and gas from Asia's largest oil exporter is transported currently by truck and train. A pipeline would reduce costs and lead times drastically for both countries. But a major problem for China in this pursuit is coming from a familiar foe and neighbor-Japan.

A major conflict is looming between the two Asian giants. Japan has for a long time been Asia's economic leader, but they are facing a rising challenger in China. In regard to this pipeline, the battle is over whether the pipeline from Siberia will terminate in China's northeast region, a hotbed of industry, or the eastern shoreline of Russia. If it were to terminate there it would be a short trip for Japanese tankers who would come to bring back the boatloads of energy

that the country needs and cannot provide on its own. In this competition China has many times made the first move and Japan has reacted later. China made a bid for the pipeline first, but Japan came in later with an attractive offer in an attempt to win over the Russians. But the main problem for Japan is that their relations with the Russian government have not been positive. After World War II no peace agreement was signed between the two countries due to a disagreement over the Kurile Islands, which Russia occupied in the war. However, Japan has decided to separate the issues and not let the land dispute interfere with economic progress.

Many factors have influenced the Russian decisions about the pipeline destination. To start with, Russia will definitely have to choose one country or the other. Although extensive, Russia's resources are not infinite, and building a pipeline for both Japan and China would not be economical or plausible. The China option would turn out to be a pipeline with less throughput, which at first seems like a disadvantage. However, the larger pipeline that Japan desires would not necessarily be filled to capacity by Russia all of the time, something that deters Russia from that option. Also, building a pipeline that connects to China would be a good step toward economic cooperation and solidarity in the region, a model that many proponents say would be similar to the U.S.-Canada relationship. Some say that dealing with Japan would mean doing business with a fading star, whereas dealing with China would take them upward. However, on the opposite side of that argument are those who believe doing business with Japan is a more secure, stable decision. They express concern over China's nascence and sometimes inconsistent business and trade tactics. The China pipeline would be a shorter distance and consequently have faster lead times. The Japan pipeline would be 900 miles longer, take 3 more years to build at a cost of \$3 billion higher. Russia will also consider factors not directly related to the oil issue, such as support on the world stage as well as economic issues in other industries.

At this point, construction has begun on the major pipeline and the planned route will take it to the region of Amur on the Chinese border and then on to the Pacific coast. Right now the pipeline is projected to run 2,550 miles and have a capacity of 1.6 million barrels per day. It will feed into China, Japan, and South Korean markets in an effort to satisfy all of the major Pacific markets.

Another major pipeline in the works to serve the Chinese market originates in the Asian country Kazakhstan. Much of the oil, most of which comes from the Caspian Sea, was previously exported to European countries. However, Kazakhstan has seen their oil industry blossom with more foreign investment in the oil and gas industries. They have lots of oil reserves and China has jumped at the chance to get a piece of those as well as to form yet another relationship with an oil producing nation. The pipeline will stretch across the plains of Kazakhstan for approximately 1,900 miles, and China hopes it will continue to supply them far into the future.

In October of this year the Chinese state-owned conglomerate Citic Group also agreed to buy an oil field in Kazakhstan from Nations Energy Co., a Canadian company, for \$1.9 billion. This deal is one of China's largest in its quest for oil. The oil field produces about 50,000 barrels a day and is endowed with plenty of reserves, which some have stated are over 340 million barrels. A company official also stated that Citic has plans to build an oil refinery in the Karazhanbas field once the deal is finalized. This deal was another addition to China's blossoming business in Kazakhstan. China's state-owned China National Petroleum Corporation bought PetroKazakhstan a year ago for \$4.2 billion. The pipeline described above is the solution that will marry this boon of supply from the northwest with the mainland demand. Citic Group

has been very clear about their expansion strategy in the energy business, and was successful in winning the deal over other oil giants like Russia.

Although they have done much business in Asia, China has not limited their conquests to that continent alone. More recently, China again very clearly showed the world how far they will go in order to ensure that their energy needs are being met and will be taken care of in the future. In late 2006, China held the largest summit in its history when it invited leaders from 48 African nations to Beijing to strike deals in trade, investment, debt forgiveness, and economic aid. In 2005, China imported 38.4 million tons of oil from Africa, the equivalent of 771,000 barrels a day. The Forum on China-Africa Cooperation, as it was named, was designed to match the needs and abilities of both Africa and China. Africa is a continent that is rich in resources, particularly oil, and it is also a large potential market for many of China's manufactured goods. However, Africa also lacks much of what is necessary for countries to prosper, such as good infrastructure and technologies. China, on the other hand, has both the money and the motivation to invest in Africa, along with plenty of demand for the oil that Africa can produce. Thus the forum was assembled as a means to leverage each party's needs with the other's abilities to meet those needs.

Although China imports less oil from Africa than the U.S. and other western powers, the Chinese have sparked some controversy in their dealings with the impoverished continent. Their unconditional debt forgiveness as well as free loans to African nations that are unlikely to spend the money responsibly (much less repay them) have frustrated countries like the U.S. Unlike the more conditional concessions that the U.S. has given, the Chinese gifts come without any requirements for social, political, or economic change. But China shows no concern for the outcries that are coming from the West over this issue. According to Chinese officials, their

interests are prohibitively commercial, and they do not want to be seen as meddling in other issues that African nations are going through. They believe that by increasing business with Africa they are taking measures to improve the standard of living for many of the poor people there, and that that should be enough to discount the negative views of their dealings with the struggling continent.

In addition to Africa, China has also made plans for oil expansion with other embattled areas of the world. At a news conference in late October, Iraq's oil minister announced that his country and China would resurrect a deal that had been initiated back in 1997 under the government of Saddam Hussein. Initial negotiations were held then, but the deal was prevented from being finalized and the Chinese being supplied by the al-Ahdab field. But now the countries are ready to restart the business proposal, and billions of dollars will need to be invested in order for the al-Ahdab oil field to produce oil. Fortunately for Iraq, China is ready to commit. China National Petroleum Corp., one of China's state-owned oil companies, agreed to the deal despite UN sanctions against direct deals with the Iraqi oil industry. The violence in Iraq has made investment there unattractive to many of the western countries with big oil demand, but China, as it has proven so many times, is undaunted by turmoil when it comes to securing its oil interests. Only ten percent of Iraq has been explored for oil production even though it is a country with the third largest amount of reserves. And although dozens of foreign oil companies have signed memoranda of understanding with the war torn nation, China is a nation that is ready and waiting to commit resources and invest in Iraq immediately. The fact that in the past three years there have been over three hundred attacks on energy infrastructure has not deterred them, but most other firms are holding off until the situation deescalates.

China has not limited themselves to the Eastern hemisphere either. They have also expressed interest in Latin American oil producers, looking to exploit the fact that the United States has for the most part ignored exporting countries like Ecuador and Colombia (not Venezuela). China is cautious about becoming too dependent on the Middle East, concerned by the turmoil and instability in the region. They are interested in decreasing their stake in the region and transferring their dependence to other regions and countries that are more stable and dependable. And although this area of the world is not a beacon of stability and progress, it is certainly satisfactory enough for China to do oil business.

Despite China's huge market size and the high profit potential it represents to oil companies and nations, they have occasionally run into difficulties in the process of securing energy sources. One such difficulty came in a run in with close neighbor and fellow population giant India, a country that to a certain degree is experiencing many of the same things that China is, especially when it comes to energy. The foreign investment arm of India's largest oil and gas producer, ONGC Videsh, at one point had negotiated with Sudan to gain an 11% stake in a proven oil field there. But while the Indian government was in the process of approving the deal, China offered Sudan a price that was 17% higher. Sudan, a country in great need of investment and cash, readily accepted the lucrative offer from the Chinese. India was obviously extremely upset over the outcome of the deal. China did not hesitate to snatch up the deal from their neighbor and fellow population giant. This example is yet another instance where China has shown how aggressively, and sometimes ruthlessly, it will pursue its desires to quench its thirst for oil and satisfy its need for energy. But India is not the only nation that has run into conflict with China over oil issues. Vietnam leaders disputed CNOOC's seismic testing in cooperation

with the Philippine National Oil Co. on the Spratly islands, an uninhabited archipelago claimed by Vietnam, China, the Philippines, Malaysia, and Taiwan.

Despite their differences, China and India have recognized the potential for positive results that could be brought about by forming closer economic ties with each other. The two giants, whose economies are both growing at least by 8% annually, have set aside the many issues that linger between them to utilize each other for continued growth. In a recent visit to India by Chinese President Hu Jintao, the first by any Chinese head of state in ten years, he and Indian Prime Minister Manmohan Singh made numerous agreements concerning their nations' future economies, with a particular focus on the energy sector. Leaders of the two countries have ignored the border disputes that have continued since the 1962 border war in which China defeated India. They have also ignored the perpetual issue of the Dalai Lama, his residence in India, and the fate of the Tibetan people. In the face of all of this the two leaders agreed to a two way trade goal of \$40 billion by the end of the decade, \$23 billion higher than what it was in 2005. To meet the needs created by the accelerated growth that China and India are experiencing, leaders of the countries know that they will need to continue to work on acquiring the energy to power that increase. As a result, the two leaders have agreed to encourage cooperation between the oil and gas companies from their respective nations as well as to tackle joint exploration projects abroad. Taking into consideration the Sudan deal discussed previously, that may take some work. Overall, it will be extremely interesting to see how these two enormous countries, who together have about a third of the world's population, will continue to balance their mutual needs with their various disputes.

China has even locked horns with the world superpower, the United States, in its constant quest for more oil supply. CNOOC bid \$18.5 billion for the U.S. oil company Unocal in 2005.

An outcry arose over the negative impact the deal would have on U.S. energy security. Many criticized the administration for not examining the implications of the deal more thoroughly. This deal is one example of the hesitations the U.S. has about giving control of operations to other countries that have not allied with them in the war on terror. This issue came to a head in the Dubai Ports World deal, which President Bush promoted but was blocked by Congress. The public unrest was to such a level concerning the Unocal deal that CNOOC withdrew its bid, ending the dispute. The outcome of this ordeal made it clear that the U.S. interests were to put a limit on China's access to the resources they seek.

But China throughout the process has remained determined to obtain its oil needs, taking their fight as far as the floor of the United Nations. In 2004 the U.N. proposed a set of sanctions for Sudan in regards to the human rights abuses taking place in Darfur. At the time China had around \$15 billion invested in the nation, who accounted for 7% of Chinese imported oil. Currently China is by far the largest investor in Sudanese oil. China, a member of the U.N. Security Council, threatened to veto the set of sanctions proposed by the U.N. to protect their interests as well as Sudan's. Apparently their threats carried some weight. In the end, a lighter set of sanctions were passed by the U.N. Many have criticized China as being indifferent in their oil dealings, and in this case critics accused them of ignoring the atrocities taking place in Sudan. Some pointed out that many of the weapons used by the military and the militias who have killed thousands of innocent people are Chinese models made in local factories with Chinese licenses. In a commentary about the role of China in human rights abuses in Sudan, Human Rights Watch executive director Kenneth Roth wrote about the principle of "noninterference" China follows in its foreign policy. In following this principle, and in encouraging others to do the same, China

says that business should be conducted without regard to the nature of the entities involved, whether they are tyrannical or democratic.

More recently, China has also run into conflicts of interest in Iran. Iran, who boasts some of the largest proven oil reserves in the world, supplied 11% of China's crude oil imports in 2005. Somewhere between eighty and ninety percent of Iran's export earnings come from oil, and as a consequence Iran is very interested in maintaining good relations with their export countries. Unfortunately for Iran, their oil industry is in need of much investment to keep up with current production levels. They need lots of foreign investment as well as technology in order to continue their success in the oil business. But American oil companies are banned from doing business with Iran, and the U.S. government can impose penalties on companies from other countries who exceed \$20 million in investments in oil and gas annually. But China has been in talks with Iran to invest in oil more directly in their country through exploration and production. For two years China has lobbied for a 50% stake in the Yadavaran field, a deal which would cost them \$100 billion (although the deal appears to be falling through due to disagreements over pricing). Simultaneously, China has offered investments in other Iranian interests, such as Tehran's subway system. China is an attractive business partner for Iran because they are willing to do whatever it takes to attain energy security, even if it means dealing with Iran's sometimes tedious system. Iran sees China not only as a potentially large customer, but also as an important chess piece in their geopolitical struggle over their nuclear weapons programs. They are looking to influence China through oil deals to side with them on the world stage. When Iran recently came under global scrutiny over their nuclear program, China joined in the criticism. However, China also has made it clear that they would veto placing sanctions

on Iran to force full disclosure of their nuclear activities, an obvious effort to protect not only their current interests in Iran but also to manage the delicate relationship with the oil giant.

Oil is not China's only major energy source, but the percentages of their energy sources is definitely shifting. To date, a majority of China's energy demands have been met by low-cost coal or crude oil. And despite some criticism concerning China's neglect of environmental issues surrounding coal burning and fuel consumption, in addition to their aggressive and sometimes ruthless deal making, they have continued to forge ahead in these endeavors. However, China has also dipped into the gas market, recognizing it as yet another potential source with the ability to satisfy their always increasing need for energy. In 2006 China reached a tentative deal with U.S. oil giant Exxon concerning a gas project in operation on Russia's Sakhalin Island. Russian state-controlled gas monopoly OAO Gazprom is the only barrier that could prevent this deal from bringing gas to the Chinese market. Sakhalin-1, as the project is called, has already begun to ship crude oil to China, but Exxon must work out a deal with Gazprom in order to begin shipping major quantities of gas to the country. Gazprom is notorious for its tight grip on the gas market and Russian exports. The problem lies in the fact that Gazprom as well as the Kremlin argue that any Russian production should primarily be focused on the domestic market, and once that is taken care of it should be allowed for export. China has already reached a deal with Gazprom to import Russian gas starting in 2011, at the rate of about 80 billion cubic meters a year. China has been building pipelines which may be put to use in the Gazprom deal. These pipelines are being built to import supply from other central Asian nations like Kazakhstan.

On a larger scale, the Chinese emergence as a global oil factor has opened up many cans of worms. As soon as China began to step onto the world stage as an oil consuming giant, a

controversial debate about the earth's remaining oil supply became more widespread than ever before. For years there have been faint cries from all over the world about the short supply of oil remaining, but in recent times the cries have become more frequent and much louder. And China's participation and seemingly unstoppable growth of oil consumption has only fanned the flames. The idea that the world may be running out of oil, or the 'peak oil' theory as it is called, has oil companies and certain nations in a fuss. These entities see this theory's claims as a threat to their viability. One such country with this fear is Saudi Arabia, who owns the world's leading crude oil producer, Saudi Aramco. The Saudis, along with other oil giants like Exxon, obviously have a lot to lose if public officials and investors turn to alternative fuel sources while crude still exists aplenty. Accordingly, they are arguing profusely about the vast availability of crude. An executive of Saudi Aramco, Abdallah S. Ju'mah, has said that at its current production volumes the world has over a century's worth of supply left. At an OPEC seminar, Ju'mah stated that the world has produced under 20% (1 trillion barrels) of the world's 5.7 trillion available barrels. In his opinion (and that of many other oil company executives), this statistic alone should quell the fears about peak oil theories. Critics of this idea believe that with existing technology production levels as high as what Mr. Ju'mah predicts are impossible to reach. Nevertheless, efforts are being made to move away from the traditional energy source of crude oil. The peak oil theory has made an impact already. In the U.S., the Department of Energy has commissioned the National Petroleum Council to research the validity of the peak oil theory and shed light on the contradictory reports concerning the world's existing oil supply. This type of activity has oil producers getting nervous about their future profitability; but for countries like China the effects of the peak oil theory are felt in other ways.

The stir that the peak oil theory has created is also felt on the consumer side of the oil supply chain. The debate about the earth's remaining supply of fuel has helped to push the price of consumer fuels up and down (although other market factors play a much larger role). Still, depending on the truth of the matter concerning how much oil is still untapped beneath the earth, the Chinese people along with billions of others around the world may see their lives drastically changed in the form of new energy initiatives in the near future brought about by the peak oil panic.

Whenever anyone talks about big oil today the subject of the environment inevitably will come up. Certainly as the world has watched China's economy and energy usage grow over the past few decades there has been no shortage of concerns about the environmental consequences there and abroad. The increase of energy consumption has brought with it an increase in waste and pollution, the effects of which are seen not only in China but in other areas of the world as well. A main concern of environmentalists and certain politicians around the globe is whether or not China is able and willing to keep pace in terms of environmental protection with the rapid growth it is experiencing. Some general trends have these people concerned. For example, the increase of fuel consumption brought on by the increase in automobile ownership is causing air pollution in the cities to become a major issue. But there have also been some specific incidents that have sparked more intense scrutiny.

One of these incidents occurred in November 2005 and involved one of China's state-owned oil companies. A chemical spill in the northeast corner of China cut off water supply to millions of Chinese and Russians who depend on the Songhua River. The explosion at the chemical plant in the Jilin province released large amounts of benzene and other harmful chemicals into the river and was one of the largest toxic spills in Chinese history. Senior

executives of China National Petroleum Corp. and its subsidiary PetroChina Co. Ltd., as well as some environmental officials were reprimanded by the Chinese Cabinet for their role in the accident. An investigation by the State Council discovered that the accident was caused by negligence and a failure to adhere to regulations related to the plant's operations. The local authorities were also criticized heavily for their allegedly slow reaction time as well as their delaying to disclose the explosion publicly, which killed 8 and injured 60.

The accident cut off water supply to just under four million people, and caused tension with northern neighbor Russia, who was very upset that one of their rivers flowing through the city of Khabarovsk was contaminated by the connecting Songhua River. This incident highlights one of China's major environmental problems: the water pollution that pervades the entire nation. Many of China's water bodies are contaminated by household and agricultural pollution, which is contributing to a water supply shortage. In order to mitigate the crisis, China has announced that it will spend \$125 billion to avoid a water supply shortage by investing in better water treatment infrastructure and recycling.

China is a country with a long history. Over time the complexion of the enormous Asian nation has changed greatly. Going into the new millennium, China most definitely stands out in the world as a nation that is making an impact in several respects. When one looks at all that is taking place there and considers the immensity of their influence on the world, it is easy to understand why China is such a prevalent topic. China's future in many ways will determine the world's future, and certainly one of the main ways it will do that regards oil. Their policies, strategies, business deals, operations, and consumption concerning oil will affect everyone at some level. The rest of the world must recognize this and seek the most beneficial actions they can take to make the most of what is happening; otherwise they may find themselves left behind.

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