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New developments and best practices in intermodal transport and logistics

The Tide Turns for Trans-Siberian Rail Transport

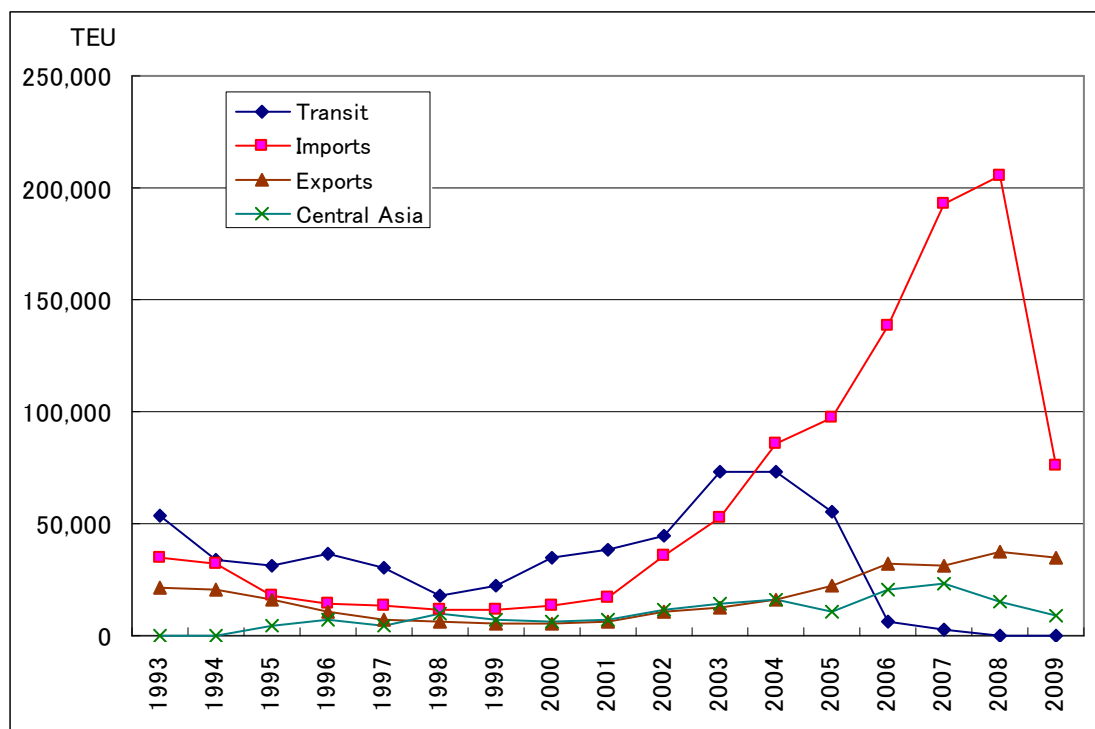
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I. Revitalized Trans-Siberian Rail Transport (TSR)

1. TSR transportation, which declined sharply in the autumn of 2008 as a consequence of the global financial crisis, is recovering since the spring of 2010 after about a year of stagnation.
2. Container handling volume at Port Vostochny, the eastern gateway of the TSR route, was 60% lower than the previous year in 2009, about equal to the 2003 level. The main reasons were 1) loss of economic competitiveness due to a severe decline of the Deep Sea charges, and 2) decreased export volume to Russia. Port Vostochny, in particular suffered from a big drop of shipments of automobile manufacturing parts for Korean car manufacturers who operate assembly plants in Russia. Russian imports of the TSR route via Port Vostochny dropped 63% in 2009 compared to the previous year. This tells how extensive the damage was (Figure 1).

¹ Informal translation of an article published in Japanese in “*Daily CARGO*”, 8 September 2010

(Figure 1) Container handling volume at Port Vostochny by destination



Source: VSC, filled containers only.

3. On the other hand, container handling volume at the Commercial Port of Vladivostok (VMTP) dropped only 15% in 2009 compared to the previous year. One of the possible reasons for the small damage was that coastal cargo represented about 30% at VMTP, which was almost free from the impact of the financial crisis. Another important reason was that the owner company, FESCO, actively supported VMTP by giving priority to FESCO vessels in calling the VMTP.

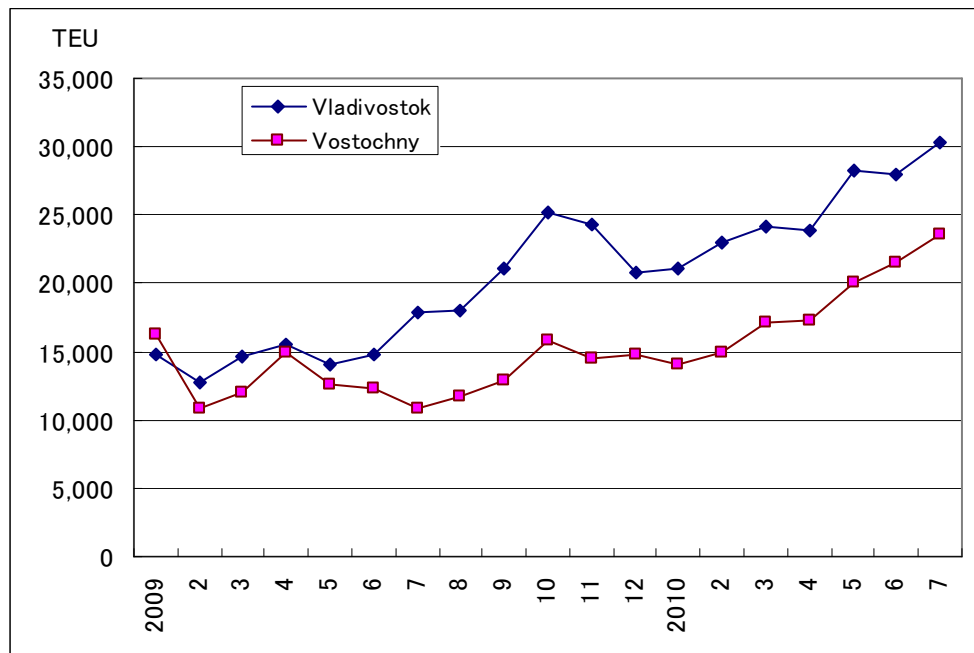
4. Port Vostochny has been the leading container port in the Russian Far East for many years. However, the leading position was replaced by VMTP since February 2009. Please note that Vostochny still exceeds Vladivostok and stays at the top in the Far East as long as international containers are concerned. About 90% of lifted containers are transported to various destinations by rail from Vostochny port, while about 35% is shipped by rail, and a fairly large volume of containers are delivered by trucks or coastal vessels from VMTP.

5. As the world-wide economic recovery became clear from the second half of 2009, Deep Sea charges gradually increased. Similarly, as the Russian economy recovered slowly, TSR transportation also regained liveliness from the spring of 2010. Container handling volume during the March-July period in 2010 was 75% up at VMTP and 59% up at Port Vostochny compared to the same period of a year ago. (Figure 2)

6. The market is driven by Korean cargo, including electrical appliances, auto-parts, plastic ingredients and chemical goods. However, major SKD parts for Hyundai Motor Company and Kia Motors Corp. haven't returned to TSR, since Hyundai closed the assembly plants at Taganrog and Kia stopped the assembly operation at Izhevsk. Hyundai Motor Company is constructing an own manufacturing plant near Saint Petersburg and is expected to use Deep Sea route for auto parts delivery from Korea. The TSR route is still used for delivery of Korean auto-parts for GM-Uzbekistan at Uzbekistan.

7. Japanese cargo is also increasing. Container shipment to/from the Russian Far East during the March-August period in 2010 was 49% higher than the same period of the previous year, and 84% higher in August than the previous year. Major export items were chemical goods, auto-parts, machinery and tires, while import items included lumber. Auto-parts include SKD parts for Isuzu (Yelabuga) and Mitsubishi-FUSO (Naberezhnyye Chelny).

(Figure 2) Monthly container handling volume at Vostochny and Vladivostok



Source: <http://www.vntp.ru/>, VSC

II. Recovery of economic competitiveness

8. The key factor determining the business of TSR transportation is economic competitiveness versus Deep Sea route. A preconception has been established that the TSR transportation is faster but more expensive compared to Deep Sea route. However, such a myth is no longer valid and is establishing a status of a fast and inexpensive shipping route.

9. I tried to analyze the relative charges of TSR versus Deep Sea route, using the internal data provided by FESCO. Let's take a case of container shipping charges from ROK to Moscow for 40' containers. (Figure 3)

10. Deep Sea rate between East Asia and Europe dropped sharply in the autumn of 2008, right after the Lehman Shock and stayed at a low level during the first half of 2009. The rate however turned upward in the second half of 2009, following the tightened space supply, initiated by the shipping industry, and the recovery of world-wide business. Deep Sea rate in 2010 has been kept at a high level, the same as the pre-crisis level.

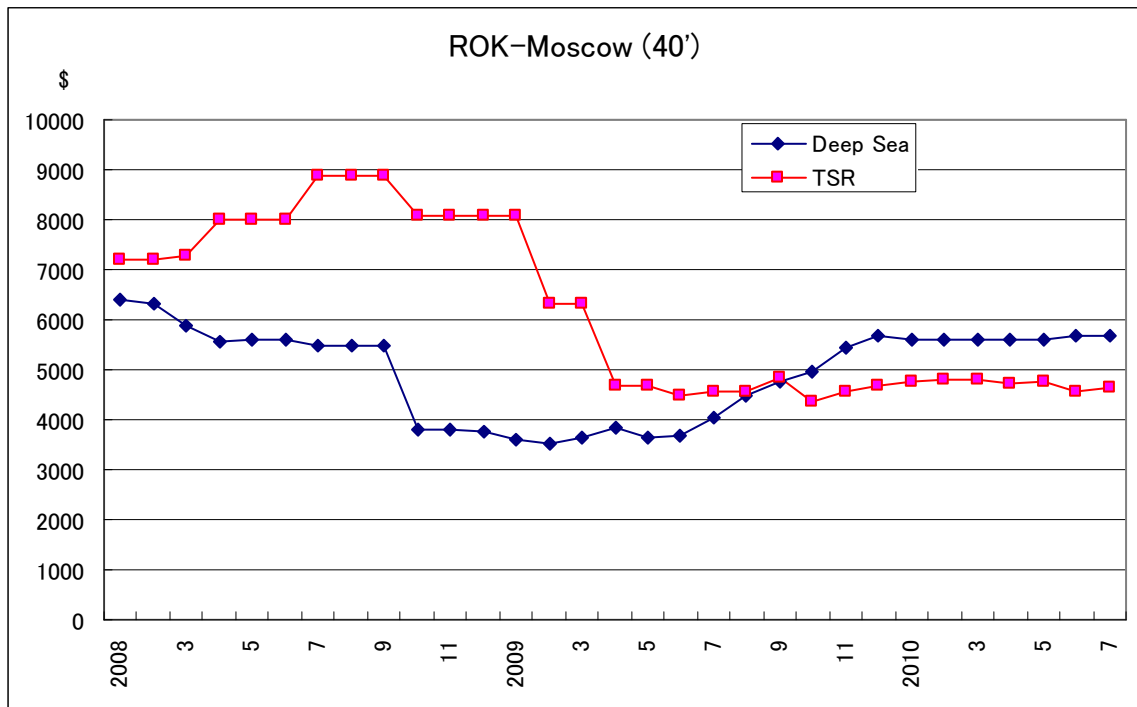
11. On the other hand, TSR charges were higher than Deep Sea rate since it was increased repeatedly during the first half of 2008. Furthermore the price gap of both routes expanded significantly since the TSR rate stayed high during the second half of 2008 even after the Lehman Shock. It is not surprising that many customers left the TSR route during this period.

12. By component, rail fee, convoy fee and flat fee for returning empty containers were raised during the first half of 2008. Russian Railways held a bullish view point that customers would not leave even if rail fee was raised since market demand would be strong.

13. However, Russian side agents were flustered to find that containers disappeared from the TSR route after the Lehman Shock. They reluctantly lowered the TSR rate in early 2009. In fact TSR rate was lowered by 42% during the Jan.-Apr. period in 2009. Key instruments contributing to the reduction were a drastic decline of flat fee and a lower ruble currency exchange rate level. Interestingly rail fee and convoy fee in ruble were not lowered officially. Regarding the drastic cut of the flat fee, Mr. Sergey Generalov, the President of FESCO, said “we had to take action in response to the significant drop in volume caused by the financial crisis and to the reduced imbalance between west bound and east bound container flow”. The flat fee seems to have been used as a strategic instrument for setting flexible tariffs. Mr. Generalov also says “we have a policy of restoring payments for the use of containers, especially when we see a shortage of them like today.”

14. Charges of the TSR transportation stayed at relatively low level in 2010. On the other hand, the Deep Sea tariff increased gradually. Therefore, TSR transportation continues to be lower than the Deep Sea route in 2010.

(Figure 3) Comparison of charges TSR transportation versus Deep Sea route from ROK



Source: FESCO

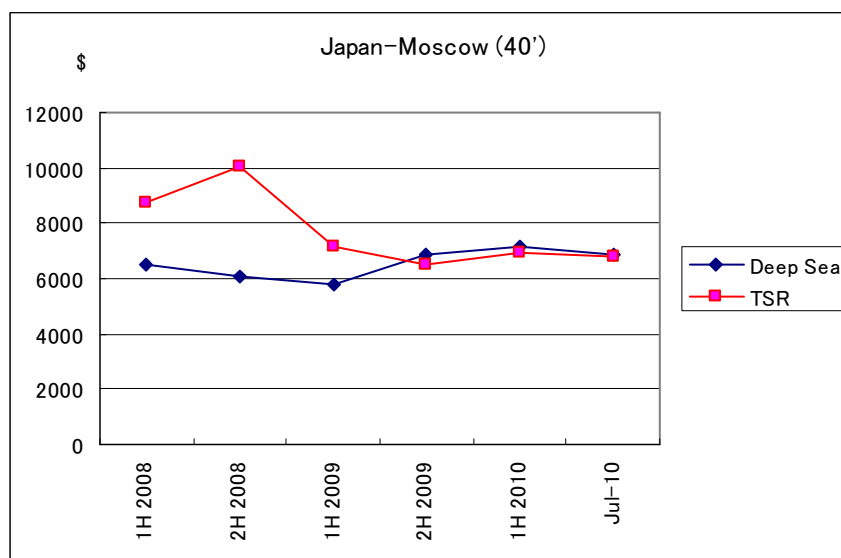
15. A similar trend is observed for the relative price of the TSR transportation and the Deep Sea route for 20' containers, shipments between China-Moscow and Japan-Moscow. TSR transportation has economic competitiveness between East Asia and Moscow at this moment. In other words, the 'watershed', to where cost becomes about equal either transporting via eastern ports or western ports from East Asia, is located around Moscow.

16. Regarding the shipment from Japan to Moscow, tariffs of TSR transportation and Deep Sea are about equal from the 2nd half of 2009 to July 2010.

17. However, in case of shipment from East Asia to Saint Petersburg, TSR transportation isn't economically competitive. When shipping to Moscow using Deep Sea route, trucking charges are added from Saint Petersburg to Moscow, \$ 1,000 for 20' and \$ 1,500 for 40' containers. Railway charges are also higher to Saint Petersburg than to Moscow from Far East. Therefore, TSR transportation costs about \$ 2,300/40' higher than Deep Sea.

18. Although Japanese and Korean automobile manufacturers located in Saint Petersburg are said to have deeper interest in TSR transportation, considering the cost difference, TSR transportation possibly will be positioned as an option when faster delivery is required or for the purpose of managing risk, such as congestion of the port in the winter.

(Figure 4) Comparison of charges TSR transportation versus Deep Sea route from Japan



Source: FESCO

III. Japan stays behind

19. Although Japan took the initiative in developing the TSR transportation in 1970s, Japan has lost presence after 2000, surpassed by ROK and China. Container share by country at Port Vostochny in 2009 were 71% for ROK, 26% for China and only 3% for Japan. China is believed to exceed ROK if containers passing through Zabaikalsk-Manzhouli border were added. The actual Japanese containers are estimated to be larger than this if containers shipped to/from Russia transshipped at Busan were included. However, Russian side is apparently disappointed with the use of TSR by Japanese shippers, as Mr. Generalov said "Japanese cargo was actually zero during 2007-2008".

20. In the world of freight shipment, winners in volume also win in pricing. In fact, relative through rate to Moscow from East Asia in July 2010 among ROK: China: Japan was 100: 115: 145. The largest factor generating the cost difference is ocean shipping charges between East Asia and Vladivostok / Vostochny, operated by FESCO. The relative ocean shipping charges among ROK: China: Japan during the first half of 2010 was 100: 106: 318, indicating extremely high cost for Japanese cargo. The key reason generating this difference is volume: a small ship operating with large empty space to/from Japan, versus

large ships operating with full of containers to/from ROK. This cost difference with ROK means that Japanese business is forced to compete against Korean companies under great disadvantages in Russian market. The cost difference is even clearer when Japanese exporters use transshipment at Busan since the feeder fee to Busan from Japanese ports is purely an additional cost. We have to cope with this disadvantage behind ROK more seriously.

IV. Geographical expansion of TSR

21. TSR transportation is expanding geographically, using branch line networks in addition to the trunk line, the originally defined Trans-Siberian railway. Generally speaking, railway has economic advantages over trucks for transporting over 2000km. Railways is broadly used for transporting good between Europe, China and continental Russia.

22. For instance, Volkswagen (VW) and Peugeot-Citroen-Mitsubishi Automobiles (PCMA) opened automobile assembly plants at Kaluga, 120km south-east from Moscow. Both car makers are using railway service for delivering SKD parts from their European base. VW started railway transportation of auto parts from Czech Republic to Kaluga via Brest in 2008. Similarly, PCMA started shipping SKD parts from France to Kaluga via Brest in March 2010. This includes auto parts for Mitsubishi Motors being shipped from France. PCMA is planning to convert from SKD to CKD in 2012. They are investigating delivering each machine part using the optimal route under the CKD scheme, including possible shipments from Japan.

23. As economic relations between China and Russia become stronger, railway route connecting inland China and Russia, using the Trans-Siberian railway, is getting attention. The most promising route is Manzhouli-Zabaikalsk border crossing route, which was improved by constructing a transshipment station at Zabaikalsk in October 2008, by Transcontainer. The maximum annual transshipment capacity is 550 thousand TEU, while only 83,474 TEU in 2008 and 42,540 TEU in 2009 were transshipped under the economic recession. Right now this route is used mainly for China-Russia trade, but the future potential will be great, including Japanese cargo from Japan to Russia via Dalian, as an alternative route of Far Eastern ports, appreciating the service frequency of Japan-China shipping route and user friendly port service in China.

V. Future issues of TSR

24. The key question for the TSR transportation is whether or not the economic competitiveness will be maintained over the long term. Russian Railways is still cautious in raising the railway tariffs since their memories of the world financial crisis are still vivid. However, there is a high possibility that Russian Railways' tradition of raising the tariffs will revive if cargo volume bounces back. Similarly, FESCO must recover the flat fee if imbalance of west bound and east bound cargo volume hurts the profit. In order to maintain the economic competitiveness of the TSR transportation, Russian players will have to carefully analyze the Deep Sea rate in determining the tariff level, as well as developing methods to decrease empty containers while not hindering overall the volume growth of the business.