Route Competition In Hong Kong

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ROUTE COMPETITION IN HONG KONG’S AVIATION INDUSTRY

YIZHANG QIU* & SINCHIT LAI**

ABSTRACT

Open sky policies have been implemented for decades, giving birth to many airline newcomers from diverse backgrounds lifting off into liberalized skies. EasyJet, Ryanair, Wizz Air, and Southwest Airlines are examples of independent budget airlines, branding the outcome of aviation liberalization and contributing to interroute competition through their networks. However, Hong Kong International Airport, which aspires to be a better and greater air hub, is crowded with local carriers, and the airport flight timetables rarely show the presence of non-local budget airlines or competing routes. This Article examines the importance of interroute competition and the role that budget airlines play in it. Upon citing the data and traffic schedule to and from HKIA, this Article looks to the HK-Japan and HK-Australia routes as examples of the lack of interroute competition in HK’s internal aviation market. Finally, this Article discusses the reasons leading to such a problem and recommends ways for policymakers to address it.

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I. INTRODUCTION

As observed from the Sky Bridge, rows of dark green and a few purple and red vertical tails form the main lineup of Hong Kong (HK) local passenger air carriers.¹ Browsing the Air Operator’s Certificate (AOC) published on the HK Air Transport Licensing Authority (ATLA)’s website, one would gather that the three colours correspond to the three major carriers in HK, namely, Cathay Pacific Airways (Cathay), Hong Kong Express Airways (HKE), and Hong Kong Airlines (CRK).²

Cathay was founded in 1946.³ Since then, it has been recognized as the city’s flagship carrier and has rapidly expanded its network to serve passengers in global destinations.⁴ Moreover, the Cathay Pacific Group (the Cathay Group), which owns Cathay, began to expand its portfolio by developing an air freight business in 1976 with a subsidiary brand named Cathay Cargo.⁵ By the mid-1980s, the Cathay passenger service network connected Europe and America through the Cathay jumbo jet fleet (Boeing 747-200).⁶ Meanwhile, challengers attempted to mount competition with Cathay’s dominant position in passenger service and air


⁴ Id.


⁶ Cathay, supra note 5.
cargo. In the passenger business, Dragonair, a truly local brand to HK, began its operations in 1985. Although the initial launch of Dragonair was a winding path, Dragonair relied on its spirit and business strategy to grow into a serious rival to Cathay Group, and even fought in court with Cathay for the traffic rights to mainland China in 2002. However, Dragonair’s growth has been constricted for decades by the “one route, one airline” policy of the government. Despite a relaxation to the policy in 2002, these changes came too late to salvage Dragonair’s growth, leaving the company to be acquired by the Cathay Group in 2006 until it ceased operations in 2020, sacrificed by Cathay to slim operations during COVID-19. A cargo challenger—Air Hong Kong (AHK)—launched in 1988 shared a similar story to Dragonair. Cathay started to acquire AHK’s shares in 1994 and eventually took over the company in 2002, turning AHK into a subsidiary of Cathay.

In the 21st century, another newcomer, Hainan Airlines (HNA), entered the HK market with CRK in 2006. Empowered by its tremendous capital, CRK rapidly expanded its network and fleet and increased competition with the Cathay-dominated routes.

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8 Lee, supra note 7.


10 Lee, supra note 7.


12 Id.


Moreover, CRK opened up the budget travel market in 2013 via a new brand, HK Express (HKE), which was acquired by CRK’s parent company, HNA, in 2006.\(^{15}\) HKE adopted a “low cost, low fare” strategy and had a chance to reshape the competitive environment of HK’s aviation industry.\(^{16}\) However, the window for reshaping it did not last long as HNA was hit by the financial crisis in 2019 and had to be restructured.\(^{17}\) Consequently, HNA sold HKE to Cathay in 2019.\(^{18}\) Since then, there has been no strong challenger to the Cathay Group, a giant airline group controlling over half the runway slots at its hometown airport.\(^{19}\) This history eventually rendered the scenery that we can see now from the Sky Bridge.

HK’s aviation industry is thus highly concentrated. There have long been discussions over the causes and solutions to the lack of competition in the industry. Professor Jae-Woon Lee has written extensively about competition policy in HK generally and in its aviation industry specifically.\(^{20}\) Lee examined the law governing foreign investment in HK’s airline industry.\(^{21}\) HK adopts a “principal place of business” rule, unlike most overseas jurisdictions, that implements foreign ownership restrictions.\(^{22}\) This is meant to be a liberal rule that sets a low hurdle for foreign investors to obtain an air transport license to enter HK’s airline industry.\(^{23}\) However, the rule has been interpreted narrowly and restrictively,


\(^{16}\) See Hayward, *supra* note 14.

\(^{17}\) Id.

\(^{18}\) Id.


\(^{21}\) Jae Woon Lee, Ting Fung Max Lui & Ho Ming Lam, *Hong Kong’s Law for Foreign Investment in the Airline Industry: A Pioneer of “Principal Place of Business”?*, 45 ANNALS OF AIR & SPACE L. 47 (2020).

\(^{22}\) Id. at 52.

\(^{23}\) Id. at 56–58.
creating a barrier to entry.\textsuperscript{24} Thus, Lee suggests that HK adopt a relaxed interpretation to stimulate competition in the relevant markets.\textsuperscript{25} In a separate research project, Lee identified a few policy limitations and offered suggestions accordingly.\textsuperscript{26} First, airline companies often need to ally with their competitors to serve passengers (e.g., through interline agreements or code-sharing agreements).\textsuperscript{27} While most airline alliances do not violate competition law, some could restrict competition.\textsuperscript{28} Moreover, airlines may form anticompetitive joint ventures.\textsuperscript{29} Currently, HK's antitrust authority has \textit{ex post} jurisdiction to prosecute anticompetitive airline alliances.\textsuperscript{30} However, in light of the uniqueness of the aviation industry, Lee argues that the antitrust authority should collaborate with HK's aviation regulators (e.g., the Civil Aviation Department) to conduct \textit{ex ante} assessments before allowing airline alliances.\textsuperscript{31} Second, concerning airline slot allocation, HK adopted the international practice of a "use it or lose it" rule where an airline company could retain its slots as long as they were used at least 80\% of the time in the previous season (e.g., summer or winter).\textsuperscript{32} This makes it difficult for new entrants to obtain slots—especially popular ones—which are essential facilities for an airline company, creating entry barriers.\textsuperscript{33} Lee urged HK to review its Schedule Coordination Guidelines for Hong Kong International Airport and consider introducing market mechanisms for slot allocation (e.g., auctions or secondary markets) to increase competition in the market.\textsuperscript{34} Third, the COVID-19 pandemic devastated aviation industries around the globe, and HK was no exception.\textsuperscript{35} To protect local airline companies, the HK government offered state aid by investing in Cathay.\textsuperscript{36} The government’s ownership may give rise to competition concerns because the government may now have an incentive to protect Cathay from its competitors.

\textsuperscript{24} Id. at 71.
\textsuperscript{25} Id. at 74–75.
\textsuperscript{26} Jae Woon Lee, \textit{Saving Competition in Hong Kong's Aviation Market}, 46 Air & Space L. 351 (2021).
\textsuperscript{27} Id. at 359.
\textsuperscript{28} Id.
\textsuperscript{29} Id.
\textsuperscript{30} Id. at 363.
\textsuperscript{31} Id.
\textsuperscript{33} Id. at 365.
\textsuperscript{34} Id. at 371.
\textsuperscript{35} Id. at 370.
\textsuperscript{36} Id.
Hence, Lee suggests that HK’s antitrust authorities provide guidance on competition neutrality.\textsuperscript{37}

Airline companies rely on and compete for various pivotal resources, such as airport slots, routes, frequency, and gates.\textsuperscript{38} The availability of these resources, therefore, determines the attractiveness of HK’s aviation industry to potential new entrants. To the best of our knowledge, there has not been a study that focuses on competition matters relating to airline routes. In short, routes are scarce, as there is a cap on each “HK-destination city” pair where airline companies could operate.\textsuperscript{39} Routes are specific not only to destination cities but also to airports therein. Hence, to be absolutely precise, there is a cap on each “VHHH-destination airport” pair, where VHHH is the ICAO airport code for Hong Kong International Airport (HKIA).\textsuperscript{40} Therefore, to compete with a particular “VHHH-destination airport” pair that is full, in the absence of any market mechanisms, airline companies may try to establish a new route between HKIA and a substitutable destination airport. However, as detailed below, airline companies may face difficulties establishing these competing routes. If so, airline companies face little or no interoute competition.

As a first attempt, this Article studies interoute competition in HK’s aviation industry and suggests ways for HK to stimulate such competition. Part II of this Article introduces the concept of route competition and its importance. Part III explains the challenges new entrants face when trying to establish new routes, not only for short-haul but also for long-haul flights. Part IV recommends ways for HK to enhance competition in its aviation industry by stimulating route competition despite not making a radical switch to market mechanisms (e.g., secondary market). Part V briefly draws conclusions.

\textsuperscript{37} Id. at 371–72.


\textsuperscript{39} See id. at 2.

\textsuperscript{40} Hong Kong International Airport, SKYbrary, https://skybrary.aero/airports/vhhh [https://perma.cc/GET2-VH48].
II. ROUTE COMPETITION

A. Intraroute Competition

A route represents a particular “airport pair,” such as VHHH-RJTT (HKIA to and from Tokyo Haneda International Airport). This pair is also called a Point of Origin/Point of Destination (O&D) pair. It has to be specific to the airport instead of the city due to the development of multiairport cities and industry practice. In this Article, the international routes will be our main topic, given the policy goal of the HK government to build an international aviation hub.

Route competition could exist in at least two forms: intraroute competition and interroute competition. First, intraroute competition refers to the competition of airline operators within a particular airport pair. We continue to take VHHH-RJTT as an example. From the perspective of competition, ideally, there should be no restriction on the number of airlines operating on a route (1) on any given day and (2) any given time slot. This means that airline operators could freely launch flights on this route at any time slot they want. To illustrate, we consider the following hypothesis: suppose Cathay was the only company that flew between VHHH and RJTT, and it scheduled a VHHH-RJTT flight at noon every day. In this case, if travelers desire to fly from VHHH to RJTT, they have to accept any price that Cathay charges as long as it is affordable to them. In the absence of any restrictions, any competing airline operators could set up their own daily VHHH-RJTT flights at noon as well. Travelers would conceive of the flights provided by Cathay and other providers as close substitutes. Thus, all airline operators have to compete vigorously, especially on price. Alternatively, without restrictions, competitors of Cathay could also set up their own daily VHHH-RJTT flights at any time other than

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41 Kam To Ng, Xiaowen Fu, Katsuhiro Yamaguchi & Chuanyan Zhu, The Effects of Bankruptcy on Airline Yield and Frequency: The Case of the Duopolistic Domestic Market in Japan, 142 Transp. Pol’y 28, 30 (2023).
44 Hong Kong Basic Law, Art. 128 (2021).
noon, such as at 13:00. There must be travelers who find that both the Cathay noon flight and non-Cathay 13:00 flight fit their itinerary. For these travelers, the VHHH-RJTT flights one hour apart continue to be close substitutes; hence, all airline operators have to compete for their businesses. As such, travelers benefit from more alternatives in terms of lower airfare and better service.

Connecting flights is very common for operators to expand their network in a long-haul market to attract consumers heading to or from a city without a massive air hub. Such a connecting flight can be completed by two or more flights operated by different airlines. However, these airlines may typically have cooperation agreements enabling a one-stop experience for clients, meaning travelers’ checked baggage will require only a one-time check-in. However, the EU commission indicated that a long-haul (e.g., transatlantic flight) one-stop connecting flight would be regarded as part of the relevant market for a nonstop flight of the same O&D pair when the connection time is less than 150 minutes—meaning that one-stop flights with less than 150 minutes transfer time will constitute intraroute competition with nonstop flights at the same O&D pairs.

In practice, regrettably, airline operators cannot freely create new VHHH-destination routes as they wish. The major reason is that the availability of an international route is jointly determined by the air service agreement (ASA) and the route license for each airport pair. The ASA is a long-established legal instrument written for two or more states that indicates traffic rights.

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Traffic rights are also known as freedoms of the air. Traffic rights are also known as freedoms of the air. There are five typical freedoms of air transport. After the third and fourth freedoms are granted through the bilateral ASA, each contractual party can designate airlines to serve air travelers at prescribed airports paired with an agreed quota through an individual route license. Route licenses constrain the day-to-day operation in a daily number of flights for each airport pair and the number of seats per flight. To transport passengers internationally between two airports, the airline shall acquire route licenses from the competent authority of each state. Given the nature of international route licensing, the timetable for an international flight is pre-approved under the dedicated route license, and there is limited room for adjusting the timetable even though the operator owns many slots. Therefore, the route license is de facto a quota controller for a pair of airports, which regulates a certain number of passengers that can transit within that airport pair per day at the allocated timeslots. This arrangement forces airlines to conduct intraroute competition.

Licensing airlines with the aforesaid quota is inevitable upon considering the origin and destination’s infrastructure capacity, the airways volume, and each state’s aviation policy. For instance, RJTT, the busiest Japanese airport, serves domestic and international passengers to and from the capital of Japan. As RJTT is just a thirteen-minute rail ride from downtown, many local and international consumers select RJTT as their first departure/landing choice instead of Tokyo Narita International Airport (RJAA). In light of its popularity, RJTT has approached its operation capacity limit. Regardless of how the Japan Civil Aviation Bureau optimizes operation performance, the RJTT capacity on international routes is still constrained by its congested airways, service of massive numbers of daily domestic flights, noise abatement measures given its close-to-town nature, and

51 Id.
52 Id.
53 Lee, supra note 20, at 2.
54 Id.
56 Id.
57 Id.
special runway operations for meeting varied wind direction and weather conditions.\textsuperscript{58}

\section*{B. Interoute Competition}

Notwithstanding the limited intraroute competition, airline operators also must engage in interoute competition. For illustration, we have prepared Figure 1 below. HK is a small city, while most destinations that travelers visit are large countries consisting of multiple cities. These cities are not equally popular with travelers. Accordingly, we divide them into primary cities and secondary cities according to demand, where the former represents more popular destinations. Within these cities, there could be more than one airport. Similarly, for each city, we could classify the airports into primary airports and secondary airports based on demand. Correspondingly, there may be flights connecting VHHH and (1) the primary airport in the primary city (i.e., Route 1); (2) the secondary airport in the primary city (i.e., Route 2); (3) the primary airport in the secondary city (i.e., Route 3); and (4) the secondary airport in the secondary city (i.e., Route 4) of country X. Hereinafter, Route 1 could be referred to as the “primary route,” while the remaining three routes could be referred to as the “secondary routes” or “competing routes.”

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{figure1.png}
\caption{How to define the primary city, secondary city, primary airport, and secondary airport in a foreign country is a policy question. For the sake of discussion, we propose the following five criteria, but policymakers are welcome to refine them before implementation. First, conceptually, a primary city is a popular destination in country X for passengers travelling from or via HK (i.e., a frequently visited destination) and has at least one airport}
\end{figure}

\textsuperscript{58} IFALPA, \textit{Approach Procedures and Restrictions at Tokyo Haneda RJTT/HND}, at 1, IFALPA Doc. 29SAB04 (May. 18, 2023).
that accepts international flights. However, the secondary city is a neighbouring city to the primary city, which is less popular and has at least one airport that accepts international flights. Specifically, we could define primary cities as any city that recorded average passenger numbers of ten million or more over the last five calendar years. If there are multiple airports that receive international flights in the same city, then we use the aggregate passenger numbers of all these airports to compute the five-year average. If the five-year average number exceeds the ten million mark, then the city is considered primary. Otherwise, it is categorized as a secondary city. We use ten million as the threshold for illustrative purposes based on the European standard for a "large community airport." Nevertheless, policymakers could adopt other thresholds as long as they are clearly defined and reflect market dynamics. For instance, they may instead adopt the EU threshold for "major hub airport," which requires the passenger number to be over twenty-five million per year.

Second, within each country, there could be more than one primary city, and multiple secondary cities could surround each primary city.

Third, in a country with more than one primary city, if there is a secondary city lying between two primary cities, a question arises as to which market the secondary city belongs to. In other words, we want to know to which primary city the secondary city serves as a closer substitute. Technically, we have to conduct a Small but Significant and Non-transitory Increase in Price (SS-NIP) test to decide. Unfortunately, we do not have the relevant data to do so. Hence, we propose using the direct distance between the secondary city and the two primary cities as a proxy and classifying a secondary city with the particular primary city that is closer geographically. The rationale behind this is that the shorter the distance, the higher the chance of the secondary city being used as an alternative landing location for a primary city, ceteris paribus.

59 Not every city has its own international airport.
60 We propose to look at the five-year average instead of just the passenger numbers in the previous calendar year to avoid the impact of unnecessary policy fluctuations due to temporary events that affect passenger numbers, such as pandemics or wars.
61 Community Guidelines on Financing of Airports and Start-Up Aid to Airlines Departing from Regional Airports, 2005 O.J. (C 312) 6.
Fourth, within each primary or secondary city, if there are two or more airports that accept international flights, the most popular one is regarded as the primary airport (i.e., the airport with the highest passenger numbers), while the remaining airport(s) are regarded as the secondary airport(s).

Fifth, if we have to rank the four types of routes by their demand, Route 1 has the highest demand, Route 2 comes second, Route 3 is third, and Route 4 is the least in demand.

Within each of the four routes connecting HK and country X, there could be intraroute competition as long as more than one airline operates there. We have already discussed this form of competition using the example of VHHH-RJTT. In addition, across these four routes, there could be interroute competition. Take Route 1 as an example. By definition, this is the most popular route among the four, meaning that many people want to travel to the primary city via the primary airport therein. However, travelers have alternatives because, as the old saying goes, “all roads lead to Rome.” Alternatively, travelers could get to the primary city by taking Route 2, meaning Route 2 is a close substitute for Route 1. However, it is not a perfect substitute for Route 1. Route 2 is in less demand than Route 1 because the secondary airport is often further away from the primary city’s centre compared to the same city’s primary airport. This means that upon landing at the secondary airport, travelers who took Route 2 inevitably spend more time and money on land transport (e.g., metro, bus, or even Shinkansen) to reach their final destination in the primary city. Reflecting the lower demand, the airfare for Route 2 is often lower than for Route 1. Depending on each traveler’s budget constraints, time, cost, final destination, itinerary, and other factors, some travelers will end up taking Route 1, while others will take Route 2.

Nevertheless, Route 2 is not the only alternative for travelers who want to go from HK to the primary city in country X because there could be flights connecting HK and a secondary city near the primary city. For instance, Route 3 could connect VHHH and the primary airport in the secondary city, and Route 4 could connect VHHH and the secondary airport in the secondary city. Upon landing in the secondary city, travelers could take land transport (e.g., taxi, coach, and train) or even domestic flights, if any, to the primary city. Obviously, compared to the previous alternative (i.e., Route 2), Routes 3 and 4 are inferior because

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64 Most cities, especially secondary cities, have only one international airport.
airports in the secondary city are further away from the primary city centre, meaning that transfers would cost more. Therefore, Routes 3 and 4 are both substitutes for Route 1. However, Route 2 is a closer substitute for Route 1 than Routes 3 and 4.

The substitutability between the routes could give rise to interroute competition. However, for such competition to exist, there should be different airline companies operating on the main route (i.e., Route 1) and the alternative routes. First, if there is only one airline company operating on all routes, then there is no interroute competition for flights between HK and country X. If a traveler wants to fly from HK to country X, although he could choose between Routes 1, 2, 3 and 4, the traveler could only fly with the monopoly airline. If the monopolizing airline raises the airfare for all four routes, then the traveler has no choice but to accept it unless the prices are out of his or her budget. In addition, if multiple companies are operating in the primary Route 1 but no airline company is operating in secondary Routes 2, 3, and 4, then the companies face no interroute competition from Routes 2, 3, and 4. This is because travelers have no choice but to travel via Route 1. In this case, only intrabrand competition exists.

If multiple airline companies operate in the primary route, but only some of them operate in the secondary routes, then the companies that only operate in the primary route face competition from the secondary routes (i.e., interroute competition). We assume that there are two airline companies, namely, C and D. Company C operates on all four routes, while Company D only operates on the primary route. When travelers wish to fly from HK to the primary city in country X, they could choose to fly not only with Companies C or D via the primary route but also with Company C via any of the secondary routes. Therefore, Company D has to offer competitive prices (i.e., discounted airfare) to avoid losing too many customers to Company C through the secondary routes. This does not mean that Company D will charge a lower airfare for tickets on its primary route ticket than Company C’s tickets on the secondary routes. After all, the primary route leads travelers to a more convenient destination and is in higher demand. Compared to the previous scenarios, the current scenario is preferable for consumers because interroute competition is in place, and travelers benefit from having more varieties and lower airfare. However, this scenario is imperfect because there is no intraroute competition for the secondary routes. Company C essentially has a monopoly on the competing routes. Furthermore, Company C’s operations in the primary route
do not face meaningful competition from the secondary routes because the latter routes are run by the company itself.

Interoute competition could be intensified if more companies operate in the competing routes, especially companies that do not also operate on the primary route (i.e., new competitors). Picking up from our previous scenario, interroute competition could be intensified if Company D also starts to operate on the secondary routes. If so, travelers have the option to go to the primary city via any of the four routes and with any of the two companies. Then, while Company D’s flights on the primary route continue to face competition from Company C’s flights on the secondary routes, Company C’s flights on the primary route also begin to face competition from Company D’s flights on the secondary routes. Company D’s expansion would not only enhance interroute competition but also create intraroute competition in the secondary routes.

Interoute competition could also be intensified if the brands across the primary and secondary routes become more diverse. For instance, other than Company D’s expansion, new airline companies (e.g., Company E) could enter the market and launch flights on competing routes. As such, the competition faced by Companies C and D on the primary route becomes more vigorous. With more vigorous interroute competition, airfares will drop even more. The entry of Company Z also provides consumers with a new option. Moreover, when there are more competitors in the market, it makes cartel formation or tacit collusion more challenging.

Above, we introduced the concept of interroute competition and demonstrated its benefits to society. In reality, interroute competition can be found in many aviation hubs. Next, we discuss the interplay between interroute competition and the development of low-cost carriers.

C. Low-Cost Carriers’ Role in Interoute Competition

Open sky policies and deregulation considerably relaxed the requirements for new airline entrants and enriched the resources

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67 For instance, flights departing from Lisbon have routes to Amsterdam and Rotterdam; there are also routes to Frankfurt and Cologne. See *Lisbon Routes and Destinations*, Flightradar24, https://www.flightradar24.com/data/airports/lis/routes [https://perma.cc/3PBK-RXRJ].
of O&D city pairs, leading to the rise and growth of low-cost carriers (LCCs) operating on a global range in the last two decades. Notably, while LCCs could operate on both high-demand and medium-demand O&D city pairs, the former often only account for a very small, or even no, portion of their route portfolio. In addition, a new normal for interroute competition is gradually forming in some well-developed and barrier-free skies. It is observed that in many aviation hubs, high-demand O&D city pairs are mainly handled by flagship carriers. The secondary medium-demand pairs (e.g., short-haul flights with secondary points) are the main playing fields of the LCCs. In other words, many primary routes are dominated by flagship carriers, while many secondary routes are operated by LCCs.

The phenomenon of LCCs targeting secondary routes could be explained by (1) the difference in the profit model between full-service carriers (FSCs) and LCCs and (2) the difference in the cost of landing at major airports and at secondary airports. On the one hand, flagship carriers brand their services with “premium service, premium fare.” They apply business and pricing strategies that target the segment with time-sensitive and diverse

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69 For instance, EasyJet operated a small number of routes from Gatwick or Luton to the primary cities among European countries or even outside the EU. Route Map | Flights to European Destinations and Beyond, EasyJet, https://www.easyjet.com/en/routemap [https://perma.cc/F2P7-EQQ5].

70 Tulfly Netherland operated zero scheduled routes to primary cities. See Where We Fly, TUI, https://www.tui.co.uk/flight/where-we-fly [https://perma.cc/V7WE-MMWQ].

71 Only approximately 23% of Cathay Group passenger scheduled routes are secondary; most of the routes are flown by HK Express.

72 Comparing the flight schedule between EGLL (Heathrow Airport), EGKK (Gatwick Airport), and EGGW (Luton), the phenomenon is traceable. See Flights, Heathrow, https://www.heathrow.com/arrivals [https://perma.cc/2VKX-DGYU]; Live Flights, LONDON GATWICK, https://www.gatwickairport.com/flights [https://perma.cc/HGM7-ELPC]; Flights, LONDON LUTON AIRPORT, https://www.londonluton.co.uk/flights [https://perma.cc/3JAG-4UAL].


74 Id.
service-focused demands, resulting in a revenue stream that can accommodate the costs of landing at the major airports or best airports and enable premium quality service to clients. On the other hand, LCCs gain profit by streamlining services and removing unnecessary investments (i.e., free air catering, VIP lounges, alliance schemes, three-class liners); increasing their daily flight sectors with speedy turnarounds; and utilizing the point-to-point mode to take advantage of lower landing fees in secondary cities and satellite airports. As a result, LCCs could sell lower fares in the market. The above differences may explain why, under interroute competition, primary routes are dominated by FSCs, and secondary routes remain the major market for LCCs. For the same reasons, it is not hard to see why LCCs could also be an appealing mode of entry for start-ups in the airline industry.

This particular model of interroute competition, which involves FSCs offering primary route tickets at higher fares and LCCs offering secondary route tickets at lower fares, not only ensures a high intensity of competition but also provides multitiered choices to meet the diverse demands of consumers. In 2007, the U.S. Supreme Court decided a landmark antitrust case often referred to as the “Leegin case.” At a glance, the case seems to be irrelevant to interroute competition because it was about resale price maintenance agreements. However, the Court decided that it is pro-competitive for the market to have some sellers positioning themselves as “high-price, high-service brands.” This gives room for “low-price, low-service brands” to enter the market, enhancing interbrand competition and providing more brand options to consumers. Likewise, in the aviation industry, it is ideal to have a mix of “high-price, high-service and primary-route FSC brands” and “low-price, low-service and secondary route LCC brands” to meet the demands of different consumer segments. Therefore, societies filled with sizable airlines that mainly operate on primary routes should facilitate LCCs to enter their market and establish more secondary routes to meet the latent demand of low-value consumers.

75 Id.
76 Id.
78 Id.
79 Id. at 890.
80 Id. at 878.
Furthermore, LCCs seem to prefer operating on short-haul secondary routes rather than long-haul secondary routes.\footnote{Checking the route map of some famous LCCs, like Southwest, EasyJet, Jet2.com, and Wizz Air, few routes would exceed six hours, a standard from the Centre for aviation. \textit{Aviation Industry Glossary, Centre for Aviation}, https://centreforaviation.com/about/glossary#glossary-8 [https://perma.cc/6SHD-XGZE].} As such, most of the interroute competition occurs among short-haul routes. The main reason is that it is less costly to fly short-haul than long-distance flights.\footnote{Urs Binggeli & Mathieu Weber, \textit{A Short Life in Long Haul for Low-Cost Carriers}, Mckinsey & Co., (June 2013) https://www.mckinsey.com/industries/travel-logistics-and-infrastructure/our-insights/a-short-life-in-long-haul-for-low-cost-carriers [https://perma.cc/S4MD-D95T].} First, short-haul flights do not technically require a long-range airliner. This greatly reduces the cost of operations because narrow-body jets are cheaper to acquire, maintain, and refuel. Moreover, short-haul flights do not require relief pilots, reducing personnel expenditure.\footnote{See Joel Freeman, \textit{How Becoming an Airline Pilot Works}, How STUFF Works, https://science.howstuffworks.com/transport/flight/modern/pilot2.htm [https://perma.cc/F5VZ-X9J3].} In addition, the LCC model for short-haul flights prefers a “point-to-point” model instead of a traditional “hub-to-spoke” model.\footnote{Binggeli & Weber, supra note 82; \textit{The Difference Between Full Service and Low Cost Carriers}, supra note 73.} The “point-to-point” model is simpler and easier to maintain than its counterpart, which helps airlines spend less on maintaining their air service network.\footnote{The Difference Between Full Service and Low Cost Carriers, supra note 73.} Such an operating model also allows airlines to increase their daily flight frequency and make more income. The lower cost requirement and faster return on investment are particularly suitable for LCCs and new entrants that have relatively less capital.

In addition to cost reasons, for a long time, the engineering of narrow-body small jets did not allow them to fly long-range.\footnote{What is a Narrow-Body Plane?, Monroe Aerospace (Jan. 6, 2021), https://monroeaerospace.com/blog/what-is-a-narrow-body-airplane/ [https://perma.cc/T247-ZXXD].} In 2019, the introduction of the Airbus A321LR, the very first narrow-body high fuel-efficiency jet certified for long-range capability, created possibilities for LCCs to fly long-haul routes with small jets.\footnote{A321LR is certified by FAA and EASA with ETOPS 180 minutes in 2018. EASA AND FAA CERTIFY LONG-RANGE CAPABILITY FOR A321neo, Airbus 1 (Oct. 2, 2018) https://www.airbus.com/en/newsroom/press-releases/2018-10-easa-and-faa-certify-long-range-capability-for-a321neo [https://perma.cc/X5CY-H9GC].} However, this development is very recent, so the
industry only has limited experience and few successful stories as of today.88

In sum, interroute competition benefits consumers by reducing airfare and offering alternative routes to travelers. The intensity of interroute competition rises (1) as the number of airline companies participating in it increases and (2) as the diversity of brands across the primary and secondary routes increases. We observe a growing trend of FSCs primarily operating primary routes, while LCCs primarily operate secondary routes.89 This helps to raise the diversity of brands across routes and hence, interroute competition. The reason behind the aforementioned phenomenon may be that secondary routes are less appealing than primary routes to travelers, so airline companies could not charge secondary route fares at the rates for primary routes (i.e., they must accept a smaller margin). This condition fits LCC’s low-cost, low-price business model. Furthermore, we observe that the majority of the secondary routes operated by LCCs are short-haul routes.90 This may be because most jets owned by LCCs are small in size.91 First, LCCs have fewer financial resources, so they cannot afford large jets. Second, small jets could carry fewer passengers at a time, so they are more suitable to meet the lower demand of secondary routes, in which LCCs primarily operate.92 Then, since it is technically challenging and costly for small jets to fly long-haul routes, most secondary routes operated by LCCs are short-haul flights. Consequently, most of the interroute competition takes place on short-haul routes.

III. THE CHALLENGES FOR NEW ENTRANTS TO ESTABLISH NEW ROUTES

Despite the benefits of interroute competition and recent developments in aviation industries around the globe, there is no independent LCC based in HK. Moreover, interroute competition

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90 Id. at 100.
92 Id.
among flights departing from HKIA is scarce. To illustrate the lack of interroute competition in HK, we use routes between HK and Japan as an example for two reasons. First, Japan is one of the favourite travel destinations for Hongkongers. This means that the demand for HK-Japan flights is high. Second, flights from HK to Japan are considered short-haul routes. For these two reasons, this market should be one of the most attractive for LCCs. Hence, if interroute competition exists in HK’s aviation industry, it should be found among the HK-Japan routes. In other words, if interroute competition could not be found among the HK-Japan routes, it is unlikely to occur in other routes beginning in HK.

We commence our analysis by constructing a map that identifies all the primary and secondary cities following the criteria we proposed in Part II.2 (see Figure 2). As shown, there are six primary cities—Fukuoka, Osaka, Nagoya, Tokyo, Chitose, and Naha—and their corresponding primary airports—RJFF, RJBB, RJGG, RJTT, RJCC, and ROAH. They are labelled by six different filled shapes. Among the six primary cities, only Tokyo has a secondary airport denoted as RJAA. Routes leading to secondary airports of primary cities are also considered secondary routes that compete with the primary routes. Then, we identify the remaining secondary routes by locating the secondary cities that correspond to the six primary cities and all the airports in these secondary cities. To reflect their competitive relationships, secondary routes are labeled with the same shape as the primary routes they are competing with, but the shapes are not filled to indicate that they are the destinations of secondary routes rather than primary routes.

Using the classification adopted in Figure 2, we collected statistics to check whether there are interroute competitions within each of these six regions and, if so, how intense they are (see Figure 3). It is worth noting that the dominant local operator Cathay and its sister company HKE are counted separately. However, since they are essentially one company, we used the “*” symbol in Figure 3 to indicate that the number counted includes HK

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Express. If this is not taken into account, the intensity of competition would be overstated. For example, the statistics show that four airlines have direct flights to RJTT in Tokyo: Cathay, HKE, Japan Airlines, and All Nippon Airways. After considering the relationship between Cathay and HKE, there are de facto three competing airline groups operating on the VHHH-RJTT route only.

There are a few takeaways from Figure 3. First, while collecting the data, we gathered that HKE is the only LCC that operates on the HK-Japan routes. Second, interroute competition is very limited among these HK-Japan routes. Out of the six Japanese regions we identified, four face interroute competition. At a glance, this proportion looks high. However, it must be read with caution for two reasons. As explained, the intensity of interroute competition depends on the number of airline companies participating in it and the diversity of brands across the primary and secondary routes. If we look at the four regions that face interroute competition, except for the region where RJTT lies, the number of operators participating in the secondary route is no more than two. Second, there is barely any diversity of brands across the primary and secondary routes. Again, the Tokyo region is an exception. Among the four secondary routes, VHHH-RJAA is the only one comprising new competitors (i.e., HK Airlines & Greater Bay Airlines). In short, there is no independent LCC operating on HK-Japan routes. Moreover, while a high portion of “VHHH-Japanese primary city” pairs faces interroute competition, the intensity of interroute competition is low.

Here, one may argue that although most of the secondary routes are run by airlines that operate in the corresponding primary routes (i.e., little interroute competition from new competitors), travelers still benefit because they are given more alternatives. However, the interroute competition generated by existing competitors is a double-edged sword because, as explained later, allowing incumbents that operate on primary routes to occupy secondary routes creates a barrier for new entrants, especially LCCs, to enter HK’s aviation market.

Next, from three different perspectives, we explain why there is no independent LCC based in HK and why interroute competition among flights departing from HKIA is scarce.

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94 Recall that for short-haul flights, connecting flights are not considered to be in the same relevant market as direct flights. Since HK-Japan flights are short-haul, our statistics exclude operators that provide relevant connecting flights. Supra Part II.A.

95 Infra Part III.B.
Figure 2 Map Locating the Six Primary Airports of Primary Cities and their Neighbouring Competing Airports in Japan.96

INDEX:

1. Shapes filled with colour represent primary airports of primary cities (six different shapes).

2. Shapes NOT filled with colour represent airports competing with the primary airport of the primary city that has the same shape.

### Primary airports in primary cities

<table>
<thead>
<tr>
<th>Airport Name</th>
<th>No. of distinct operators (i.e., intraroute competition)</th>
<th>No. of airports</th>
<th>No. of operators also in the competing primary route (i.e., interroute competition from existing competitors)</th>
<th>No. of operators NOT in the competing primary route (i.e., interroute competition from new competitors)</th>
<th>No. of airports</th>
<th>No. of operators also in the competing primary route (i.e., interroute competition from existing competitors)</th>
<th>No. of operators NOT in the competing primary route (i.e., interroute competition from new competitors)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tokyo International Airport (RJTT)</td>
<td>4*</td>
<td>1 (i.e., RJAA)</td>
<td>4*</td>
<td>2</td>
<td>3</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td>Nagoya Centrair International Airport (RJGG)</td>
<td>3*</td>
<td>Nil</td>
<td>N/A</td>
<td>N/A</td>
<td>3</td>
<td>Nil</td>
<td>Nil</td>
</tr>
<tr>
<td>Kansai International Airport (RJBB)</td>
<td>5*</td>
<td>Nil</td>
<td>N/A</td>
<td>N/A</td>
<td>4</td>
<td>2*</td>
<td>Nil</td>
</tr>
<tr>
<td>Fukuoka Airport (RJFF)</td>
<td>3*</td>
<td>Nil</td>
<td>N/A</td>
<td>N/A</td>
<td>8</td>
<td>1*</td>
<td>Nil</td>
</tr>
<tr>
<td>Naha Airport (ROAH)</td>
<td>2*</td>
<td>Nil</td>
<td>N/A</td>
<td>N/A</td>
<td>2</td>
<td>1*</td>
<td>Nil</td>
</tr>
<tr>
<td>New Chitose Airport (RJCC)</td>
<td>2</td>
<td>Nil</td>
<td>N/A</td>
<td>N/A</td>
<td>5</td>
<td>Nil</td>
<td>Nil</td>
</tr>
</tbody>
</table>

**Figure 3 Statistics Summarizing Route Competition among HK-Japan Routes**

*Note: * is used to indicate that one of the operators counted is a low-cost carrier named Hong Kong Express, which is a sister company of Cathay Pacific.

**A. The Scope of HK Route License Regulation Is Too Narrow**

The first challenge new entrants face in HK is that it is difficult for them to establish new routes. To understand this, we review the procedures airline operators have to go through to obtain new routes.

To establish a registered airline in HK, investors have to first go through the CAD 360 process and obtain an Air Operator Certificate (AOC) from the Civil Aviation Department (CAD).97 Then, newly registered airlines need to seek permission for each

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route they intend to operate.98 Meanwhile, existing registered airlines may do the same to expand their route network.99 As explained, the HK government is responsible for negotiating traffic rights with other countries.100 These traffic rights could be specific to country pairs, city pairs, or airport pairs. If the registered airlines wish to operate on routes in which the government has not obtained the corresponding traffic rights, the airlines need to first invite the government to initiate a negotiation process with the relevant county. After forming agreements with other countries, HK’s ATLA is responsible for allocating and designating the negotiated traffic rights to registered airlines under legislation Chapter 448A Air Transport (Licensing of Air Services) Regulations and the affiliated guidelines.101 Therefore, registered airlines can submit an application form to ATLA for licenses to operate on the contracted routes, which are also known as operating licenses or route licenses (i.e., no supporting documents are required at this stage).102

Upon receiving applications from airlines, the ATLA will gazette the applications for two consecutive Fridays to solicit public comments to see if there are objections or representations to the applications from the public, including other local airlines.103 If there is an objection, the Chief Executive of HK will decide whether to require ATLA to initiate a hearing process for the objection.104 If ATLA rejects the objection after the hearing, the review of the operating license application will continue; otherwise, it will be declined.105 If there is no objection, ATLA will request supporting documents from applicants to assess whether they fulfil the criteria set down in the licensing guidelines.106 According to the guidelines, newly registered airline applicants have to sat-

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99 Id. at 12.
100 Id., supra note 26, at 352.
101 ATLA, supra note 98, at 1. License is only applicable to HK airlines, while the foreign airlines will apply with permit to entry.
103 ATLA, supra note 98, at 19.
104 Id.
105 Id. at 22.
106 Id.
isfy two requirements, which we refer to as the ‘normal operation requirement’ and the ‘financial resilience requirement,’ while existing registered airline applicants need to satisfy the former requirement only.\textsuperscript{107}

First, the “normal operation” requirement requires the applicants to demonstrate that they could fulfil their actual and potential obligations (i.e., maintain normal operations) within a prescribed time period, which is twenty-four months for newly registered airlines and twelve months for existing registered airlines.\textsuperscript{108} Second, the “financial resilience” requirement requires newly registered airlines (only) to have financial durability and reliability to meet any extraordinary circumstances, even if there was no income in the first three months of service.\textsuperscript{109} To check if the applicants meet the aforesaid requirement(s), ATLA requires them to submit their business plans, operation projections, and finance projections for the routes or new city pairs they intend to operate on.\textsuperscript{110}

If the application is successful, the designated airline could then use the operating license to apply for permission to enter from the relevant authorities in the destination country of the new route. Upon obtaining permission, the designated airline could start operating on the designated routes. If the airline is newly registered, then it is required to submit its operational and financial data monthly to ATLA in the first twenty-four months of operation for monitoring purposes.\textsuperscript{111}

The operating license application procedure, including a public comment process, helps safeguard the public interest. However, in the past, existing carriers have utilized this process to block or delay new entries such as Jetstar HK, Oasis Airlines, and Greater Bay Airlines.\textsuperscript{112} Thus, it is questionable whether the public could make a meaningful assessment of applicants’ suitability to establish a new route simply based on their application (i.e., a pending ATLA assessment application). Moreover, concerns arise as to whether existing carriers should be allowed to object to the route license applications. If so, how much weight should be given to their objections? The launch of new routes intensifies competition in the

\textsuperscript{107} Id. at 6, 12.
\textsuperscript{108} Id.
\textsuperscript{109} ATLA, supra note 98, at 7.
\textsuperscript{110} Id. at 6–9.
\textsuperscript{111} See id. at 7.
aviation market and reduces the market share and profits of the existing carriers. Hence, permitting them to raise objections gives rise to a conflict of interest and creates a barrier to entry.113

Similarly, it is understandable for the operating license application procedure to set out the “normal operation” and “financial resilience” requirements. ATLA wants to allocate route resources to financially sound carriers and ensure the reliability and stability of air transport services.114 However, the requirements may overly emphasize the financial soundness of the applicants and fail to consider other values important to HK, such as the new route’s implication for the competitive environment in the industry. Moreover, the guidelines discriminate against newly registered airline applicants by expecting more from them. First, these applicants need to promise normal operations for twenty-four months instead of twelve months.115 Second, only newcomers need to meet the “financial resilience” requirement and submit data to ALTA on a monthly basis in the first twenty-four months of their operation.116 These discriminative requirements are unfavourable to new entrants, creating high barriers for them to acquire route resources that are essential for them to enter HK’s market. This is because, compared to existing carriers, new entrants may have fewer financial resources and less, or even no, operation experience. Such a disadvantage is particularly salient among new entrants that intend to position themselves as an LCC. For the same reasons, when dominant incumbents and small- and medium-sized airlines (including new entrants) submit an operating license application for the same route simultaneously, the former almost always prevails. For instance, the shutdown of Cathay Dragonair in 2020 returned over forty traffic rights to ATLA for redesignation.117 Although the nondominant local carriers tried to bid on these routes, including the newly established Greater Bay Airlines, they were still defeated by Cathay, the flagship carrier of the city.118

113 Id.
114 See ATLA, supra note 98, at 9.
115 Id. at 6.
116 Id.
In short, the current route license rules create a narrow and financially based scope to assess route license applications, rendering it difficult for new entrants and nondominant airlines to fairly enjoy access to scarce route resources.

B. Limited Route Resources and Potential Monopolistic Conducts

However, even if HK’s route license rules were relaxed and became more favorable to nondominant airline companies, it does not guarantee more applications for licenses to operate on secondary routes and the subsequent generation of interroute competition. Nondominant airline companies’ incentive to apply for route licenses also depends on the availability of quality route resources.

Primary routes are more profitable than secondary routes. Nevertheless, as explained, there is a quota as to how many flights can operate on any given route. In HK, the dominant players control primary route resources, and they can keep these premier resources as long as they comply with the licensing rules and fulfill their obligations. Therefore, it is difficult for nondominant airline companies and new entrants to gain access to these premier resources, and these airlines may need to rely on secondary route resources to survive. However, secondary route resources are also scarce in HK for the following reasons.

First, although the worldwide opening of the skies boosts the expansion and enhancement of regional and secondary airports, the nature of the secondary cities and their airports means that the designated airlines and flight frequencies are not unlimited. First, secondary airports generally will not build a multirunway system due to geographical and noise restrictions. For instance, many secondary points in Japan (as shown in Figure 2) are single runway operations and even single taxiways. In addition, many secondary cities’ airports mainly commute with popular neighbouring primary cities, while receiving international flights is merely their “side hustle.” The above constraints limit the num-

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119 Lee, supra note 26, at 364.
120 For instance, Okayama Airport has only one taxiway. About Okayama, Okayama Airport https://www.okayama-airport.org/about [https://perma.cc/HJG3-NMJ2].
ber of traffic rights that other countries could grant HK airlines for more secondary route flights.

Second, the scarce secondary route resources in HK are controlled mainly by dominant local carriers, leaving even fewer such resources for new entrants, especially LCCs, to construct a route portfolio that could make it profitable for them to enter HK’s market. From Figure 3, one can see that the incumbent aviation groups of HK occupied many secondary points and primary points in Japan simultaneously for short-haul operations, creating a barrier for new entrants to join the HK-Japan market. For instance, almost all of the existing secondary routes in operation are dominated by HKE.121 However, HKE is a sister company of Cathay, which dominates the corresponding primary routes.122 Hence, although HKE introduced interoute competition, the intensity of such competition is low. As explained, this situation could be improved by new entrants operating on the secondary routes. However, this might not be feasible given that HKE occupies many secondary route resources, and the HK government does not have the discretion to raise the cap on the route quota, given that the quota is bilaterally determined.

Here, one may wonder why the Cathay Group could control not only the primary route but also secondary route resources. Put differently, why is HKE, which controls most of the secondary route resources, also owned by the dominant player in the primary routes? Rewinding ten years, HNA Group dove into the LCC market via its HKE brand.123 The HNA Group is a large conglomerate in China that already has its CRK brand operating on the primary routes in HK.124 HNA might have opened up the LCC market with the intention of creating a new source of income. However, it could also be the case that HNA had to look to this market for survival because most of the primary route resources were already dominated by Cathay at that time, so HNA had to seek alternative resources. Moreover, it is not impossible that HNA acquired secondary route resources in a strategy to raise

122 Id.
124 Id.
the barrier of entry and stifle further competition. In any event, in the absence of any regulation, HNA Group created a situation in which one company controlled a large amount of primary and secondary route resources simultaneously.\textsuperscript{125} Therefore, when the Cathay Pacific Group acquired HKE in 2019, this situation was extended until today. If a hypothetical airline with a substantial degree of market power abuses its power by occupying routes with the object or effect of harming competition, it might violate antitrust laws.\textsuperscript{126} Even if the dominant airlines did not acquire secondary route resources with the intention to stifle competition, these acquisitions could be harmful to HK since they inevitably reduce the availability of route resources for new entrants, discouraging new entrants and reducing future competition.

Skeptics might argue that there are still plenty of secondary route resources in HK for new entrants to acquire because, for example, Figure 3 shows that many Japanese secondary routes have not been established, and there is no competition therein (e.g., from VHHH to airports in the secondary cities of the Tokyo, Nagoya, and Chitose regions). Hence, the new entrants or LCCs could establish routes to these secondary cities and create interroute competitions to challenge Cathay or CRK. However, upon checking the statistics of Japanese airports prepared by the Japan Civil Aviation authorities, it is found that the secondary routes that the Cathay Group has not occupied are less popular than those that have already been occupied. This is not surprising because the Group could make more profit from secondary routes that are more popular. That said, allowing the Group to occupy these secondary routes may leave no room for new LCCs to enter the relevant market, rendering interroute competition weak. An investor may find it unprofitable to enter HK’s market even if he could acquire all the remaining low-demand slots in the occupied secondary routes and all slots in the unoccupied secondary routes. In addition, the investor has to compete with HKE, which is not only backed by the resourceful Cathay Group (e.g., HKE codeshares with Cathay on the secondary routes to ensure sufficient and stable load factors, while new entrants cannot) but


\textsuperscript{126} Hong Kong Competition Ordinance, Cap. 619 § 21. Hong Kong introduced the object versus effect dichotomy in the rule that regulates abuse of market power, differentiating from the comparable European competition rule (i.e., Art. 102 of the TFEU). Thomas K. Cheng & Kelvin Hiu Fai Kwok, Hong Kong Competition Law: Comparative and Theoretical Models 143–44 (2021).
also controls the high-demand secondary route resources. Furthermore, even if operating on all the unoccupied low-demand secondary route resources is profitable, the margin may not be large enough for the investor to satisfy ATLA’s financial criteria for obtaining route licenses in HK.127 In contrast, if airlines that own primary route resources were not allowed to own secondary route resources simultaneously, then the secondary route resources available to HK could allow and attract investors to establish airlines, especially budget airlines, in HK.

C. TECHNOLOGICAL CONSTRAINT FOR LONG-RANGE TRAFFIC

As explained, new entrants and LCCs prefer to operate short-range flights due to cost and technological constraints. Thus, interroute competition, if any, is expected to be more common among short-range routes. In light of this, one might argue that if dominant airlines strategically occupied secondary route resources to raise the barrier of entry and stifle competition, this problem should only prevail among short-range routes. However, in practice, it is also found that dominant airlines occupy secondary routes between HK and long-distance destinations. For example, we constructed Figures 4 and 5 below to reveal the intensity of interroute competition among flights between HK and Australia, one of the popular long-haul destinations for Hongkongers. The statistics show that many HK-Australian secondary routes are occupied by airlines which are also operating on the corresponding primary routes.

Notwithstanding the actuality of dominant airlines occupying long-haul secondary routes, sceptics might argue that this is not a problem for HK because new entrants and LCCs do not prefer to fly long-range anyway. That said, the landscape of competition might have been changing due to recent technological advancements. In 2019, the introduction of the Airbus A321LR, the very first narrow-body high fuel-efficiency jet certified with long-range capability, created possibilities for LCCs to fly long-haul with small jets.128 For example, JetBlue has been utilizing A321LR to fly long-haul budget flights instead of leasing a Jet A-guzzling Boeing 757 or a wide-body Boeing 787 (despite the 787’s outstanding average

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127 Supra Part III.A.
Apart from JetBlue, Scandinavian Airlines (SAS), an FSC, also flies the A321LR across the Atlantic, serving round trip flights between Scandinavian countries and the US for medium-demand traffic. The success of the A321LR also makes Airbus confident in further developing an extra longer-range type—A321XLR—a game changer for the industry, which can travel nonstop for 5400 miles, offering room for LCCs to imagine their long-haul city pairs in the future. These technological advancements gradually allow small jetliners to fly long-haul routes, enabling new entrants and LCCs to operate on long-range secondary routes and introducing interroute competition to long-haul routes.

However, new entrants and LCCs will face multiple challenges when trying to fly long hauls. First, long-haul route resources are also scarce. FSCs and flagship carriers have been operating on long-range routes for a few decades, so many long-haul primary routes are under their control. Second, FSCs could also add the A321XLR to their fleet to dive into the long-haul secondary route market. They have an incentive to do so because they know that investors may set up LCCs to expand long-haul secondary markets and compete with them. Therefore, the FSCs may want to occupy the relevant route resources to avoid competition.

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129 Pearson, supra note 88.
Figure 4 Map Locating the Four Primary Airports of Primary Cities and their Neighbouring Competing Airports in Australia

INDEX:

1. Shapes filled with colour represent primary airports of primary cities (six different shapes).

2. Shapes NOT filled with colour represent airports competing with the primary airport of the primary city that has the same shape.
Figure 5 Statistics Summarizing Route Competition among HK-AU Routes

Note: Since HK-Australia flights are considered long-haul, the statistics include the number of operators not only in direct flights, but also in one-stop flights with a layover time less than 150 minutes in the same relevant market.

IV. RECOMMENDATIONS

As shown, HK's aviation sector faces three challenges, causing a lack of independent LCCs and interoute competition. To address these problems, we propose three recommendations accordingly.

First and foremost, the licensing regulations need renovation to level the playing field between the giant airline group and new entrants, allocating scarce route resources fairly and equally. The necessity of amending regulation is rooted in HK Basic Law Article 128, which states that the government needs to take measures to maintain HKIA's position as an international air hub.133 The

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133 Hong Kong Basic Law, Art. 128 (2021).
law can be interpreted to mean that HKIA shall consistently innovate in infrastructure and regulatory design to keep up with the other states that claim to consistently elevate their major airports to attain a higher level of international aviation hub. As analysed above, even though the license rule looks reasonable and has effectively maintained reliable public air transit, the narrow focus on financials and revenue viability unintentionally constructs uneven ground between incumbents and new entrants when they apply to fly the same routes. Such a narrow focus on finances in assessing new entrants’ applications may bring hardship for them given that a reasonable newcomer may be inexperienced in drafting a good and persuading business plan and projection and be financially weaker than the incumbents. Moreover, objections from dominant players are not rare when a new airline attempts to shake up dominant positions, which often delays the start-up and operations of the fresh airlines.

When comparing the licensing protocol with those in markets featuring great interroute competition, such as the UK and Singapore, which have thriving international air hubs, it is not hard to find that their legal frameworks are advanced for scaling new heights of the local aviation industry.\(^\text{134}\)

The UK air service license framework has some similar elements to the HK version (e.g., the almost identical two principles and similar requirements on supporting documents), but the UK one adopts a relaxed approach to financial monitoring of mainline airlines and authorizes the power of the Civil Aviation Authority (CAA) to review licenses under the auspices of consumer protection concerns and the prevention of any anti-competitive behaviour (i.e., abuse of dominant position).\(^\text{135}\) Moreover, the UK authority is inclined to refrain from using time-consuming public hearings to deal with objections to the grant of a license, making the application process smoother and friendlier to newcomers.\(^\text{136}\)

Singapore, however, allows more room for applicants to present their proof of operational viability with many available aspects to persuade the Air Traffic Rights Committee (ATRC) to grant or renew the license to their service network (i.e., the city/airport pairs),

\(^{134}\) UK CIV. AVIATION AUTH. (CAA), LICENSING AIRLINES IN THE UK: THE FRAMEWORK AND CRITERIA FOR GRANTING OPERATING LICENCES, ROUTE LICENCES AND AIR TRANSPORT LICENCES (July 2008), http://publicapps.caa.co.uk/docs/33/cap1301ors1jul2008.pdf [https://perma.cc/7Q8P-RGGD] (hereinafter UK CAA); CIV. AVIATION AUTH. SINGAPORE, AIR NAVIGATION (LICENSING OF AIR SERVICES) REGULATIONS, CAP. 6, RG. 2 (2009) (hereinafter Cap.6 Rg.2).

\(^{135}\) UK CAA, supra note 134, ¶ 26 at 13–14.

\(^{136}\) Id. at ¶¶ 13–16, at 18.
which will benefit new entrants.\textsuperscript{137} For instance, Chapter 6 Rg 2 of Singapore Statutes states that the committee will consider whether granting or renewing the license to an applicant can promote the economy, trade, and development of Changi Airport as an air hub, which is the policy goal of Changi Airport.\textsuperscript{138} In that case, if a new budget airline submits a proposed network consisting of many new secondary points helping expand the connectivity of Changi air hub, the ATRC may grant a license. Moreover, the committee also considers applications that can improve public benefits in air transport (i.e., flight frequency, airfare, network expansion), leading to favor for new entrants or new routes if they can achieve this aim.\textsuperscript{139} There are also political benefits (i.e., contributing to more cross-border cooperation or more bilateral ASAs) that carriers can use to prove that they deserve to designate traffic rights or continue to use them to eventually achieve greater total welfare.\textsuperscript{140}

Switching our focus back to HK, its route license regulations (i.e., Cap. 448A and its procedural guidelines) should be amended to widen the scope of the matters considered by ATLA and optimize the workflow and approach to handling objections. Specifically, ATLA should have diverse criteria to review the application, such as whether applicants can bring more competition to the HK market, whether applicants can help elevate the status of HKIA as a world gateway and air hub, and whether the applicant’s running model can offer the consumer a more convenient journey, more affordable price and more frequent service per week than the business models of existing carriers. In addition, when incumbents and new airlines compete on the same routes, the modified licensing rules should guide regulators to weigh their competition from the suitability of each airline to such a route (i.e., whether the planned use of aircraft fits the demand on the submitted routes) and the risk analysis of anticompetitive behaviour if granting the license to applicants.

Regarding the objection handling process, the Oasis Airlines case, Jetstar HK, and the recent Greater Bay Airlines case represent telltale evidence that dominant players could utilize the objection process as a shield to protect their position in HK and have used it to delay and strike out newcomers into HKIA.\textsuperscript{141} As analysed in

\begin{flushright}
137 Cap. 6 Rg. 2, \textit{supra} note 134, at Art. 2F. \\
138 \textit{Id.} at Art. 2G. \\
139 \textit{Id.} \\
140 Lee, \textit{supra} note 20, at 71. \\
141 \textit{See}, \textit{e.g.}, Cheung & Lee, \textit{supra} note 118; Lee, \textit{supra} note 112; Sijia Jiang, \textit{As Public Hearing Wraps, Jetstar Hong Kong Awaits Word of Its Fate}, \textit{S. China Morning Post}
\end{flushright}
Part III.A, the objection from rivals may raise a conflict of interest, as the dominant players may naturally attempt to block newcomers to protect their share of the market.\footnote{Infra Part III.} Even though the objections raised by rivals are concerned with the public interest, ATLA may find it hard to identify whether their intentions are not anticompetitive. In addition, when ATLA receives the objections and decides to suspend any further application assessment and arrange a hearing, ATLA has not reviewed any documents provided by the applicants, suggesting that competitors’ objections were meaningless in calling for a hearing. Therefore, we suggest revising this arrangement by moving the public comment/objection process to the end of the route license application workflow. As such, after receiving an application, ATLA shall gazette the application and start the review process immediately. After reviewing an application, ATLA should publish its decision and the reasons behind it. Only after that should the ATLA invite the public to comment on its decision. At this stage, if any party wants to raise an objection, it has to address the evidence and arguments provided in ATLA’s decision. Then, the Chief Executive decide whether to order ATLA to reconsider the application. The revised workflow can avoid unnecessary delay and make it harder for rivals to challenge new entrants.

Apart from amendments and reconfiguring the workflow of licensing regulation, to prevent dominant airlines on primary routes from extending their reach to secondary routes and stifling interroute competition, the air service regulation Cap. 448A should be amended to include a provision to prevent any airline group from controlling a large amount of primary and secondary route resources at the same time. Specifically, we suggest establishing the following 2-prong rule:

1. ATLA (or Director-General of Civil Aviation) shall not grant a specific secondary route license (or operating permit) to any airline group (1) for which over 50% of its route portfolio are primary routes (i.e., a primary route airline group) and (2) already operates on the corresponding primary route to the specific destination of the secondary route in question.

2. ATLA (or Director-General of Civil Aviation) shall not grant a specific primary route license (or operating permit) to any airline group (1) for which over 50% of its route portfolio are primary routes (i.e., a primary route airline group) and (2)
already operates on the corresponding secondary route to the
destination of the specific primary route in question.

It is worth noting that these rules are specific to airline groups
rather than airline brands. Thus, airline groups could not cir-
cumvent this rule by allocating all their primary route resources
to one subsidiary and all secondary route resources to another
subsidiary. In addition, the second prong is in place to prevent
primary route airline groups from circumventing the first prong
in situations where the groups are not operating in a particular
primary and secondary route pair (i.e., a new market) by first es-

tablishing a secondary route, then the primary route of that pair.
Moreover, our rules restrict not only ATLA but also the Director-
genral of Civil Aviation because the rules apply the same stand-
ard to non-local airline groups when operating routes to and
from HK and prevent any circumvention of the proposed rules.
Besides, since the traffic rights’ designation tends to require bi-
negotiation before any new designation or renewal, the opposing
states will have a chance to be informed on this rule and properly
arrange their designation. Therefore, the Director-General won’t
often reject the operating permit on this ground.

If our proposal is adopted, then, for example, the Cathay
Group or CRK, which already operates on VHHH-ROAH, will
not be allowed to establish new routes connecting VHHH and
any airports in the secondary cities of the Okinawa region (e.g.,
ROIG and RORS). Our proposal does not preclude primary route
airline groups from establishing any new secondary routes in the
future. However, if a primary route airline group wishes to enter
a new market, it has to choose between operating on its primary
route or its secondary route(s). Upon establishing a secondary
route, the group would be precluded from obtaining a license to
operate on the competing primary route.

Regarding the secondary routes that are already controlled by
existing primary route airlines, while we do not suggest that the
government withdraw their designated traffic rights on the sec-
ondary routes, there should also be a new rule to restrict their
ability to expand their dominance in these secondary routes. It
is, therefore, proposed that when existing primary route airlines
apply for increasing their entitlements of traffic rights for second-
ary routes, ATLA should not entertain these requests unless they
are not operating on the competing primary route.

As explained in Part III.C., technological advancements ex-
tend the capability of new entrants and LCCs to operate nonstop
long-haul routes. However, primary route airlines may partner with foreign airlines to circumvent our proposed rules by launching connecting flights (i.e., one-stop flights), instead of direct flights, on secondary routes, raising a barrier for newly established long-haul budgets. Despite the existence of this loophole, our proposed rules give new entrants an advantage over primary route airlines. Passengers will find new entrants’ nonstop direct flights more convenient than the one-stop flights served by primary route airlines. That said, there may still be a need to fill up the abovementioned loophole because it is recognized that codesharing could be anti-competitive. For example, the Australian International Air Services Commission (IASC) reviewed the submission from Qantas to vary the permission of Code Share service with Cathay to forge a deeper codeshare agreement in 2019. However, the IASC rejected this variation on the ground that the free-sale codeshare agreement tended to be anti-competitive.

In light of this, we suggest HK lawmakers prohibit the primary route airlines from selling one-stop flight tickets (i.e., through journeys) on any route between HK and secondary points connecting to/from other primary points.

As seen, the proposed rules only impose restrictions on primary route airline groups but not secondary route airline groups (i.e., less than 50% of their route portfolio are primary routes). The rationale behind this is that if secondary route airline groups are allowed to operate on primary routes, but not vice versa, then this would make launching a secondary route airline group more attractive to new entrants. Starting as a secondary route airline permits new entrants to first accumulate secondary route resources and then extend to primary route resources to achieve a more diversified route portfolio. In contrast, starting as a primary route airline makes it harder to acquire secondary route resources. Inducing new entrants to HK’s market as a secondary route airline is ideal for consumers because this could result in more secondary route choices, which HK lacks, and intensify interroute competition.

\[143\] \textit{Infra Part III.C.}
\[144\] 150 minutes is a threshold for determining the relevant market. When the LCC use the gamechanger A321XLR to operate secondary long-hauls, the 150 minutes below connecting flights served by LCC and its partner will be a concern on the anti-competitive. \textit{Lee, supra note 20, at 347.}
\[145\] Decision [2019], IASC 204, IASC/APP/201902, 18 July 2019 (Austl.).
\[146\] \textit{Id. at 5.43.}
V. CONCLUSION

Since air space liberalization in the last century and the deregulation of airlines, many new entrants have crowded into the market to shake their hometown flag carrier’s dominant position by utilizing interroute competition and the LCC model strategy to serve diverse demands and reduce the average fare price on the market. HK has relaxed its “one route, one airline” policy since the 2000s, and each year’s policy address claims to fulfill the policy goal of strengthening the international air hub of HK since the Basic Law has been in force; however, the aviation market in HK is not becoming more competitive nor is it a land of opportunity for newcomers looking to establish an airline business to challenge incumbents. Rather, the fate of new entrants is either harnessed by dominant players or constrained to a slow and gradual engulfment as they are acquired by dominant players.

Upon reviewing the legal framework of the route license, we conclude that the framework plays an inexcusable role in furthering the lack of route competition and obstructing the global trend of promoting LCCs (particularly independent LCCs) in HK. The route licensing regulation is overwhelmingly and narrowly focused on financial matters when a newly established airline applies for a license, which is unfriendly to new entrants and paves an uneven field for newcomers bidding on the same O&D pairs against stronger hometown rivals, resulting in many route resources being dominated by the large airliners. Moreover, the objection process could be abused by the dominant players to prevent new entrants from challenging incumbents from challenging their long-established positions.

In light of the above, to attract LCCs into HK’s aviation market and intensify interroute competition, we propose that the route license rules should expand the scope of consideration for new operating licenses. A broader framework allows regulators to review each application from a perspective other than financial or business viability and ultimately construct an industry with varied strategies and models to boost the growth of HKIA as an international aviation hub. In addition, interroute competition heavily relies on the proper allocation of scarce route resources, and licensing regulations should add a provision restricting the dominant airlines from enjoying both primary routes and secondary routes to the same primary city to prevent anticompetitive conduct. Moreover, to tackle the potential issues raised by the one-stop flights under 150 minutes that operate under alliance or codeshare modes, we suggest authorizing ATLA to suspend the retail of these flights’ tickets on the online reservation system for large HK airlines when there is a new entrant intending to operate these routes.