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Investigating Hong Kong's Role as the Main Air Transport Hub in the Asia-Pacific Region

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ABSTRACT

Hong Kong International Airport (HKIA) has experienced growth in air traffic volumes since its opening in 1998, and has established itself as one of the main international hub airports in the Asia-Pacific region and China's primary gateway. However, it is concerned about losing this position due to increased competition from alternative international gateway hub airports in Mainland China and around the Asia-Pacific region. In particular, HKIA's growth in passenger numbers started to show a declining trend and was smaller relative to other regional airports.

The objective of this research was to investigate HKIA's relative operational efficiency and network position and forecast its ability to maintain its role as the main air transport hub in the Asia-Pacific region and the primary passenger gateway to Mainland China. The research in this thesis undertook three separate but related empirical studies to answer several questions that contribute to addressing the overall research objective. The first study used Data Envelopment Analysis (DEA) to assess the operational efficiency of HKIA compared to other major Asia-Pacific airports. HKIA was found to reside on the efficiency frontier as one of the most efficient airports in the Asia-Pacific region. In the second study, the NetScan Connectivity Units (CNU) model measured and compared the direct, indirect, and hub connectivity of the major Asia-Pacific airports. HKIA was found to have a competitive position offering larger direct and hub connectivity to other international regions relative to other airports. Furthermore, the market share analysis showed that HKIA maintained its role as China's primary passenger gateway handling a significant share of China's inbound international visitors from several regions around the world. In the third study, the Box−Jenkins Seasonal Autoregressive Integrated Moving Average (SARIMA) and ARIMAX models were modelled to forecast Hong Kong airport's future passenger throughput, and its future passenger throughput were projected to grow.

The findings of the research suggested that HKIA has maintained its position as the main air transport hub in the Asia-Pacific region and China's primary passenger

gateway with the support of efficient operations and competitive international flight connectivity networks. Given that HKIA maintains this relative position, its airport passenger throughput is forecasted to grow in the future.

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