

Air Cargo 2020

Does Your Strategy Address the Right Questions?

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As the global air cargo industry encounters unprecedented supply-and-demand dynamics, several key questions should be top-of-mind for freight forwarders and airlines.

Situation: Air Cargo Demand and Supply in 2020

Demand Curve: Global air cargo demand in 2020 will be directly impacted by macro-economic factors, given its close correlation with gross-domestic-product (GDP) growth. The unique characteristics of diverse world economies – advanced, natural-resource-based, oil-based, agribusiness-based, and other emerging markets – will continue to play a critical role in shaping demand.

Advanced economies (i.e., those of the United States, European Union, Japan, and Canada) will grow at a slower rate, absolute growth and incremental economic activity will continue to be significant. A resilient US will be the motivational force for the world economy owing to its position as the backbone of global innovation, its insulation from oil volatility through fracking, its access to financial markets, and its highly educated population. The projected benefit of US growth on the distribution of wealth and consumption, however, is uncertain.

The EU, affected by its unique north-south and east-west dynamics, will continue to lag slightly behind the US in growth. Japan's economy will continue to deflate with its declining population, but will likely play a key role in the high-tech supply chain. Though China's GDP is expected to grow at a much faster rate than the US, its projected contribution to global airfreight demand remains ambiguous. China's import market will likely continue to be limited (due to its excess ghost-city manufacturing capacity) while its export market will largely be contingent upon US and EU consumption. Key factors such as increasing militarization of China or the threat of trade protectionism could negatively impact air and sea trade flows.

Natural resource-based economies, such as those of Brazil and Australia as exporters of iron ore, will require natural resource consumption to experience increased prices and growth. Oil-based economies (e.g., those of the Middle East, Russia, Venezuela, and Nigeria) will likely be challenged over the next five years; as oil prices drift back up, fracking will drive prices down. When oil prices are high, these countries experience growth from increased government spending, but when prices are low, non-oil economies benefit from affordable fuel sources.

Agribusiness economies with key export segments will continue to

generate steady airfreight demand. These economies and exports include Argentinian beef, Colombian flowers, and Peruvian asparagus. Other emerging markets in Latin America, Africa, and the Middle East will likely experience high relative growth (incremental absolute growth when compared with advanced economies).

In addition to macro-economic factors, air cargo use cases by shipper-vertical-market will significantly impact demand. The primary air cargo drivers have unique demand dynamics. These drivers include high-unit-value products, physical perishable products, economic-process impairment, economic order quantity, and international e-commerce.

High-unit-value products – in technology, healthcare, specialized machinery, and aerospace – will continue to remain a primary driver of airfreight. The high-tech market has experienced both form-factor density (more-compact products), functional consolidation (e.g., phone, camera, disk drive, music in single device), and reduction in value due to globalization and low interest rates. As a result, future high-tech growth will be contingent upon product launches and investments. The healthcare industry – an air cargo consumer across the three core segments of life sciences, pharmaceuticals, and medical equipment – will experience structural tailwinds due to the aging population of the developed world. The aerospace industry will continue to grow in production and in its maintenance/spare-install base. Passenger air travel, driven by price elasticity, will increase with household income and generational preferences for travel experiences, rather than material possessions driving aerospace production and the need for airfreight transportation of high-value aircraft parts for assembly and repair.

Physical perishable products – e.g., temperature-controlled healthcare, fresh fruits, vegetables – will continue to grow with populations and rising incomes. Perishables will become a very important airfreight segment because it can absorb higher transportation costs with volatility in oil prices.

Economic-process impairment will continue to drive airfreight in production processes, specific types of activities, and marketing processes. Production-process demand (i.e., supplying emergency parts to prevent plant shut-down) is closely linked to industry production with frequent sporadic contingencies mandating on-demand parts. The need for factory repair and maintenance could be a likely future-growth driver. Specific activities such as oil drilling, mining, and agriculture also require emergency parts in order to maintain operations. Moreover,

marketing processes – e.g., samples for trade shows, inventory supplies following advertising campaigns, data/analytics – will continue to necessitate the timely availability of products and parts.

Economic order quantities (e.g., lot size) will also continue to mandate airfreight usage. For example, consumers ordering in smaller quantities will experience lot-size constraints in shipping options. If, for example, the quantity isn't great enough to fill the container, this will prompt the need for airfreight usage.

Finally, international e-commerce growth could likely be a catalyst for air cargo usage. In light of recent US, European, and Asian intra-regional e-commerce growth, the globalization of e-commerce could trigger the demand for a deferred intercontinental transportation service. Given the small lot size and relatively low product value of e-commerce purchases, accompanied by the consumer expectation of accelerated delivery, air cargo will likely emerge as the dominant transportation option. Moreover, a slow, fragile, and unpredictable sea-freight network affected by structural overcapacity, consolidation, and decelerated transit times makes airfreight an attractive choice for international e-commerce expansion.

Supply Curve: Belly capacity will continue to outpace freighter capacity as passenger air-travel demand grows and freighter orders remain at an all-time low. Passenger air travel, a price-elastic segment growing as a multiple of GDP, will continue to experience growth with more efficient airline operations, cheaper oil, and more fuel-efficient engines. The ratio of belly capacity per seat will continue to increase due to aircraft design.

Though belly capacity as a percentage of total capacity has increased, belly capacity has yet to exceed freighter total capacity and, simultaneously, has limitations. For example, the B777 belly accommodates only six to eight bottom-deck pallets, making it difficult for forwarders to achieve economies of scale when moving shipments in batches. The need for non-integrated freighters will continue to exist due to lot/shipment size, directionality, and seasonality.

A significant share of the freighter fleet (over 80%) is operated or economically controlled by one of the big three integrators – FedEx, UPS, and DHL. Chinese integrators and Amazon have also entered the market. Integrated carriers saw a resurgence of intra-regional network growth during the 2015 peak season, as the domestic portion of international-journey segments (DPII) composed nearly one-fifth of the US domestic market. In the near future, capacity among the integrated carriers will likely shrink, given that integrators will primarily augment fleets with the B777. The B747-400 series, released in 1993, is now over 20 years old, and the main non-express carriers purchasing 747s are Cathay Pacific, Korean Airlines, Qatar Airways, Emirates, Etihad, Silk Way Airways, and Air Bridge Cargo. Because B777s are ordered over B747-8s, the future supply curve will look different as the B747-400 retires and capacity shrinks.

Other key factors impacting supply are seasonality and directional trade imbalance. International seasonality for consumer products will likely continue to change as consumers order more efficiently. In addition, directional imbalance, which has historically been driven by China, could be affected by changes in China's export as a percentage of imports.

Supply-and-demand dynamics inevitability impact price formation. Barring fuel, prices usually increase as freighter capacity is needed. In regions where the demand curve matches the supply curve, prices will remain competitive. In lanes with excess capacity (e.g., North America to Asia), rates will decrease to absorb cost of backhaul.

Implications for Freight Forwarders and Airlines

The evolving demand-and-supply dynamics of the global air cargo industry uniquely affect freight forwarders and airlines.

Freight Forwarders: Given that freight forwarding is a buy/sell-spread business optimized by consolidation-arbitrage mix, forwarders need state-of-the-art technology in order to maintain service levels and prevent customers from defecting to integrators. It is imperative that forwarders know their costs and invest in automation and analytics to effectively compete in the transforming supply/demand landscape. Due to industry trends, it is likely that shipment sizes that forwarders handle will decrease. In order to manage more transactions and smaller shipment sizes, forwarders will need to remain competitive on the handling size and keep costs low to service various HAWB and MAWB sizes. As the cost of technology decreases, forwarders should make critical investments in automation, IT, and analytics in order to better serve customers, manage costs, and preserve margins.

Airlines: Non-integrated carriers – network passenger carriers, low-cost carriers, mixed-fleet flag carriers, and all-cargo freighter carriers – will be impacted by fluctuations in supply and demand. Major network passenger carriers (i.e., Delta, American Airlines, and United) will need to make strategic investments to manage costs and improve efficiency. In addition to making IT investments to manage back-office costs, these airlines will need to invest in platforms to increase ground-handling efficiency (e.g., RFID and tracking technology with real-time information flows) to change the dynamics of air cargo handling. Furthermore, major network passenger carriers will need to effectively manage security posture and strategize for participation in a potential international e-commerce boom.

The major challenge for LCCs will be to determine how to increase participation in the global airfreight market without a hub-and-spoke network. In particular, the point-to-point segments that LCCs serve often do not generate significant air cargo demand as trucks are a competitive alternative on distance. In addition, physical cargo space is limited due to narrow-body belly capacity.

For major mixed-fleet flag carriers such as Cathay Pacific and Korean Air, critical investments in IT will be necessary to improve profitability. In particular, these carriers need to invest in IT around cargo terminals, space control, revenue management (allocating capacity/mix across assets), and pricing (discriminating across customer segments to price levels). Proper pricing, particularly pricing independently from belly and freighter, will be critical for preserving margins. In addition, these airlines will need to improve cargo-handling operations and integration with departure-control systems (e.g., ticketing and payload balance). Mixed-fleet petro-dollar carriers such as Emirates, Qatar Airways, Etihad, and Silk Way Airlines will continue to grow as a result of their countries' use of oil wealth for diversification. They currently have favorable tailwinds, but in the near term need to consider how structural headwinds

of low oil prices could impact operations. Continued investment in IT capabilities will be critical for improving operations.

All-cargo freighter carriers – Cargolux, Nippon Cargo Airlines, ABC (AirBridgeCargo), and Silk Way – will be challenged because they operate swing capacity and face significant risk in market downturns. As a result, these carriers need to offer differentiated value in the marketplace, such as flying to non-standard destinations and offering specialized handling of cargo. To maintain profitability, it is imperative that these carriers have a quality sales force, robust client segmentation, specialized cargo-pricing knowledge, and access to specialty markets.



NOTE: For additional information please email: BClancy@LogCapStrat.com

	Demand	Supply	Price	Costs	Investments
Freight Forwarders	<ul style="list-style-type: none"> • How do we manage volatility and the need to optimize modal mix for our customers? • Do we have a plan that enables our participation in the explosive growth of intra-regional and intercontinental e-commerce? 	<ul style="list-style-type: none"> • Can we purchase capacity at rates similar to or lower than our competitors? • Are we using real-time market intelligence to identify and exploit changes in supply/demand and price levels? 	<ul style="list-style-type: none"> • Do we really understand how to price our services so that our unique value is realized, but we are still competitive relative to market? 	<ul style="list-style-type: none"> • How can we use technology to lower our non-transportation cost structure? • How competitive is our handling and P&D cost structure? Could we profitably serve the large-format B2C market? 	<ul style="list-style-type: none"> • What types of human-capital investments will be required to sustain our competitive edge? • How do we avoid the recent IT disasters and end up better and cheaper?
Network Passenger Airlines	<ul style="list-style-type: none"> • Do we have an actionable perishable vertical-market strategy? • What unique advantages do we have to serve healthcare shippers? 	<ul style="list-style-type: none"> • On which intercontinental connecting markets do we have a unique value proposition? • Do we know our relative network quality? 	<ul style="list-style-type: none"> • How can we reduce the labor intensity and increase effectiveness of our pricing and capacity-allocation processes? 	<ul style="list-style-type: none"> • How will global consolidation in the air cargo-handling market impact our cost-to-serve, flexibility, and service levels? 	<ul style="list-style-type: none"> • What investments do we need to make in cold chain to serve the perishables market?
Low-Cost Carriers	<ul style="list-style-type: none"> • How do we access more demand? 	<ul style="list-style-type: none"> • Should we use GSAs or build out a sales force? 	<ul style="list-style-type: none"> • Do we need revenue management? 	<ul style="list-style-type: none"> • Do we know and understand our cargo costs? 	<ul style="list-style-type: none"> • Should we invest in cargo IT?
Mixed-Fleet Flag Carriers	<ul style="list-style-type: none"> • Which vertical shipper markets and lanes should we target to maximize growth? 	<ul style="list-style-type: none"> • How do we counteract the threat to freighter profitability from rising 787/777 belly capacity in long-haul lanes? 	<ul style="list-style-type: none"> • How can we differentiate our prices for freighter-versus-belly capacity? 	<ul style="list-style-type: none"> • How will consolidation of the RFS industry in North America impact airline network reach? 	<ul style="list-style-type: none"> • What is the best risk/value strategy for making air cargo IT investments?
Mixed-Fleet Petro Dollar Carriers	<ul style="list-style-type: none"> • How will we manage the air trade downturn in oil-based economies? 	<ul style="list-style-type: none"> • What is the best way to use the freighters in our network to complement the belly network? 	<ul style="list-style-type: none"> • How do we move away from selling on price alone to include emphasis on value provided? 	<ul style="list-style-type: none"> • How do we protect our relative cost advantage when oil prices are low? 	<ul style="list-style-type: none"> • How do we attract and retain world-class talent while growing rapidly?
Non-Integrated All-Cargo Airlines	<ul style="list-style-type: none"> • Are we able to identify and capture all of the shipper volumes that require highly specialized services that only we can provide? 	<ul style="list-style-type: none"> • Should we consider alliances to expand our network reach while minimizing capital investment in aircraft? 	<ul style="list-style-type: none"> • Do we properly price our specialty services to reflect the unique value provided? 	<ul style="list-style-type: none"> • Which parts of our cost structure can we further optimize or is there nothing left to improve? 	<ul style="list-style-type: none"> • Should we invest in the next generation of large and medium widebody freighters?