MONGOLIAN COKING COAL EXPORT DYNAMICS: OPPORTUNITIES AND CHALLENGES

Dolgorsuren Dorj
Associate Professor of Economics
National Academy of Governance

Abstract

Mongolia, a landlocked country with untapped resources of high-grade coal, has huge potential to improve its economy by exporting to its neighboring market, China. The oversupply of coal and demand slowdown of the international coal trade market starting in 2012 pushed the coal price further down, making competition harder for a country that has no access to a seaborne market. Even though the Chinese economy has slowed down, Chinese coal imports have been rising while from 2012-2014 Mongolian export shares were getting smaller and smaller in contrast to increased Australian shares (CCR, January 23, 2015). There is a need to institute measures such as railroad logistics and financing for coal development to increase Mongolia’s coal exports and better compete against other suppliers, such as Australia.

Background

Mongolia’s geological coal resources are estimated at 162 billion tons with proven coal reserves over 20 billion tons. Mongolia has over 300 deposits of coal and is included in the world’s top ten countries in terms of coal reserves (BP statistics). Its resources are attracting worldwide interest. In line with foreign demand, mainly from China, coal production in 2010-2012 jumped fourfold while coal exports grew 8-10 times as compared with 2005. In 2014, Mongolia produced 24.4 million tons of coal and exported 19.4 million tons, from which 14.8 million tons were coking coal (NSO). Mongolian Mining Corporation (MMC), state-owned Erdenes-Tavan Tolgoi (ETT), South Gobi

---

1 This work benefited from discussions at “Perspectives on the Development of Energy and Mineral Resources – Hawai‘i, Mongolia and Germany” conference 2015 in Honolulu, National Academy of Governance’s 100 years anniversary 2014 conference in Ulaanbaatar. Many thanks to Tulga Tsedev, Richard Pratt, Charles Krusekopf.

2 According the Statistical Review of World Energy proven reserves of coal at the end of 2012 by country were: USA ~ 237 billion tons (27.6% share of total world reserves), Russia ~ 157 billion tons (18.2%), China~ 114.5 billion tons (13.3%).
Resources, and Mongolyn Alt Corp. (MAK) are the major producers and exporters. China is the main export destination for Mongolian coal and the country overtook Australia as the main supplier of coking coal to China in 2011. In 2011 Mongolia supplied 45 percent of China’s coking coal as compared with 23 percent from Australia. However in 2014 these numbers were reversed with 24 percent of coking coal coming from Mongolia versus 50 percent from Australia (CCR, January 23, 2015). This paper summarizes Mongolian coal export dynamics and analyzes the main obstacles to restoring the dominant supplier position in the Chinese coal import market.

In October 2013 China’s coal giant Shenhua and three companies (Mongolian Mining Corporation, Таван Толгой JSC, and Erdenes Tavan Tolgoi JSC) at the Tavan Tolgoi deposit signed a memorandum of understanding on exporting one billion tons of coal to China over the next twenty years (Bloomberg, 2013). Mongolia expects to increase its coal exports to forty million tons by 2015. The main obstacles to reach this goal are poor infrastructure and the lack of working and investment capital for domestic mining companies. In early December 2014, a winner of the investment bid to develop the Tavan Tolgoi deposit was announced as a consortium of three companies including Energy Resources LLC, China Shenhua Energy Co., and Sumitomo Corporation (InfoMongolia, 2014). The Mongolian government is making efforts to negotiate details of the proposal and sign contracts with investors.

*Coal reserves*

Lignite deposits dominate Mongolia’s eastern areas. In the central provinces there is a shift from lignite\(^3\) to coking coal while the western and Gobi basins are dominated by hard/coking coal (Figure 1). Eighty percent of coking coal deposits lies in Umnugobi province with the rest located in Khubsugul and Khovd provinces (that is, the west of the country).

\(^{3}\)Lignite ("brown coal") and sub-bituminous coal are low rank coals that are softer and have low organic maturity. Higher rank coals include bituminous coal (thermal and metallurgical coal) and anthracite. Higher rank coals are harder, contain more carbon and produce more energy.
Umnugobi province, in the southern part of the country, contains more than half of total national reserves. Almost half of Umnugobi coal reserves belong to the East and West Tsankhi sections of the Tavan Tolgoi coal deposit.

**Development of the Tavan Tolgoi coal deposit**

Tavan Tolgoi, one of the world’s largest high quality coal deposit sites, is expected to yield over 6 billion tons of resources, of which a quarter is coking coal. Erdenes-Tavan Tolgoi JSC holds six licenses for the deposit. The deposit is divided into two blocks, eastern and western. Erdenes-Tavan Tolgoi is developing both blocks with the eastern block operated by Macmahon & Operta JV and the western block operated by a consortium of three domestic companies. The government intends to sell 30 percent of the company on the stock exchange; however the triple listing IPO was postponed several times in the past years due to weaker coal prices, poor market conditions, and
pending changes in the securities law in Mongolia. The government plans to launch the IPO in 2016 when the company will be in good shape with restructuring and improving operations.

Initially the government considered developing the western block by strategic investors. In January 2011 the Mongolian government announced an international tender for the western block to which fifteen companies and consortia responded and submitted proposals of interest. These companies were from China, Japan, Korea, India and Russia, as well as multinationals including ArcelorMittal, Vale, Xstrata, Rio Tinto, BHP Billiton and Peabody. In July of the same year, the Mongolian government selected the consortium composed of Shenhua (40 percent), Peabody (24 percent) and a cluster of Russian companies (36 percent). It soon canceled the decision when Korean and Japanese companies complained about the make-up of the consortium. Faced with a sensitive political issue the government upheld this decision until recently when a new tender was put out. The mine opened on the western block in February 2013 with the coal extraction beginning in July of the same year. Currently three national companies (Khishig Arvin Industrial, Mera, Mongolyn Undesnii Olborlogch) are working together as the ‘’Mongol Uurkhaichid’’ consortium on the western block.

**Coking coal exports from Mongolia decline**

Driven by increased demand, mainly from China, Mongolian coal exports grew ten times from two million tons in 2005 to 20 million tons in 2012. In 2013 Mongolia exported slightly lower amounts totaling 18 Mt (NSO, Figure 2). Coking coal exports were 15.4 Mt and exports of other type of coal were 1.9 Mt (CCR). The decline in the 2013 export shipments was mainly due to domestic activities such as price disputes between ETT and Chalco, lack of working capital for main deposits, and domestic expectations on an overall slowdown of Chinese economy. Despite China’s economic growth being projected to fall, in 2013 its coking coal imports have raised by forty percent to 75.4 Mt.
In 2014, the volume of coking coal imports into China reached 62.36 Mt, which is down seventeen percent on a year-over-year basis. This decline in coking coal was triggered by a downturn in the real estate sector of China and reduced demand of steel and coke. In 2014 Mongolia delivered to China 14.8 million tons of coking coal, down 4 percent from the previous year. This is the third consecutive year in which coking coal exports from Mongolia have declined.

![Figure 2. Mongolian coal export, Mt](image)

Source: National Statistics Office of Mongolia, China Coal Resources

China’s coal imports have risen continuously until 2014.

**Total coal imports**

In 2013 China imported 314.3 Mt of all types of coal as compared to 289 Mt in the previous year meaning a 9 percent increase (CCR, Figure 3). In 2014 China’s total coal imports fell by 7.3 percent to 291 Mt. In 2014 China’s imports of thermal coal fell by 1.5 percent and imports of lignite increased by 5 percent, while imports of coking coal and anthracite declined by seventeen and twenty three percent respectively.
Coal represents 77 percent of China’s primary energy production and almost 80 percent of its electricity generation. China’s domestic coal production accounts for nearly half of the world’s coal extraction and China consumes 46 percent of the world’s coal production (WCA).

China became a net importer of coal in 2009, and the top net importer of coal in 2011 overtaking Japan. China’s hunger for imported coal is mainly due to (i) seaborne and Chinese domestic coal price differences; (ii) transportation bottlenecks in the Hebei region; (iii) environmental and safety concerns; (iv) worries about coking coal resource depletion; (v) economic considerations such as an increase in mining cost due to deeper mines, salary increases, and input cost increases; (vi) social unrest ignited by land seizures carried out by mining operations (Tu & Johnson-Reiser, 2012). Since late 2011 seaborne coking coal prices and freight rates have fallen dramatically. Because of this Chinese steel makers preferred cheaper priced seaborne coal over the domestic coal. China is one of the two ‘‘swing’’ players on the international coal trade market, the other being the United States. China’s coal imports rise when seaborne coal prices are below the domestic market prices and fall during high priced times like in 2011 (Morse & He, 2010). Second, power utilities close to the seaports turn to the cheaper overseas coal to avoid transportation bottlenecks present in moving coal from the coal mining areas in the west and north of the country to the consuming regions along the east and south coastlines. The lack of adequate railway capacity
in relation to coal production is the main constraint in moving coal (Tu, 2011). On the other hand, Chinese sea ports can handle large amounts of coal since port building activities were not monopolized and were opened up to competition that brought the port building boom after 1990. However, in 2014 China Railway Corporation raised its investment capacity to $117 billion, higher than the initially planned amount by $3 billion (Xinhua news, 2014). Some 7,000 km of new lines are expected to be completed in 2014 as compared to the original schedule of 6,600 km. The government will build up a development fund of $32-49 billion annually to finance railway building and another $24 billion will be raised by bond issuance each year. Third, government policies may play a significant role in defining how much coal China imports. In November 2014, China and Australia signed free trade agreement including zero tariffs on coking coal trade.

Indonesia and Australia currently are the main suppliers of coal to the Chinese market. The Indonesian supply is dominated by steam coal used in power plants, while Australia supplies mainly coking coal used in iron and steel production. In 2013 Australia delivered 30 Mt of coking coal and 58 Mt of other types to China (CCR). Sizable amounts of coal are coming from Russia, Mongolia, South Africa, Vietnam, and North Korea. Canada and the United States exported large amounts since freight rates were historically low in 2013.

*Coking coal imports*

Coking coal imports have risen over the last five years, reaching 75 Mt in 2013 because high-quality coking coal supplies are much tighter in China (Figure 4). However in 2014 China’s import demand declined by 17 percent to 62.36 Mt stemming from the cyclical downturn in the real estate sector.
In the first half of 2013 China imported an additional 7.6 Mt compared to the previous year, and an additional 14.2 Mt in the second half of 2013, so that coking coal imports in 2013 grew by 21.8 Mt on a year-on-year basis (Figure 5).

In the first half of 2014 China’s coking coal imports fell by 4 Mt and by another 8.7 Mt in the second half of the year. Since China is considered as a ‘swing’ player and coking coal imports declined, did China export more of coal last year? In 2014, China’s coking coal exports amounted 0.8 million tonnes, down 28.3 percent from the year before.
In 2014, China’s coking coal imports declined amid a slowdown in the economy and sluggish demand in the housing sector. Residential sales in China fell by 10 percent in the first eight months of 2014 due to tight credit conditions, oversupply of housing stock and weak demand in the real estate sector, which accounts around 15 percent of the economy (BREE, 2014).

China may import less coking coal in 2015 while exports are likely to increase to some extent due to recent policy changes. The government cut export tariffs from 10 percent to 3 percent from January, while reinstating a 3 percent tariff on imports from mid-October of 2014. This 3 percent import tax may hit Mongolian exporters while Australia and Indonesia have free trade agreements exemption. Other exporters, such as Russia, Canada, and the United States, may turn to alternative export markets to sell their coal, such as India, South Korea, and Japan, but Mongolia has a single market, China.

Government measures to support underperforming industry in China, such as easing purchase restrictions, property tax reforms, and cash injection of state-owned banks to facilitate credit availability, were introduced. The slowdown in the real estate sector is expected to remain in the short-term as housing stocks decline and government support measures slowly take effect. According to the BREE (December 2014) China’s real estate sector is forecast to improve starting in 2016 mainly from support for the development of central and western regions of China.

**Other exporters increased coking coal supply**

China’s coking coal imports jumped four fold in 2009 to 34.4 Mt of which Mongolia supplied 12 percent, or 4 Mt. In 2010 Mongolian coking coal exports jumped to 15 Mt taking a 32 percent share in China’s coking coal import volume while Australia’s share was 37 percent (Figure 6). In the following year the Mongolian share in the Chinese coking coal import market grew to 45 percent. In 2010/2011, due to flooding in Australia, Mongolian coal became a substitute. However, with the recovery of Australian mines in 2012 the Mongolian share fell to 36 percent. In 2013 the
Australian share climbed to 40 percent (30.2 Mt) while Mongolia’s dropped to 20 percent (15.4 Mt).

Source: China Coal Resources

Figure 6 shows that since 2011 the Mongolian share of the Chinese coking coal imports markets’ has gradually declined to 24 percent and by 2014 the half of the market has been overtaken by Australia.

Source: China Coal Resources

In 2013 Australia, Canada, Russia was the main suppliers of an additional 21.8 Mt coking coal import demand from China (Figure 7). Australia’s exports grew by 16.2 Mt thus supplying 74
percent of the 21.8 Mt added demand from China. On the other hand, Mongolian coking coal exports fell by 3.6 Mt on a year-by-year basis. In 2013 Australia, Canada, Russia and the United States were able to increase their export share when compared to the previous 2012 year.

On the contrary, in 2014 China’s coking coal imports declined from most sources but increased from Australia by 1Mt. In 2014 Australia was the largest supplier to China and its export share in the Chinese coking coal market was 50 percent compared to the 24 percent Mongolian share. In 2014 Mongolia’s coking coal exports dropped 4.24 percent on year to 14.79 Mt. Canada was the third largest supplier to China with 7.2 Mt of exports, down 35 percent from the previous year. Russia exported 5.76 Mt of coking coal to China, declining 31.8 percent from the previous year.

**Figure 8. Export shares by country in China’s coking coal import**

<table>
<thead>
<tr>
<th>Year</th>
<th>USA</th>
<th>Others</th>
<th>Russia</th>
<th>Canada</th>
<th>Australia</th>
<th>Mongolia</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>10%</td>
<td>7%</td>
<td>8%</td>
<td>7%</td>
<td>23%</td>
<td>45%</td>
</tr>
<tr>
<td>2012</td>
<td></td>
<td>8%</td>
<td>9%</td>
<td>13%</td>
<td>26%</td>
<td>36%</td>
</tr>
<tr>
<td>2013</td>
<td>8%</td>
<td>6%</td>
<td>11%</td>
<td>15%</td>
<td>40%</td>
<td>20%</td>
</tr>
<tr>
<td>2014</td>
<td>8%</td>
<td>2%</td>
<td>3%</td>
<td>12%</td>
<td>50%</td>
<td>24%</td>
</tr>
</tbody>
</table>

Source: China Coal Resources

**China’s import prices fell**

Spot metallurgical coal prices were exposed to several dips and rises in 2013, but there was less volatility than in the previous year. February performance indicators on the cooling Chinese
property market resulted in a sudden destocking and price fall from $160 at the beginning of the year until July to $132 (Platts, 2013). Coal prices recovered during pre-winter restocking in July through September to $150. With restocking starting a little earlier, demand was weak in the final quarter of 2013 causing another drop in prices at the end of the year to $138, a 14 percent decline since the beginning of the year.

**Figure 9. Coking coal price CFR China**

Source: MB Steel First coking coal index

Despite the $20 per ton fall during first three months of 2014 spot prices of metallurgical coal were relatively stable over the rest of the year (Figure 9). On December 31, 2014, the Steel First index of seaborne premium hard coking coal at the Jingtang port of China was at $119.03/t. This is a nineteen percent fall since the beginning of the year. The average spot price for 2014 was $123/t.

---

4 CFR price includes cost, freight and insurance to deliver coal. This price index shows the price of the coal that traveled from Australia to Jingtang port at the North East coast of China.

5 The Steel First coking coal index has following specifications. PHCC or premium hard coking coal infers to the coal at the base values with CSR 71%, Volatile matter 21%, Ash 9.5%, Sulphur 0.5%, CSN/FSI 8, Moisture 10%; HCC or hard coking coal properties are as follows CSR 64%, Volatile matter 25%, Ash 9.5%, Sulphur 0.6%, CSN/FSI 7, Moisture 10%.
The fall in coking coal prices will continue due to market oversupply and reduced demand from steel mills, and coking plants amid real estate sector stagnation in China. According to the BREE December report, in 2014 benchmark prices averaged $126/t, while in 2015 metallurgical coal contract prices are expected to be on average at $120/t and recover again to $130/t in 2016. Coking coal import demand from China is likely to rise in 2016 when government projects to develop western and central regions of country are underway.

International coal trade represents only a small share (17%) of the world coal production. A few players dominate the global seaborne coal market and therefore it is a very thin market where small changes have a huge impact. Since 2005 seaborne hard coking coal benchmark pricing fluctuated dramatically (Figure 10). Prices were affected by the world financial crisis in 2008-2009, European debt crisis in 2011-2012, and weaker growth rates in China since 2012. Flooding of the Australian/Queensland mines in 2008 and 2010/11 and the supply disruption on the seaborne markets contributed greatly to the spike in prices. The rise in coal demand from China in 2009, as the largest importer of steel making raw materials, contributed to the price volatility. New suppliers like Russia, Mongolia, and Mozambique followed Australia, a key supplier to the seaborne coking coal markets.

**Figure 10. HCC price FOB Australia trends and forecast**

![HCC price FOB Australia trends and forecast](image-url)
Prospects for China’s coking coal demand

Based on China’s buying behavior in the past years China’s coking coal imports are expected to continue to rise over the next several years. Coal prices are unlikely to rise in the near future because the current international coal market is oversupplied and demand has slowed down. On the other side China will further push safety considerations and stricter safety controls that will lead to foreclosures of many small mines that are incompliant with standards. In order to reduce its carbon related footprint China might reduce domestic coal production and rely on the import of coal from abroad. It will take time for the development of new mines in the western regions of China and better infrastructure to turn China into self-sufficient country (China SignPost, 2012).

### Table 1. World coking coal trade forecast, Mt

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>65</td>
<td>69</td>
<td>72</td>
<td>73</td>
<td>74</td>
<td>75</td>
<td>77</td>
</tr>
<tr>
<td>Japan</td>
<td>48</td>
<td>49</td>
<td>49</td>
<td>47</td>
<td>46</td>
<td>45</td>
<td>45</td>
</tr>
<tr>
<td>India</td>
<td>44</td>
<td>50</td>
<td>51</td>
<td>52</td>
<td>53</td>
<td>55</td>
<td>58</td>
</tr>
<tr>
<td>South Korea</td>
<td>34</td>
<td>34</td>
<td>34</td>
<td>34</td>
<td>34</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>Europe 28</td>
<td>40</td>
<td>41</td>
<td>43</td>
<td>42</td>
<td>44</td>
<td>45</td>
<td>47</td>
</tr>
<tr>
<td><strong>Total trade</strong></td>
<td><strong>309</strong></td>
<td><strong>316</strong></td>
<td><strong>320</strong></td>
<td><strong>322</strong></td>
<td><strong>326</strong></td>
<td><strong>330</strong></td>
<td><strong>334</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>186</td>
<td>189</td>
<td>191</td>
<td>195</td>
<td>199</td>
<td>202</td>
<td>205</td>
</tr>
<tr>
<td>Canada</td>
<td>32</td>
<td>33</td>
<td>33</td>
<td>33</td>
<td>34</td>
<td>34</td>
<td>35</td>
</tr>
<tr>
<td>USA</td>
<td>58</td>
<td>54</td>
<td>50</td>
<td>48</td>
<td>45</td>
<td>43</td>
<td>40</td>
</tr>
<tr>
<td>Russia</td>
<td>22</td>
<td>22</td>
<td>23</td>
<td>23</td>
<td>24</td>
<td>24</td>
<td>25</td>
</tr>
</tbody>
</table>

Source: BREE (REQ, March 2015)

If the medium term overseas coal prices climb up as compared to the domestic coal prices, then China will import less steam coal. The picture is different for Chinese coking coal imports. China will buy high-grade coal in any case, regardless of the international coal price situation; hence a production ramp-up at Mongolian mines will not harm profits. Even though China has large
coal resources, coking coal accounts for only one quarter of its total resources. China’s intensive growth of the iron and steel production over the last two decades implies China is exhausting coking coal resources rapidly. Since China categorized coking coal as a “strategic resource” it could explore increasing coking coal imports. Its coking coal import demand is expected to peak out in several years (Table 1, BREE, March 2015).

Steel and coke industries in China face two challenges: overcapacity and tighter environmental regulations. Recently, China has taken measures to eliminate overcapacity by shutting down inefficient steel mills and coke plants. However, China’s steel output rose by 0.9 percent to 822.7 Mt in 2014. China Iron and Steel Association (CISA) reported that China’s steel consumption fell by 2.5 percent for the first time in 15 years in 2014 (CCR, January 26 2015).

**Mongolian coal export strategies**

*Production ramp up at existing deposits*

Mongolia, being a landlocked country, has a single destination for its coal, the Chinese market, unless there are infrastructure developments that ease access to third markets such as South Korea, Japan, and India. Therefore, one strategy to overtake Australia in this competition is to increase extraction from existing mines located close to the Chinese border. Expanding coal production activities in Mongolia has two effects. First, more quantities of coal, after initial investment, implies a reduction in the unit production cost. Second, as more coal is produced, coal shipments will become more stable for the buyers. A stable and continuous supply of coal should be the number one priority for the coal industry. There is an urgent need to improve governance of the state-owned enterprises in terms of accountability and accomplishment of their production targets. The Board of directors and shareholders should increase control over management through the executives’ employment contracts.

*Improving logistics and transportation*
Rail infrastructure linking Tavan Tolgoi with the border (about 237 km) is a significant factor to improve competitiveness of Tavan Tolgoi operations in the long run. Currently coal is trucked to the border on the Gobi sealed road with 18 Mt annual capacity and on unpaved roads. Shipment by rail imposes less dust and impact on the local environment than trucking on unpaved roads. Delivering coal by trucks is estimated to cost USD 0.07-0.08/km/t versus USD 0.03/km/t by the railway (Renaissance Capital, 2011). For these reasons raling coal to the border is a key factor to lowering the delivered cost and increasing profit margins. Development of the rail line between Tavan Tolgoi and Ganqimodau on the Mongolian border will require five years for completion. Discussions on whether to have Russian (wide, 1520 millimeter broad, gauge) or Chinese (a narrow, 1435 millimeter, gauge) rail line delayed rail line development for many years. Russian gauge rail line will be more costly since wheel sets must be changed at the border while Chinese gauge rail line introduces national security issues. The Mongolian state-owned railway (MTZ) company, which was supposed to be constructing 225 km railway link connecting the deposit with Mongolian border at Gashuun Sukhait, has been on hold due to insufficient funding. In October 2014 it was decided that separate railway links to the north border will have a wide gauge, with separate railway links to China connecting Tavan Tolgoi and Gashuun Sukhait, Khuut and Bichigt having a narrow gauge.

In 2014 three Mongolian companies (Energy Resources LLC, Tavan Tolgoi JSC, Erdenes Tavan Tolgoi JSC) signed a shareholders agreement with China Shenhua Overseas Development and Investment subsidiary Lodestar Investment. The agreement signed on April 7, 2014 establishes a joint venture to be named Gashuunsukhait Railway, to jointly develop a cross-border freight railway (18 km) connecting the Gashuunsukhait port station of Mongolia and the Ganqimaodu port station of China. Shenhua will hold 49 percent of equity interest of the joint venture while three Mongolian companies will equally split the remaining 51 percent of equity interest. This initiative is
an important step toward enhancing infrastructure and building a railway connecting the Tavan Tolgoi deposit with the Chinese border because rail transportation of coal will reduce transportation costs trifold as compared to current transportation by truck.

Mongolia has no access to overseas markets due to its landlocked location. If Mongolia is to diversify its market it could build a railway to Russia to reach Pacific ports, allowing for exports to Japan and South Korea. This choice will require a 1,100 km rail line across eastern Mongolia connecting Dalanzadgad-Choibalsan-Ereentsav and the trans-Siberian line to Vladivostok or Vostochny. The total distance will be very long, about 4500 km, with the estimated costs of delivery through Russia at USD72/t (Wood Mackenzie, 2012). This would bring positive margins for coking coal only. There is no possibility for moving thermal coal from Tavan Tolgoi deposit to seaborne market through Far East Russian port because of the low value of thermal coal on world markets. Defining export routes is not an easy decision because it depends on the handling capacity of Russian ports as well as trans-Siberian rail capacity. An additional factor is that Russia is an exporter of coal and may be considered a competitor on the seaborne market.

Government charges

Mongolia is considered to have the lowest level of government take (taxes, charges, royalties and related) on a percentage of net present value basis at 35 percent for the metallurgical coal projects (Wood Mackenzie, 2012). In comparison, uncertainty over increases in taxes in both Australia and Indonesia has concerned investors in recent years. Therefore the next strategy would be to keep tax environment at current low levels.

Figure 11. Government take-percentage of total NPV
Attracting foreign investment

Efforts to raise money for the development of Tavan Tolgoi and the launching of an IPO for shares in Erdenes-Tavan Tolgoi JSC have been postponed several times. The main reasons for delays in 2012 were the downturn on stock exchanges related to an international market recession and lack of investors to buy shares from IPO proceedings. In addition there was no direct way for the registered company on the Mongolian Stock Exchange to go public on the Hong Kong Stock Exchange. After long debates this became possible with the renewal of the Securities Markets Law in accordance with international standards. New Securities Markets Law was approved by the parliament and became effective since January 1, 2014.

Since 2008 foreign direct investment in Mongolia has continuously increased reaching a maximum at USD 4.7 billion in 2011. However in 2013, FDI dropped to USD 2.3 billion and even lower in 2014 (Frontiers, 2015). The huge decrease in FDI was mainly due to ongoing Oyu Tolgoi project negotiations. In 2012 the FDI share in Mongolia’s GDP of 10.3 billion dollars was 42.8 percent versus 5.6 percent in 2014 (Figure 11).

Ninety percent of foreign companies in Mongolia operate in the mining sector whereas nine percent pursue trade activities in other sectors (MNCCI). FDI in Mongolia has been directed towards mining and export oriented activities due to favorable conditions such as low taxes, low
cost open cut mines, cheap labor, poor labor union activities, and closeness to the largest market in the world.

![Figure 11. FDI shares in Mongolia's GDP, %](image)

Source: National Statistical Office, World Bank

Foreign investment is generally directed towards countries with more developed infrastructure, high per capita income, concentrated markets, developed R&D, and high population growth. Therefore to attract more foreign investment the Mongolian government must put more effort on improving education, infrastructure, and financial stability. Foreign mining companies expect the government to finance exploration activities and develop geological database from the royalties collected in the mining industry. Studies show that every dollar spent on exploration activities induces 3-9 dollars in the private sector spending which will in turn boost the economy. Collected royalties are expected to be spent on improving local infrastructure, environmental protection, building schools and hospitals, and more importantly investing in new technology sectors like biotechnology, advanced materials, energy saving technologies, alternative fuel vehicles to provide future sustainable growth for Mongolia.

**Conclusion**

This paper conducted some analysis on the Mongolian coking coal exports and dynamics of competitors’ actions in the Chinese market. As a result we found that, (i) Even though the Mongolian share in the Chinese coking coal import market have been falling during the last three
years, Mongolia still holds a second largest supplier position with a quarter of it’s provision, while Australia provides half of the Chinese imported coking coal; (ii) Despite sluggish demand and housing sector cyclical downturn China will remain the largest coking coal importer and it’s imports will grow faster beginning 2016 due to the government infrastructure projects developed in the western and central part of the country; (iii) Seaborne coking coal prices fell continuously starting in 2012, however Tavan Tolgoi deposit geological conditions such as open cut mine, a high quality of coal allows Mongolian coal to be competitive in the Chinese market; (iv) Currently main obstacles for the coal deposit developments are poor infrastructure and transportation, lack of working and investment capital, a poor governance of the state owned enterprises.

Our analysis suggests that Mongolia would increase the competitive edge of the coal exports by (i) building railway linking Tavan Tolgoi deposit with Chinese border and improving logistics in moving coal; (ii) expanding coal extraction activities at main deposits and improving the company governance by increasing accountability and transparency of a large state-owned projects; (iii) attracting foreign investment, and (iv) establishing a sovereign fund from the collected money in the mining sector for future investments in leading technology sectors of the economy.

References
Bloomberg. (October 30, 2013). China’s Shenhua agrees to buy 1 billion tons of Mongolian coal. bloomberg.com/news


Frontier Securities. (February 13, 2015). Foreign Direct Investment to Mongolia. Frontier’s Strategy Note.


