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Discussions on Boxships of 8,000Teus (or 12,000Teus) on Ports

Prior to the economic tsunami taking place since the last quarter of 2009, liners rushed to place new building orders for mega sized boxships with capacity between 8,000TEUS and 12,000 TEUS. While liners have tried to cancel orders or defer delivery of as many boxships as possible due to the large number of vessels being laid up, this paper reviews the effect of the surge of these maga sized boxships in the recent past few years, in particular on ports' facilities.

Mega sized ships had become an inevitable trend in the liner industry. This trend took place since the introduction of containerization. The massive increase in trade and improvement of technology in the last decade had further accelerated the speed and scale of this trend.

With the introduction of such newly built mega ships, it has invoked many discussions regarding the rationale behind them, and whether they would actually live up to their promised benefits. Ports are not left out here too as their adaptability to such change are constantly questioned, since they are instrumental in ensuring the realization of the cost savings promised by mega ships.

As fleets consisting of mega boxships are deployed, they will obviously call less frequently at ports to cater for the same amount of cargo. Mega ships have to wait longer to fill up their vast cargo holds. Longer distance between ports is also expected as there is a less number of ports being able to efficiently service them. Minor ports will also be skipped as mega boxships will incur extra port time and cost due to their substantial size. This will invoke a new round of change of routing and scheduling of the liner services. Major ports have to compete between each other in being able to offer the necessary services for these mega ships.

Another important implication is that the increase in sizes from 8000TEUs to 12000TEUs is not a mere matter of doubling the capacity. This is because the megaboxships replace older generation ships aged 20-25 years. The ships that are being phased out of the market are that of 2000-3000TEUs. This will cause further strain on liners due to the surge in supply of ship space.. Major ports have to come out with strategies to attract shippers in concentrating their cargo in their vicinity.

The cascade effect, where larger ships displacing smaller ships in their original routes, is happening worldwide. An across-the-board chain reaction is under way, as newly built 8000-12000teu ships are pushing the previous 4000-8000teu ships down the hierarchy to shorter routes. Consequently the 4000-8000teu ships are pushing 2000-4000teu vessels down one level. At the lowest levels, the smallest vessels will be squeezed out, as they will no longer be economically viable. The feeder ports in feeder routes will have to be able to cater for these pushed down fleets, which inevitably will put stress on them to improve their infrastructure. In the end, both hub ports and feeder ports have to deal with much bigger ships than what they can handle currently.

In this paper, the port of Hong Kong will be treated as a port of choice in the discussions below. Port of Hong Kong has traditionally been one of the busiest ports in the world. Not only is it the gateway of China to the outside world but is also a natural deep water port that mega vessels may enter without any dredging . This is because if a ship is large, only ports with sufficient water depth may let her enter. This proves to be a huge advantage as dredging is often a complicated and expensive project to run.

One of the Hong Kong port's most significant constraints is that it is difficult to expand the terminal size. As mega ships require even more efficient operations, the limitations on the land side working area would result in congestion and even reduce efficiency. It is a very difficult and

expensive exercise for the terminals to acquire more land, either through buying new sites or reclaiming land, for their operations. The government of Hong Kong would also have to resolve conflicts between land for port use and for urban use as an increased traffic in the port will be a major source of congestion on the roads. The government would have to strike a balance act between serving mega ships and other interests.

For operators of mega ships, they would always consider reducing the number of port calls to cut time and cost. Therefore, Hong Kong has to increase its competitiveness, especially in attracting such ships to call in Hong Kong as the port of choice, rather than to other newly built China ports. An inter-modal link with China is crucial in attracting cargo to use Hong Kong as the port for inward/outward transportation gateway. If an efficient inter-modal link could be set-up with major cities in China, Hong Kong could be a better choice for mega ships despite fierce competition with mainland ports.

Inter-modal container movement demands inter-modal cooperation between various planning agencies, between different tiers of government and between the carriers, operators, shippers, customs, clearing agencies and providers of transport infrastructure. Therefore Hong Kong would have to seek the blessings of the Central China government before embarking on any meaningful change in the current inter-modal connections. That said, it would greatly increase Hong Kong's competitiveness in attracting mega ships visiting its terminal if the above mentioned is realized.

The infrastructures that are needed to handle mega sized ships have to be upgraded. For instance, the outreach of current cranes are inadequate to cater for the much wider mega vessels. Therefore, the lifting equipment has to be advanced. The speed of cranes in loading and reloading containers would also have to be increased to ensure the comparable port time could be achieved. Maybe it is now feasible to employ 3 cranes to serve one ship instead of 2 as the length of the ships has also been increased. Stowing and handling of containers have to be improved to avoid

congestion in the land side operations.

There is a surge in safety measures employed in ports since the 911 terrorist attacks. It would be a potential bottleneck for mega ships, as the time needed to scan container boxes for dangerous or radioactive goods could take much longer time before they could leave the port. Hong Kong port would have to improve its speed in such scanning and searching without jeopardising the safety requirements stated by various international organizations. Investment in advanced detection and scanning technology and stream flow in inspection routines have to be implemented.

Most of Hong Kong cargo is transshipment cargo, destined to be transported elsewhere. With mega vessels, it is now more difficult to ensure that such transshipment cargo could be efficiently transported to their final destination. An improved IT system would be needed to provide both carriers and shippers to acquire up to date information in monitoring the containers. The port of Hong Kong could cooperate in creating an integrated system to reduce such errors, thereby increasing the prospect of shippers and carriers selecting the port of Hong Kong.

In conclusion, the emergence of mega ships will no doubt affect liners' routing strategy and also their demand for efficient port side services. In order to remain competitive, the port of Hong Kong will not only have to efficiently implement infrastructure that will meet liners' changing demand but also actively promote the advantages of the port of Hong Kong so as to attract shippers and operators to select Hong Kong as the port of their choice instead of other ports.. If Hong Kong could not stand up to the challenges posed by these mega size ships, it may lose its hub port advantage and be reduced to only a feeder port. It is hoped that more investment will be secured and suitable policies can be put in place for meeting these challenges so as to enable the Hong Kong port maintaining its status as one of the world's major hubs.

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