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The Maltese Aircraft Registry in Focus: Global Reach and Carbon Footprint

Kurt Sant[1]

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Abstract

Backed by an economic framework offering substantial advantages to operators, Malta's aircraft registry has experienced significant growth in recent years, with 913 aircraft registered by the end of 2024. This registry supports a diverse range of aviation operations, including commercial airlines, private jet charters, and cargo services, amongst others. This discussion paper provides an in-depth analysis of the Maltese aircraft registry's current profile and constructs a comprehensive dataset of all flights completed by Maltese-flagged aircraft during 2024, subject to some limitations. The analysis reveals that in 2024 alone, Maltese-flagged aircraft conducted 804,000 flights, covering a combined distance of 1,020 million kilometres. These operations consumed approximately 4,554 million kilograms of fuel, releasing 14.39 million metric tons of CO_2 into the atmosphere. As the aviation industry grows in size and complexity, adequate support and resources need to be made available to the respective authorities, in order for Malta to remain at the forefront of global aviation competitiveness.

JEL classification: L93, Q53, Q58, R41

Keywords: Aviation Policy, Aviation Growth, Carbon Emissions, Sustainable Aviation, Aircraft Operations, Environmental Impact

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Executive Summary

This Discussion Paper explores the significant growth and global relevance of Malta's aircraft registry, examining its current profile, operational reach, and environmental impact. Constructing a detailed dataset of flights completed by Maltese-flagged aircraft in 2024, this analysis identifies the key drivers behind the registry's success and its extensive global operations. The findings underscore Malta's pivotal role in the global aviation sector.

Malta's aircraft registry has experienced remarkable growth, with 913 aircraft registered by the end of 2024. This growth is underpinned by a progressive economic framework offering strategic advantages to operators. Malta's geographic location, as a politically stable EU member state in the Mediterranean, provides connectivity to major markets in Europe, the Middle East, and Africa. The registry benefits from EU aviation standards, granting unrestricted access to the European Single Aviation Market, and offers fiscal incentives such as competitive tax rates and reduced VAT on aircraft leasing. The streamlined registration process, a multilingual workforce, and modern aviation infrastructure further enhance Malta's appeal. These factors support diverse operators, including low-cost carriers, private jet charters, and cargo services, amongst others.

In 2024, almost 804,000 flights were conducted, covering a combined distance of 1,020 million kilometres and serving over 1,500 airports in more than 170 countries. This meant that in 2024, Maltese-flagged aircraft consumed 4,554 million kilograms of fuel, resulting in 14.39 million metric tons of CO_2 emissions. This extensive reach supports a wide variety of business models, ranging from high-frequency operations to premium private jet charters. The registry's ability to cater for such diverse needs highlights its flexibility, providing a platform for operators to expand their networks and optimize their operations.

Looking ahead, sustaining the momentum of Malta's aircraft registry's success will require continued policy support, investment and institutional capacity-building. To remain competitive in a rapidly evolving global aviation landscape, it is essential that both regulatory authorities and industry stakeholders are adequately financed, equipped with the necessary infrastructure, and supported through continued upskilling and knowledge development. One potential avenue, amongst others, could involve reinvesting a portion of government revenues from aviation Emissions Trading System (ETS) payments into aviation-related initiatives — including innovation, training, and environmental improvements. Such strategic support would help ensure the long-term resilience, competitiveness, and sustainability of Malta's aviation sector.

1. Introduction

The relationship between air connectivity and a nation's economic prosperity is largely influenced by four key characteristics, namely geographical location, airport infrastructure, airlines and the regulatory/economic frameworks adopted by nations (Morphet & Bottini, 2014). Over the years, these factors have collectively contributed to establishing Malta as a prominent hub for aviation within its economic landscape (See Sant, 2020 for a detailed discussion). Aviation has long been an integral part of Malta's economy, largely owing to its strategic location at the heart of the Mediterranean which provides connectivity to major markets in Europe, the Middle East, and Africa. Unrestricted access to the European Single Aviation Market fiscal incentives and a streamlined registration process, provide attractive economic and regulatory frameworks to operators. Furthermore, a multilingual workforce and modern aviation infrastructure further enhance Malta's appeal to different operators, including low-cost carriers, private jet charters, and cargo services, amongst others.

This Discussion Paper explores the strong growth and global relevance of Malta's aircraft registry, examining its current profile, operational reach, and environmental impact. In order to do this, I first collect data on all aircraft registered in the Maltese Aircraft Registry. In this part of the study, I also explore the key drivers behind the registry's success as well as provide an overview of the extensive global coverage of the Maltese-flagged fleet. I then combine aircraft registry data with publicly available flight path data to construct a detailed dataset of flights completed by Maltese-flagged aircraft in 2024. This data is then used to compute a comprehensive estimate of carbon emissions by Maltese flagged aircraft. The findings underscore Malta's pivotal role in the aviation sector while emphasizing the importance of addressing the environmental implications of this success.

The Discussion Paper is organised as follows. The next section provides an overview of Malta's Aircraft Registry. I then track flights completed by Maltese-flagged aircraft and explain the global reach of the fleet. Section 4 estimates the carbon emissions of these flights and provides some policy recommendations. The final section summarises and concludes.

2. An Overview of Malta's Aircraft Registry

2.1 The Origins of Malta's Aircraft Registry

Historically, Malta's role as a British colony and the presence of British Military Services provided the island with early exposure to advancements in aviation technology and practices, both within the British Empire and across Europe (Aquilina Spagnol, 2001). Back in the 1920s, increased aviation-related activity in the Mediterranean by British forces likely marked the early stages of civil aviation in Malta. During this period, British, Australian and South African aviators embarked on long journeys in small, fragile biplanes to distant destinations. Given the technological limitations of early aircraft, multiple stopovers were essential for such flights. Malta's central location naturally positioned it as a key waypoint for these early air routes (Attard, 2000). This strategic advantage allowed the island to naturally develop into an aviation hub. As a result, Malta's aviation activities aligned with international developments in civilian air travel, keeping pace with advancements abroad without delay.

In the post-war era, Malta became a central transit point for Britain's air services connecting to destinations in Africa, the Middle East, India, and Australia. This role was facilitated by the emergence of numerous airlines in the UK, many of which operating from re-purposed wartime airfields (Aquilina Spagnol, 2001). Additionally, British colonies established national airlines, including countries such as Cyprus, Iraq, Syria, Lebanon and Hong Kong. As a fellow British colony, Malta was perfectly positioned to serve as a central hub for flights linking these regions. In fact, by the late 1940s, this strategic importance was evident, with the largest British airline at the time operating as many as 30 to 40 flights per week through Luqa Airport, either as transit stops or overnight layovers (Zammit, 2000).

With innovations in the aeroplane manufacturing industry and more powerful engines, the need for Malta as a stopover destination began to diminish. However, this period marked the emergence of significant local developments in the aviation sector. Several Maltese companies initiated scheduled flights from Malta to destinations within the UK, as well as several chartered flights to Tunis, Tripoli, Rome, and Catania. Initially, these companies operated with leased aircraft from foreign airlines. These aircraft were registered in Britain, thus carrying the G-nationality mark, since Malta lacked the facilities to register foreign-leased aircraft at the time (Zammit, 2000).

The 1960s marked a transformative period in the history of Maltese civil aviation, driven by Malta's attainment of independence in 1964. This milestone granted Malta the status of a sovereign state, giving it full control over both its internal and external affairs. Until then, Malta had authority only over its internal matters, while civil aviation, classified as an external affair, remained regulated by British legislation (Rutter Giappone, 2010). Independence, however, transferred these responsibilities to Malta, allowing the country to establish its own civil aviation framework.

This new autonomy aligned with a broader shift in Malta's economic priorities, as the nation began transitioning away from dependence on Britain towards a more self-sufficient economy rooted in industry, tourism and services. These changes fuelled the ambition to establish national airlines, leading to the formation of Malta Metropolitan Airlines in 1963. The airline's aircraft became the only aircraft to bear the colonial registration prefix assigned to Malta as a British colony. Another significant development occurred in 1968, when Malta adopted its independent nationality and registration prefix, "9H." (Luqa Aviation Yearbook, 1985). The first aircraft to carry this new prefix was registered as 9H-AAA (see Figure 1), symbolizing a new chapter in Maltese aviation. Notably, the "9H" prefix remains in use to this day, serving as a distinctive identifier for aircraft registered under the Maltese flag.

Figure 1: The first three aircraft registered on the Maltese 9H register – '9H-AAA' Cessna 172, '9H-AAB' BN Islander, and '9H-AAC' Cherokee

Source: Mangion (1970)

Subsequently, significant legislative and regulatory developments were introduced to support the growing aviation sector. The Civil Aviation Act of 1972 laid the foundation for the Air Navigation Order of 1990, which provided comprehensive guidelines for aircraft registration (Rutter Giappone, 2010). This order was then superseded by the introduction of the Aircraft Registration Act (Cap. 503 of the Laws of Malta) in 2010. This legislation governs aircraft registration, leasing, and operational matters. A key feature of the Act was the adoption of the Cape Town Convention and the Aircraft Protocol into Maltese law, creating a more robust fiscal and legal environment for aircraft registration and financing. Malta ratified the Convention on 1 October 2010, and it entered into force on 1 February 2011, making Malta the first EU Member State to accede to this treaty. As a result of this progressive regulatory framework, a range of advantages have positioned Malta as a global leader in the aviation industry.

Being a full member of the European Union further strengthens Malta's position. Aircraft registered in Malta benefit from unrestricted access to the European Single Aviation Market, simplifying cross-border travel and commercial operations. Registration under Malta also provides adherence to EU aviation regulations. These advantages grant operators significant operational flexibility and open doors to a broad range of commercial opportunities within the EU and beyond. Furthermore, as an EU Aviation Safety Agency (EASA)-certified state with an FAA Category 1 rating, Malta upholds stringent safety and operational standards.

Other significant advantages relate to Malta's fiscal incentives. The country offers a competitive corporate tax regime, a full imputation tax system, and reduced VAT rates on aircraft leasing arrangements, which can significantly minimize tax liabilities. Additionally, the absence of inheritance tax on aircraft makes Malta particularly attractive for individual private jet registration, with no cost incurred for transferring private aircraft to heirs.

The ease and efficiency of the registration process is another compelling advantage. Malta offers a straightforward and cost-effective aircraft registration process, characterized by clear timeliness. Furthermore, Malta's skilled and multilingual workforce is an essential asset, with English as an official language ensuring seamless communication and operations.

The island's modern aviation infrastructure includes a well-equipped international airport. The presence of certified Maintenance, Repair, and Overhaul (MRO) providers ensures high-quality support services for aircraft maintenance and repairs, adding convenience and operational efficiency for aircraft owners. Malta also offers a wealth of professional services tailored to the aviation industry, including aviation lawyers, tax advisors, financial institutions, and MRO organizations. These resources create a robust environment that supports the diverse needs of aircraft owners and operators.

In this light, Malta's economic framework, underpinned by a robust regulatory framework, a modern infrastructure and a strategic geographical location, have contributed to make Malta a premier destination for aircraft registration, offering a stable, efficient, and business-friendly environment for global operators.

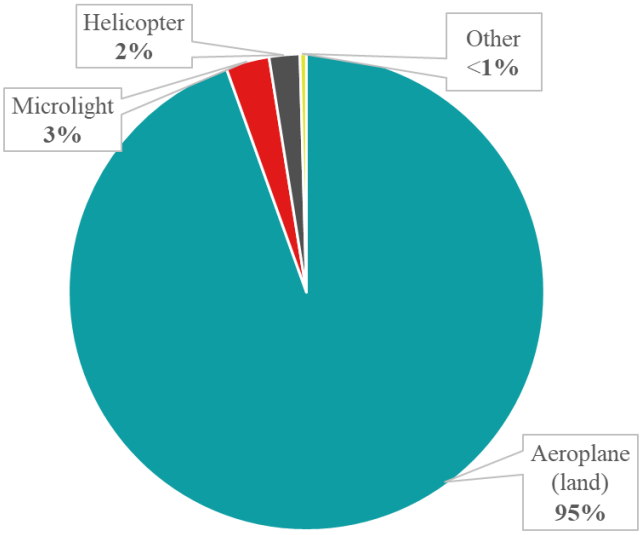
2.2 The Present-Day Maltese Aircraft Registry

Amid significant improvements in Malta's aviation economic framework and the numerous advantages it offers, the Maltese aircraft registry has witnessed remarkable growth in recent years. Back in 2000, 26 aircraft were registered on the Maltese registry (Aquilina Spagnol, 2001). By the end of 2021, the registry included 519 aircraft. This number rose to 691 by the end of 2022, followed by a substantial increase in 2023, with over 170 new registrations bringing the total to 863 aircraft (Parliamentary Questions, 2024). The upward trend continued into 2024, reaching 913 registered aircraft by November (Transport Malta, 2024)[2].

Of the 913 registered aircraft, the vast majority are land aeroplanes, accounting for 863 (95%) registrations (see Figure 2). Microlight aircraft – small, lightweight aircraft primarily used for recreational or sport flying – represent the second largest category on the registry, with 27 (3%) registrations. Finally, the registry includes 19 (2%) helicopters and 4 aircraft (<1%) classified as "Other," a category that includes amphibian and sea planes, among others.

[2] Based on the latest update of the Maltese aircraft registry at the time of writing. The registry is frequently updated and can be found on: https://www.transport.gov.mt/aviation/aircraft-flight-standards/registration-of-aircraft-2663

Figure 2: The Maltese Aircraft Registry by Type of Aircraft

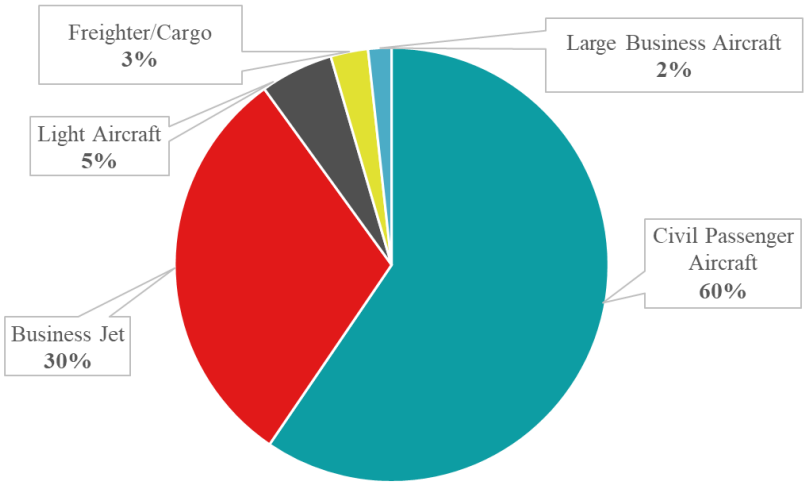


Note: Figure illustrates types of aircraft as a percentage of total aircraft on the Maltese aircraft registry

Source: Transport Malta (2024)

Focusing on the 'land' category, 513 aircraft (60% of all land aeroplanes) are Civil Passenger Aircraft, designed and operated primarily for the transportation of passengers on commercial flights (see Figure 3). Business Jets account for 263 aircraft (30%), catering to small groups for business or personal travel, offering privacy and flexibility. Then, 47 aircraft (5%) are Light Aircraft, typically used for private aviation, flight training, air taxi services, and recreational flying. Freighter or Cargo planes – specialized aircraft for transporting goods – total 24 aircraft (3%). Finally, 15 aircraft (2%) are Large Business Aircraft, which are converted commercial airliners for VIP or luxury use. These aircraft often include high-end amenities such as bedrooms, lounges, conference areas, and entertainment systems.

Figure 3: Composition by type of Land Aircraft

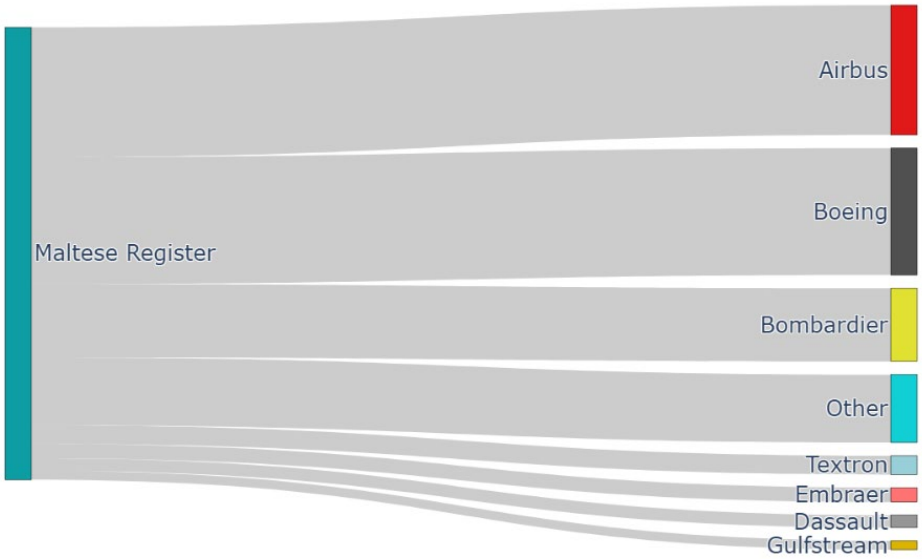


Note: Figure illustrates types of land aircraft as a percentage of total land aircraft on the Maltese aircraft registry

Source: Author's Calculations

The registry features aircraft from no less than 50 manufacturers. However, three manufacturers dominate the registry with a combined total of 666 aircraft. Leading the list is Airbus, a European company headquartered in France and representing a collaboration of several European nations, with 262 registered aircraft (see Figure 4). American aerospace company Boeing has 256 aircraft registered in Malta, followed by Bombardier, a Canadian maker renowned for its business jets which contribute148 aircraft to the registry. A full list of manufacturers can be found in Annex 1.

Figure 4: The Maltese Aircraft Registry by aircraft manufacturer

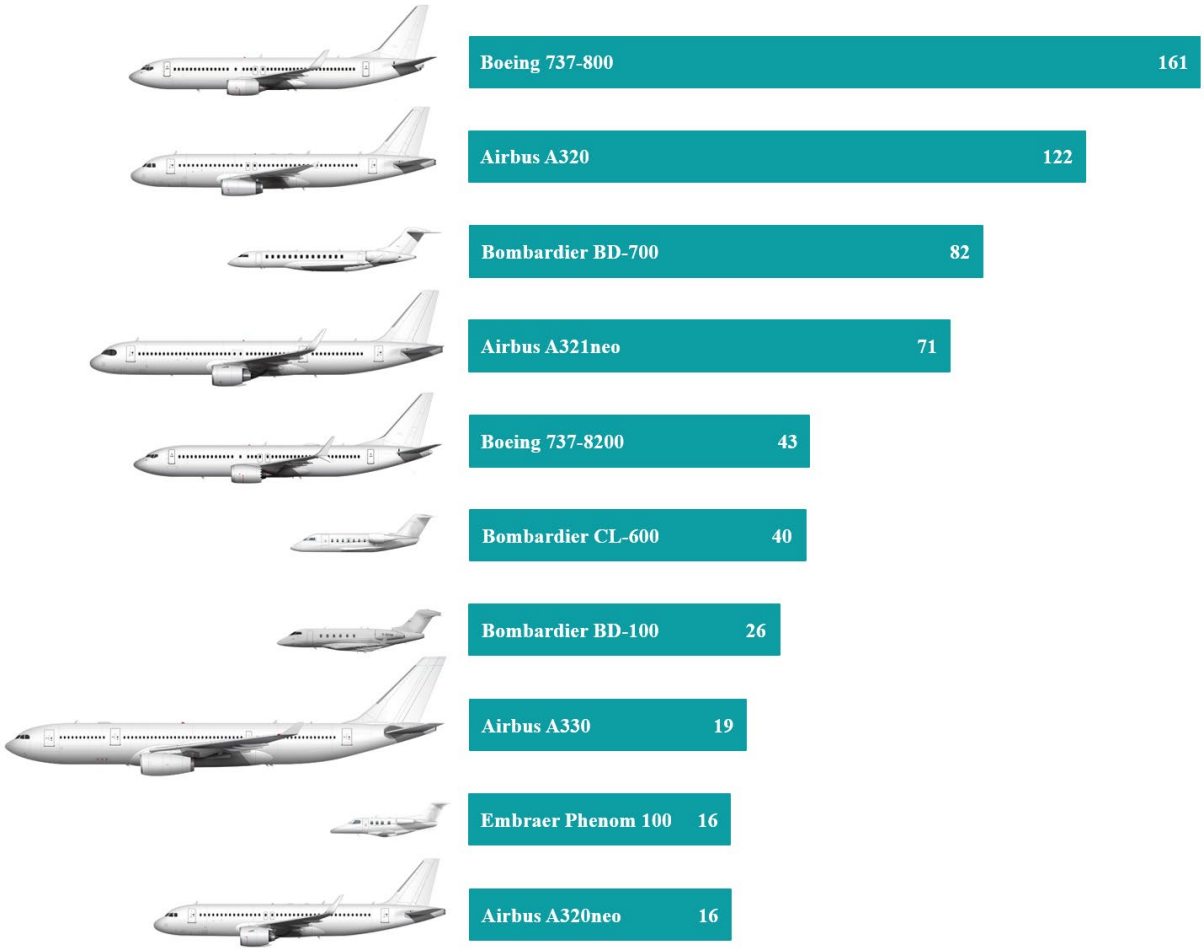


Note: Figure shows the composition of the Maltese Aircraft Registry by aircraft make

Source: Author's Calculations

The registry also boasts over 125 different aircraft models. As shown in Figure 5, the ten most popular aircraft registered in Malta comprise a mix of six Civil Passenger Aircraft and four Business Jets. The two most popular models are Civil Passenger Aircraft: the Boeing 737-800, with 161 aircraft on the register, and the Airbus A320, with 122. These models are widely used narrow-body aircraft celebrated for their reliability and fuel efficiency on short- to medium-haul routes. Other popular Civil Passenger Aircraft include the Airbus A321neo, Boeing 737-8200, Airbus A330, and Airbus A320neo (see Figure 5). Meanwhile, the Bombardier BD-700, a long-range business jet designed for luxurious intercontinental travel, is the most popular Business Jet. With 82 aircraft registered, it ranks third overall in terms of aircraft listed on the Maltese registry. The Bombardier CL-600 and BD-100 Business Jets are also popular Business Jets, joined by the Embraer Phenom 100. A full list of aircraft models featured on Malta's registry can be found in Annex 2.

Figure 5: Top 10 Aircraft Models on the Maltese Aircraft Registry



Note: Figure shows count of the top ten aircraft models on the Maltese aircraft registry

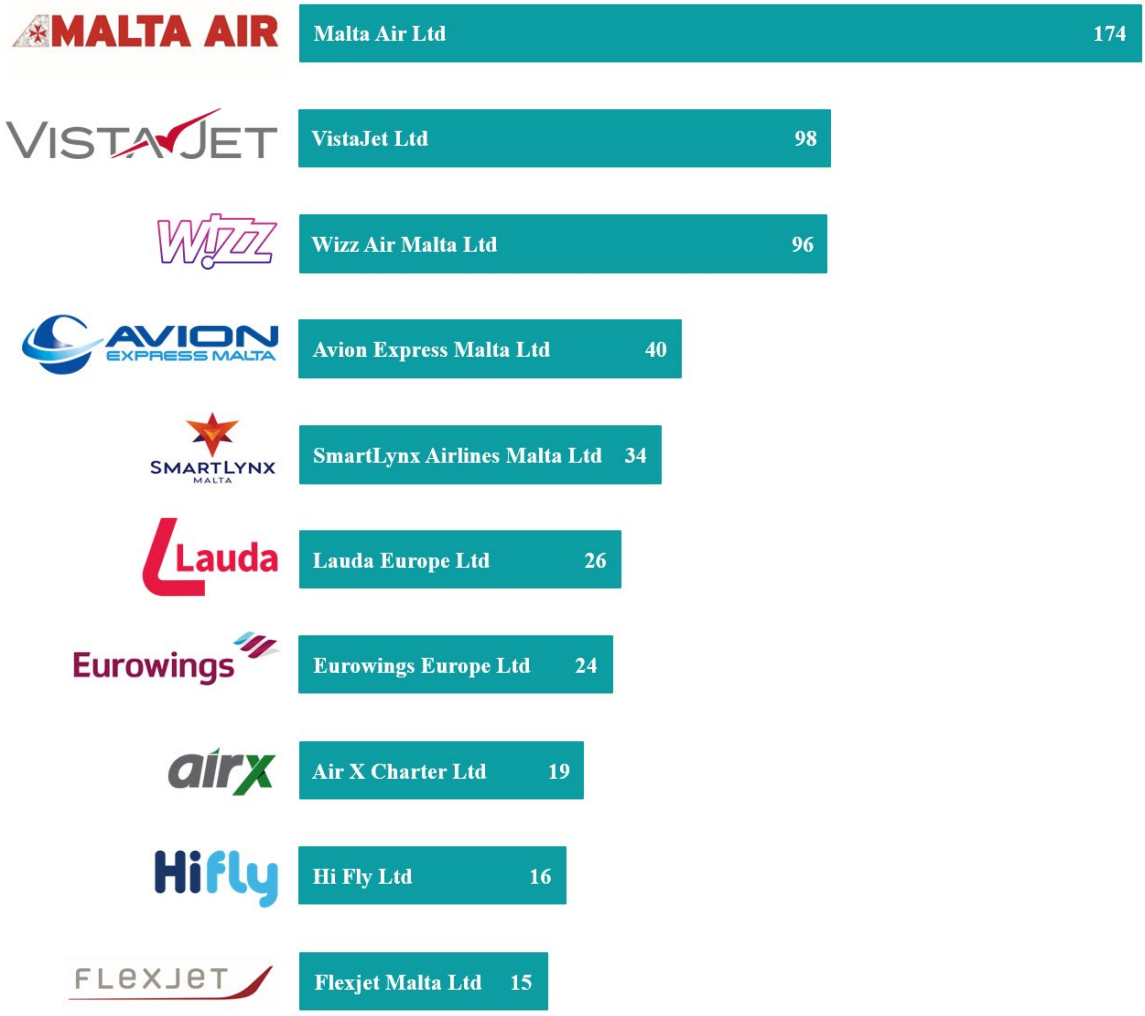
Source: Author's Calculations

Figure 6 shows the largest operators according to the number of aircraft on the Maltese registry. Malta Air Limited, a subsidiary of Ryanair Holdings, dominates the registry with 174 aircraft. Ryanair's influence on the Maltese registry is further underscored by the 26 aircraft registered under Lauda Europe Limited, another subsidiary of Ryanair Holdings, and on its own the 6th largest operator on the Maltese register. Therefore, Ryanair Holdings has a combined 200 aircraft registered in Malta, meaning that over a third of Ryanair's total fleet now operates under the Maltese flag.

Two other companies offering Scheduled Flight Services feature prominently in the top 10 largest operators on the registry. Wizz Air Malta, subsidiary of Hungarian low-cost carrier Wizz Air, has 96 Civil Passenger Aircraft registered in Malta, approaching close to half of the group's total fleet. Similarly, Eurowings Europe, part of Lufthansa Group, ranks amongst top operators with 24 aircraft. This means that over a fourth of Eurowings' total fleet now operate under the Maltese flag.

Private Jet charter operators also hold a strong presence in terms of largest operators on the registry. These include VistaJet Limited, AirX Charter Limited and Flexjet Malta Limited. Amongst these, VistaJet Limited stands out as the second largest operator with 98 aircraft registered in Malta. Completing the list are operators specializing in Chartered Flights, Wet-Lease solutions, and ACMI (Aircraft, Crew, Maintenance, and Insurance) services, including Avion Express Malta Limited, SmartLynx Malta Limited, and HiFly Limited.

Figure 6: Top 10 Operators on the Maltese Aircraft Registry



Note: Figure shows count of registered aircraft for the largest ten operators on the Maltese aircraft registry

Source: Author's Calculations

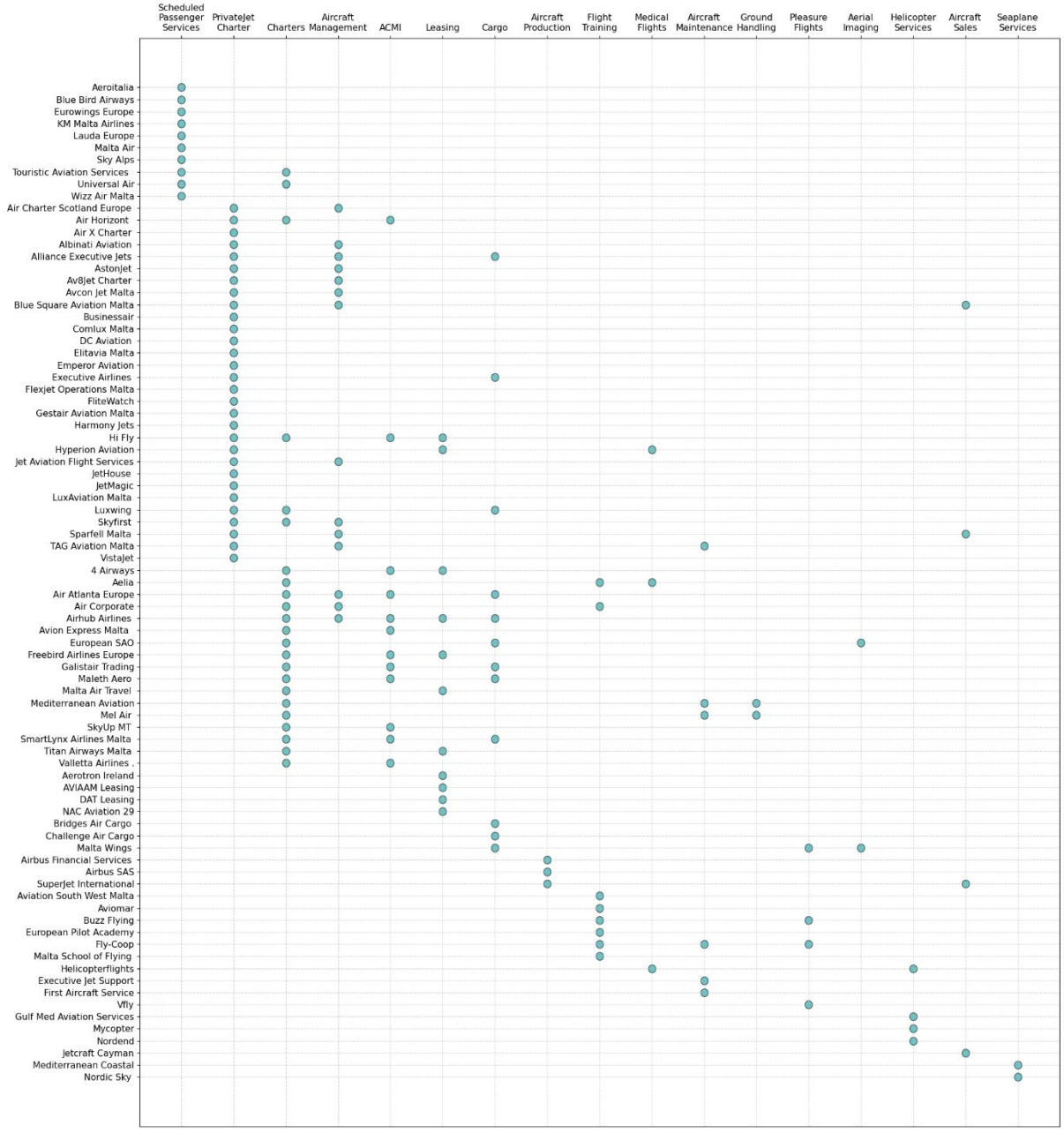
While the ten largest companies analysed above provide a snapshot of the key operators on the Maltese registry, they represent merely a fraction of the total number of aviation companies utilizing the registry. Excluding private individuals, there are no fewer than 118 companies with aircraft registered in Malta.

Figure 7 plots a comprehensive overview of select operators and the range of services they offer. This graphic clearly illustrates the diversity of operators, underscoring the versatility and broad appeal of the Maltese registry across a wide array of aviation services. Companies offering private jet chartering services dominate the registry, with 30 operators specializing in this segment. These companies often provide additional services, such as Aircraft Management solutions. Similarly, 23 operators offer chartered flights for civil aviation, with many of these companies also engaging in complementary services such as ACMI solutions, leasing, and cargo operations. Scheduled passenger services account for 10 companies on the registry, focusing primarily on providing regular flights for the general public. However, some of these companies also operate chartered flights.

The remaining companies provide a wide array of specialized services. These include Aircraft Production, Flight Training, Medical Flights, Aircraft Maintenance, Ground Handling Services, Pleasure Flights, Aerial Imaging, Helicopter Services, Aircraft Sales, and Seaplane Services. This diversity underscores the broad appeal of the Maltese registry to companies across the aviation industry.

The Maltese aircraft registry has seen an influx of both established and start-up operators who have chosen to base their operations in Malta or use the registry as part of their global footprint. Beyond the operators listed on the Maltese registry, Malta's aviation economic cluster is even more expansive and diverse. It includes 5 Approved Cabin Crew Training Organisations, 11 Approved Flight Training Organisations, 18 Maintenance Organisations, and 7 Maintenance Training and Examination Organisations. The growing presence of high-quality operators and ancillary service providers has significantly contributed to the overall quality of the aviation environment in Malta. The Maltese registry's appeal to both large-scale international operators and specialized aviation providers reflects its ability to support a wide range of aviation activities while adhering to the highest standards of safety, efficiency, and regulatory compliance.

Figure 7: Operators on the Maltese Aircraft Registry and services offered



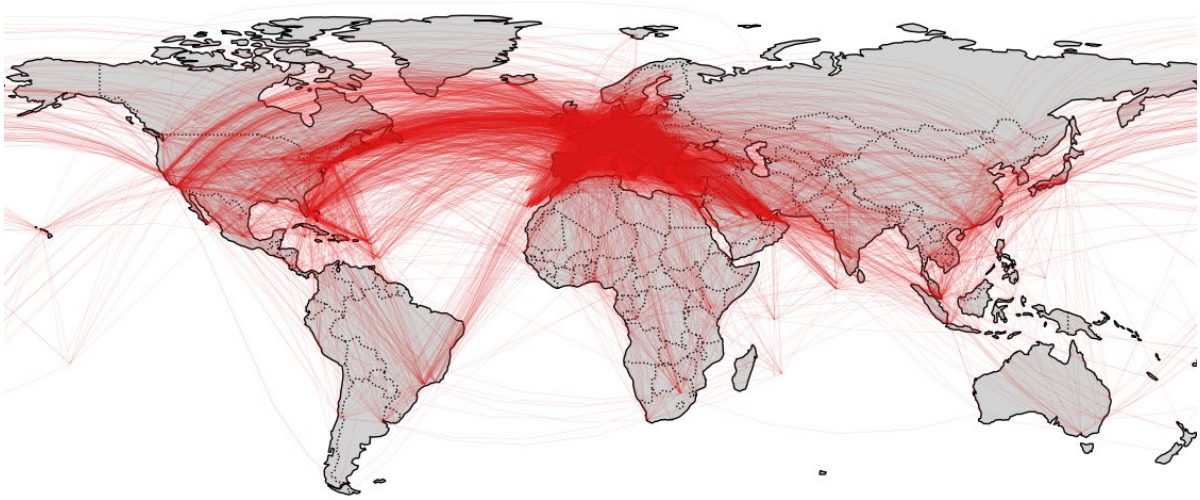
Note: Vertical Axis provides a list of operators. Horizontal Axis provides several services offered by registered operators. Teal circles indicate that respective operators provide such services.

Source: Author's Calculations

3. The Global Reach of Maltese-Flagged Aircraft

Having outlined the considerable growth in aircraft registrations in Malta and the diversity in the type of aircraft registered and operators found in the Maltese aircraft registry, the next section focuses on the operational trends of Maltese-flagged aircraft during 2024, analysing their flight paths and usage. By combining the Aircraft Registry data with information gleaned from public online flight tracking platforms, I create a comprehensive dataset capturing 803,994 distinct flights (see Figure 8) operated by Maltese-flagged aircraft. For practicality, the dataset excludes flights by helicopters, microlight aircraft, and light aircraft, as these are primarily used for flight training, pleasure, or recreational purposes. This analysis presents a novel data source on flight patterns and trends for aircraft on the Maltese registry, offering policymakers valuable insights into the registry's function and the varied ways operators use it to provide different services and operations.

Figure 8: 2024 Flight Paths of Maltese-flagged aircraft.



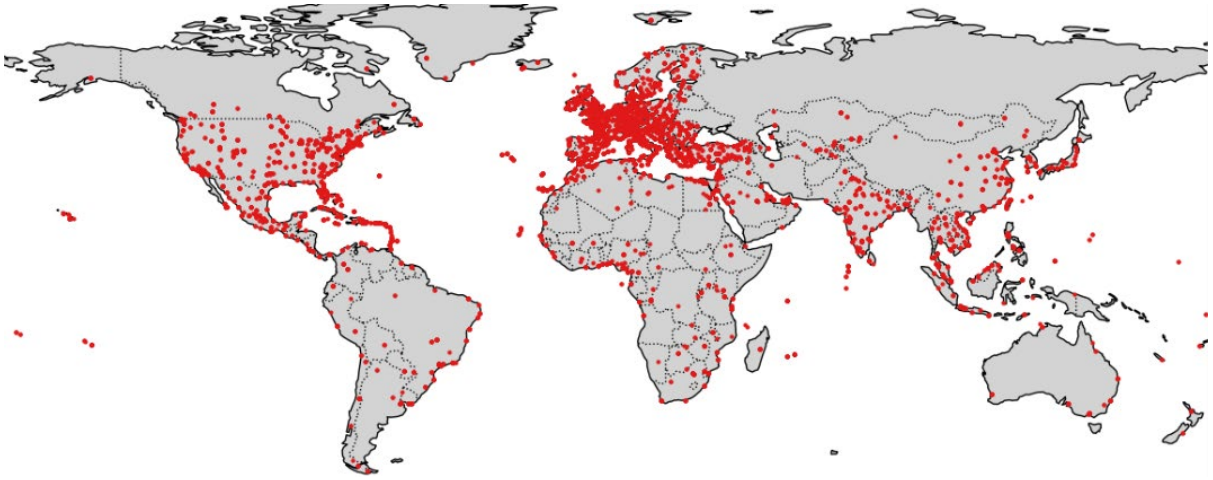
Note: Figure shows flights operated by all Maltese-flagged aircraft in 2024. Routes are point-to-point, not actual GPS paths.

Source: Author's Calculations

The majority of flights – 648,972 – in total were intra-European, meaning they originated and concluded in Europe. Additionally, 40,546 flights were intra-North American flights, while 35,511 flights connected Asia and Europe, and 28,654 were intra-Asia. Although most flights were concentrated within Europe, the global reach of Maltese-registered aircraft in 2024 was extensive. In fact, aircraft bearing the Maltese flag operated to and from 1,530 airports (see Figure 9) across more than 170 United Nations member countries and 28 non-sovereign territories or special regions. Remarkably, only 25 countries worldwide did not see the arrival or departure of a Maltese-flagged aircraft (see Figure 10).

Of these 25 countries, 10 were inaccessible due to war, political instability, or sanctions, including Belarus, Russia, and Ukraine in Europe, as well as Afghanistan, Niger, North Korea, Somalia, Sudan, Syria, and Yemen. Another five countries—Andorra, Liechtenstein, Monaco, San Marino, and Vatican City—lack airports altogether, making access by aircraft impossible (red markers, Figure 10). The remaining 10 countries, primarily small island states or geographically remote nations including: Eritrea, Kiribati, Lesotho, Liberia, Micronesia, Nauru, Papua New Guinea, Solomon Islands, Tonga, and Vanuatu, were not reached by Maltese-flagged aircraft in 2024.

Figure 9: Airports served by Maltese-flagged aircraft in 2024



Note: Points on figure shows airports reached by aircraft registered on the Maltese aircraft register.

Source: Author's Calculations

Figure 10: Countries not served by Maltese-flagged aircraft in 2024

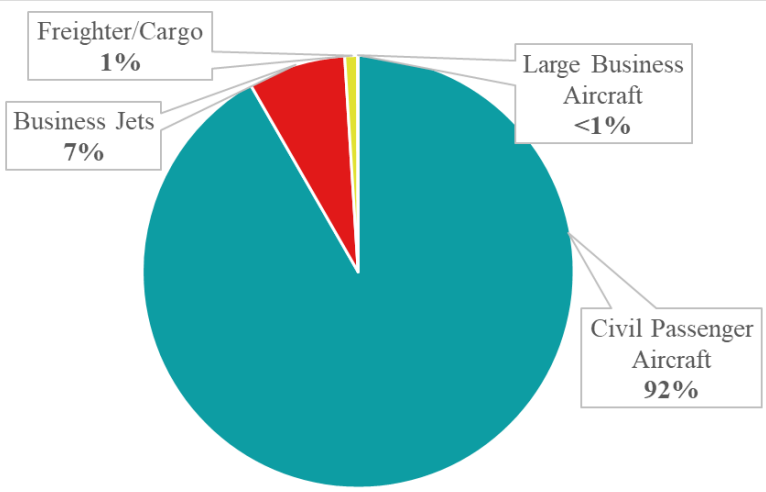
Note: Figure shows countries not served by Maltese-flagged aircraft during 2024. Red points illustrate countries not reached since such countries do not have an airport (Andorra, San Marino, Vatican City, Liechtenstein, Monaco)

Source: Author's Calculations

Regarding the type of aircraft, 737,080 flights (92%) were conducted by civil passenger aircraft (see Figure 11), 58,920 flights (7%) by business jets, 7,674 flights (1%) by freight or cargo aircraft, and just 310 flights (<1%) by large business aircraft. These operations were carried out by 58 different Maltese-registered companies, which in turn were utilized, leased, or chartered by more than 180 entities worldwide over the course of the year. Of these, Ryanair, under the Malta Air and Lauda Air names, operated 50% of all flights by Maltese-flagged aircraft in 2024 (Figure 12). Other significant contributors include Wizz Air Malta, Avion Express Malta, and VistaJet, followed by

Eurowings Europe and SmartLynx Airlines. Interestingly, flights by KM Malta Airlines3 – the flag carrier of the Maltese Islands – represented just 1% of all Maltese-flagged flights. A full review of Maltese-flagged flights by operator in 2024 can be found in Annex 3.

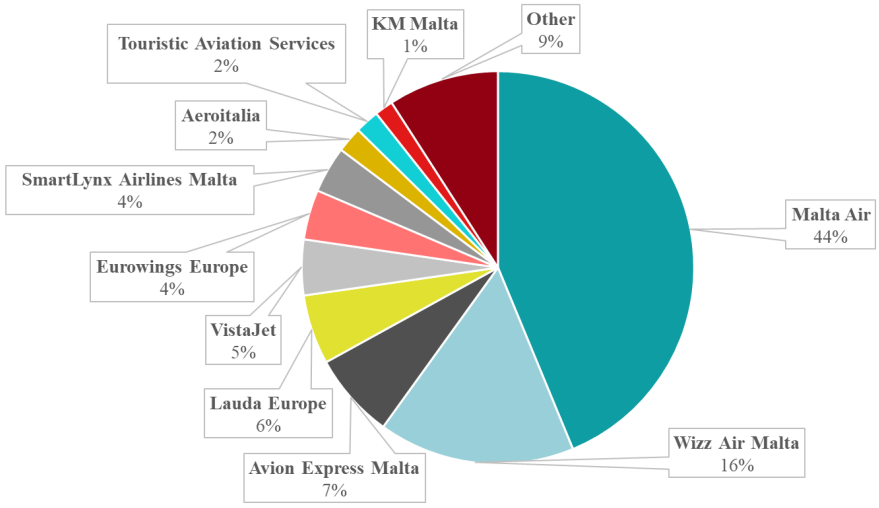
Figure 11: 2024 Flights of Maltese-flagged aircraft by Aircraft Type



Note: Figure shows percentage of flights by type of total flights performed by aircraft on the Maltese aircraft registry.

Source: Author's Calculations

Figure 12: 2024 Flights of Maltese-flagged aircraft by Operator



Note: Figure shows percentage of flights by operator of total flights performed by aircraft on the Maltese aircraft registry

Source: Author's Calculations

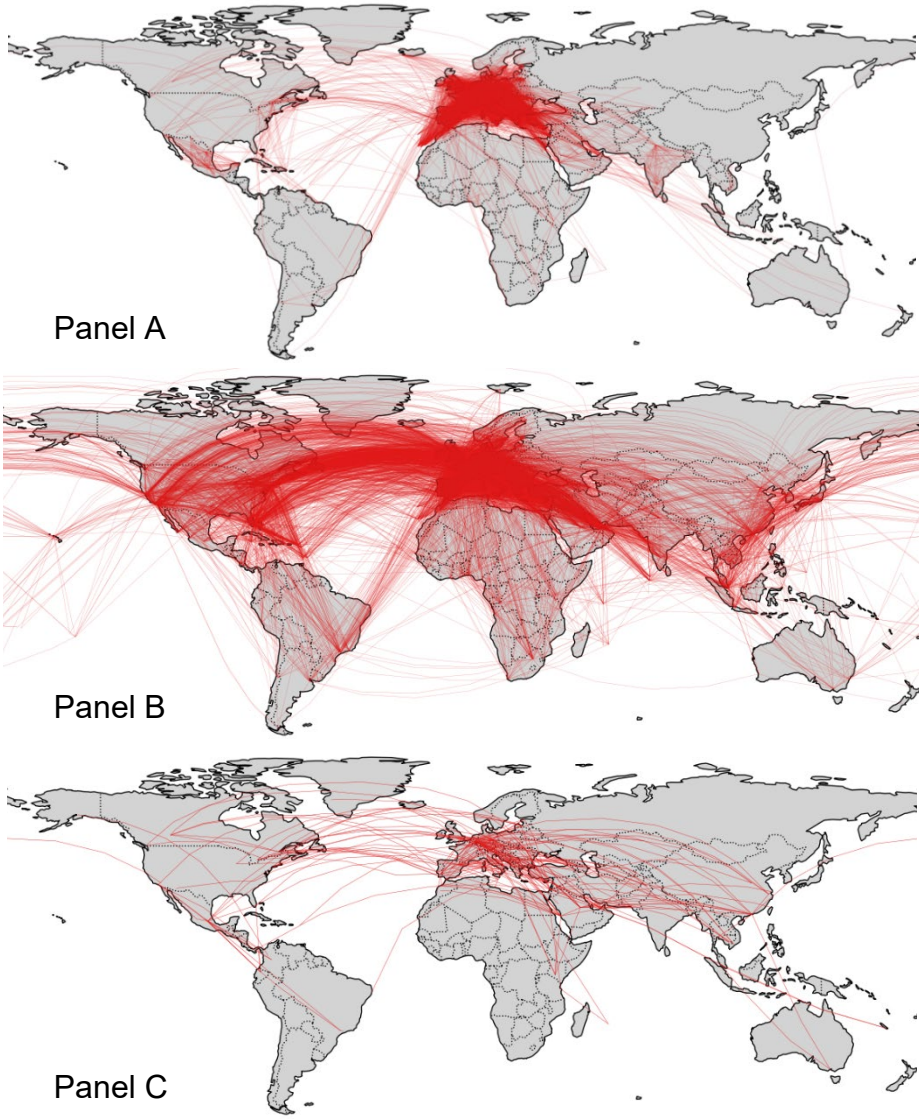
Analysing the flight patterns of various aircraft types reveals interesting differences in how Maltese-registered aircraft are utilized. 84% of Civil Passenger Aircraft flights are within Europe. However, there is a noticeable presence of transatlantic flights to North America, South America and the Caribbean, along with connections to the Middle East, as well as significant activity within Mexico and India (Figure 13, Panel A).

Business Jets, while also predominantly serving the European market, exhibit increased transatlantic activity, substantial intra-North American operations, and notable activity in Asia, particularly in Japan, China, and Singapore (Figure 13, Panel B). Cargo operations follow a similar

[3] Includes flights operated by Air Malta between January and March 2024.

pattern, with the majority of flights occurring within Europe. Nonetheless, a significant proportion of Asia-Europe and intra-Asia flights highlights their global reach (Figure 13, Panel C).

Figure 13: 2024 Flight Paths of Maltese-flagged aircraft by Aircraft Type



Note: Panel A shows all 2024 flights by civil passenger aircraft registered in Malta. Panel B shows all 2024 flights by private jets registered in Malta. Panel C shows all 2024 flights by Cargo aircraft registered in Malta.

Source: Author's Calculations

Figures 14 to 18 examine flight paths of the most utilized Maltese-registered aircraft by selected operators in 2024, offering insights into how the registry supports a variety of business models and operational strategies. Note that for some operators, analysing a single most-utilized aircraft may not provide a comprehensive representation of their operations. This is particularly true for companies that offer multiple services, such as chartered civil passenger flights, chartered business flights, and cargo flights. To address this limitation, the analysis focuses on operators with a clear and distinct business focus, ensuring the figures effectively illustrate their primary operations.

Figure 14 focuses on airlines categorized as Scheduled Passenger Airlines, revealing distinct patterns among operators. Low-cost carriers such as Malta Air (Panel A) and Wizz Air Malta (Panel B) operate across extensive networks with no centralized hubs. In contrast, airlines like KM Malta Airlines (Panel C) and Blue Bird Airways (Panel E) focus their operations around specific hubs,

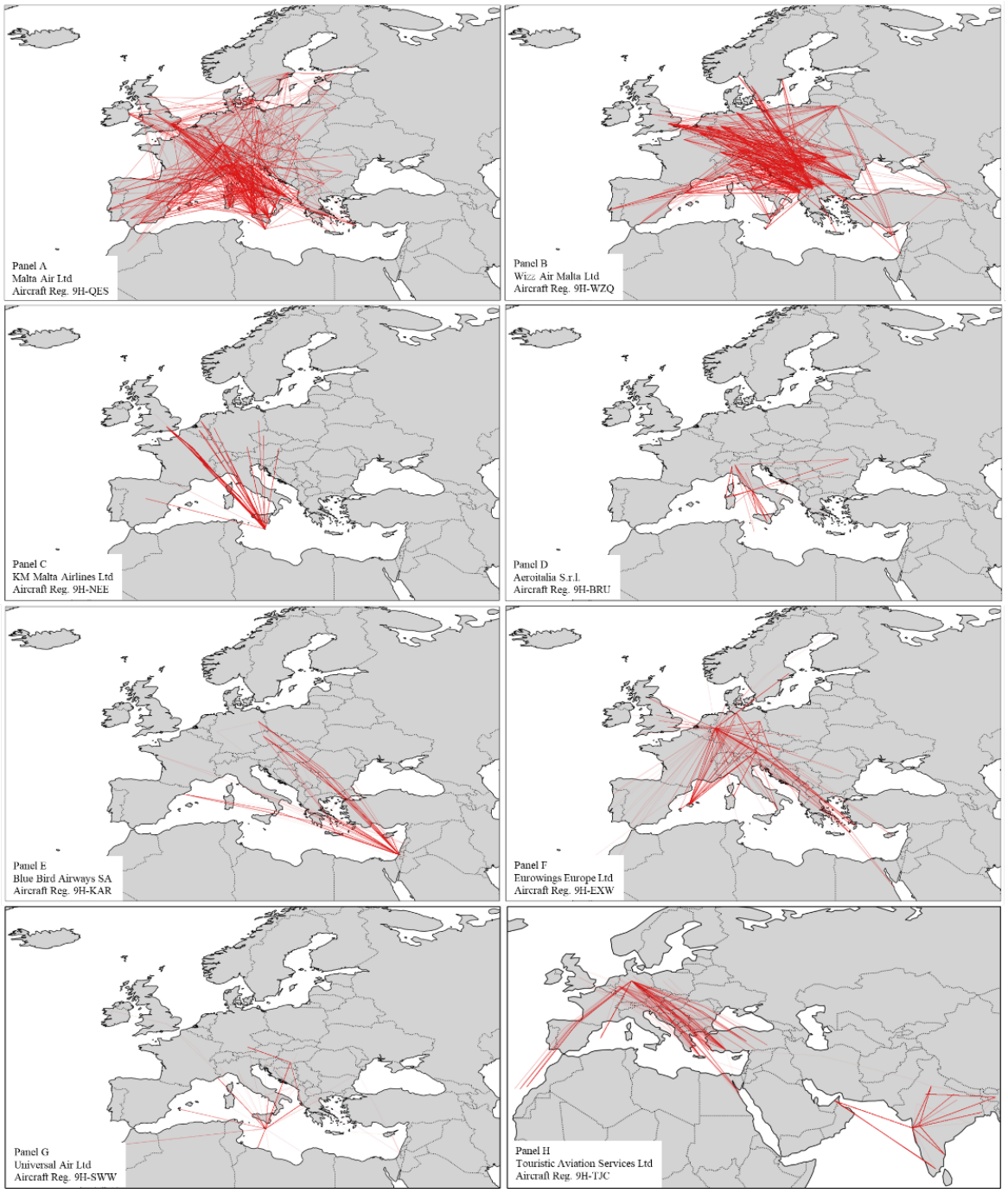
namely Malta and Tel Aviv, respectively. Aeroitalia primarily conducts intra-Italy flights (Panel D), while Eurowings serves diverse destinations, predominantly from its base in Düsseldorf (Panel F).

Panels G and H depict flight paths for Scheduled Passenger Airlines that also engage in charter operations as part of their business activities. For instance, while Universal Air's map shows its scheduled services from Malta, additional non-scheduled routes are also evident. This is particularly noticeable for Touristic Aviation Services. The aircraft operated under the Corendon Airlines brand across Europe from April to September and under the SpiceJet name within India in the rest of the year.

Figure 15 examines operators specializing in charters, ACMI and lease services, which provide aircraft and essential support to meet specific needs like seasonal demand, extra capacity, or aircraft replacement. This flexibility makes them a key part of the aviation industry. Panel A features Avion Express Malta's 9H-AMP aircraft, which flew for Air Malta in January before being ferried to Mexico in February to operate for VivaAerobus. SmartLynx Malta's 9H-SLI aircraft (Panel B), operated for Air Peace in Nigeria until April 2024, then flew for Turkish carrier AJet from May to July, and later for IndiGo in India from August onwards.

SkyUp, originally a Ukrainian low-cost carrier, adapted to the closure of Ukrainian airspace following Russia's full-scale war on Ukraine by pivoting to wet-lease and charter operations. In May 2023, it launched SkyUp MT in Malta to expand its European presence. Its 9H-SAT aircraft (Panel C) flew for FlyOne from Moldova, Wizz Air from Warsaw, and United Nigeria Airlines by year-end. HiFly's 9H-HFI (Panel D), a long-haul Airbus A330, operated for Kenya Airways early in the year, Air Algérie for French routes, and Royal Air Maroc on Middle Eastern routes from Casablanca. Finally, Valletta Airlines' 9H-NZL (Panel E) was leased to EquAir, flying out of Vilnius, whilst MaltaMedAir, owned by the Government of Malta, operated its 9H-MSA aircraft (Panel F) for Libyan airline Medsky.

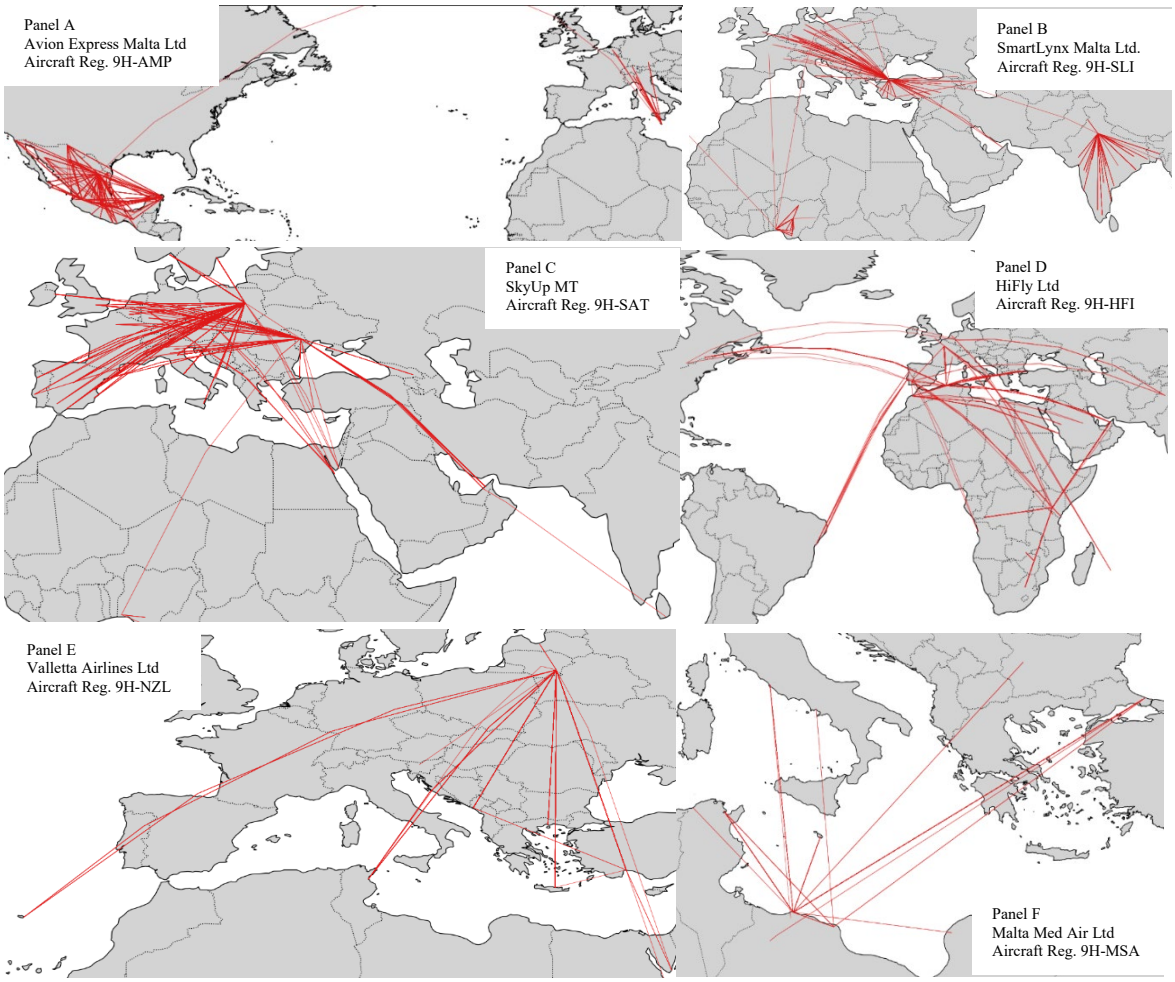
Figure 14: A focus on Scheduled Passenger Flight Operators



Note: Panels A-H shows all 2024 flights of most-flown Maltese-registered civil passenger aircraft by selected operators.

Source: Author's Calculations

Figure 15: A focus on Charter, ACMI & Lease Operators

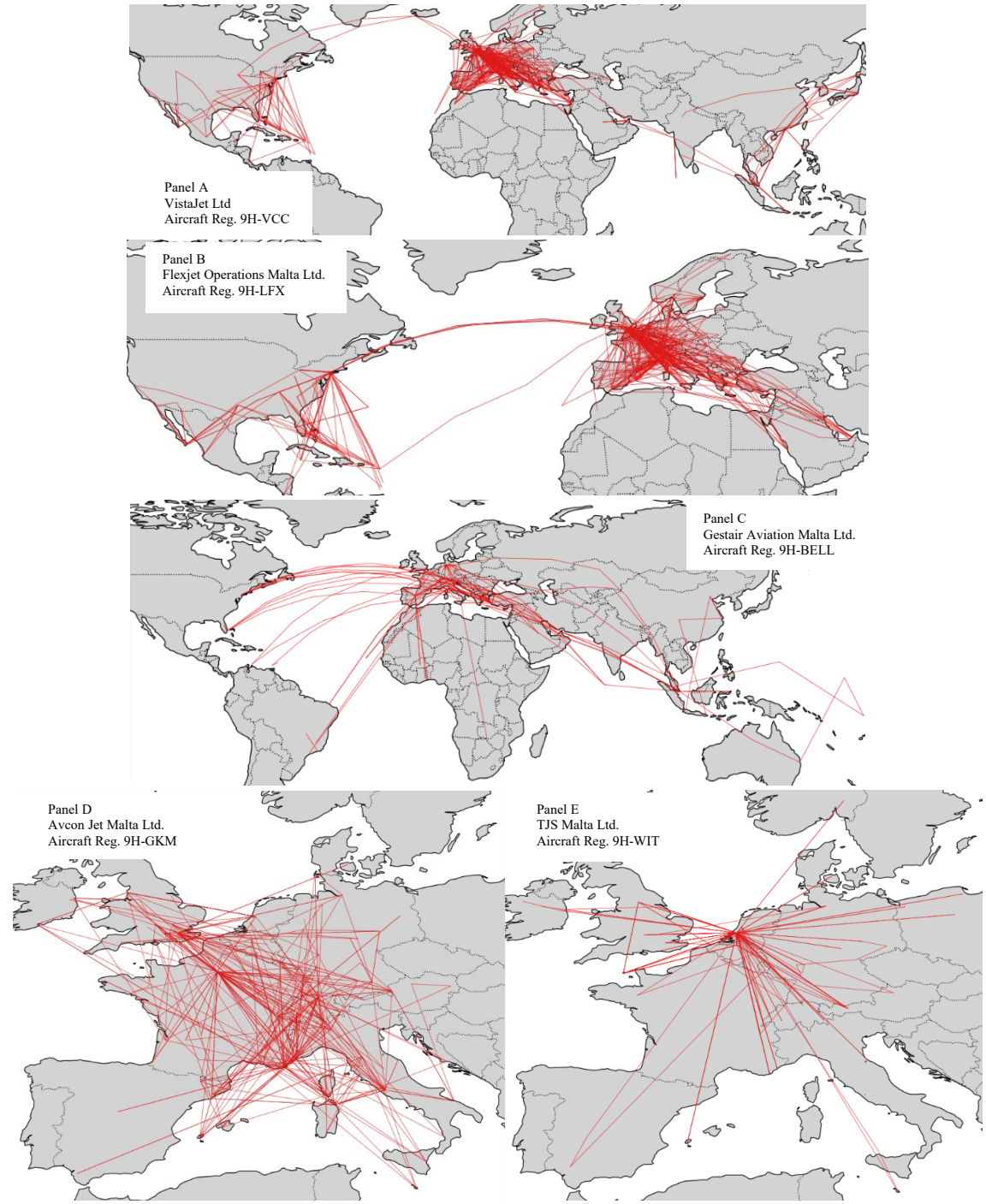


Note: Panels A-F show 2024 flights of most-flown Maltese-registered ACMI/Charter/Lease aircraft by selected operators.

Source: Author's Calculations.

Shifting focus to private charter operators specializing in business jets, significant heterogeneity in operational patterns is evident (Figure 16). For example, VistaJet's 9H-VCC (Panel A) and FlexJet's 9H-LFX (Panel B) primarily served private European routes but also had a notable presence in North America, the Caribbean, and also Asia in the case of VistaJet. In contrast, Gestair's 9H-BELL (Panel C) focused on long-haul routes, connecting Europe to North and South America, Asia, and even Australia and Oceania. Meanwhile, Avcon Jet's 9H-GKM (Panel D) and TJS Malta's 9H-WIT (Panel E) operated exclusively on intra-European flights, with the latter flying out of a base in Rotterdam.

Figure 16: A focus on Business Jet Charter Operators

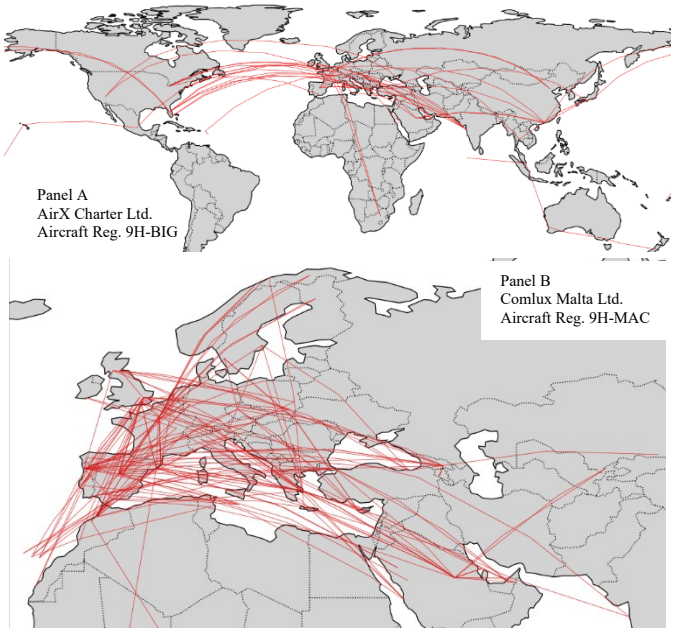


Note: Panels A-E show 2024 flights of most-flown Maltese-registered Business Jet aircraft by selected operators.

Source: Author's Calculations.

Figure 17 illustrates the flight paths of Maltese-flagged aircraft chartered as Large Business Jets. These are higher-capacity, long-range aircraft designed for luxurious long-haul private travel. For example, AirX's 9H-BIG, an Airbus A340 usually capable of seating a maximum of 440 passengers, is retrofitted as a luxury business jet to accommodate just 100 passengers. It features lay-flat seats and a lounge area, amongst other premium design features. Panel A shows that this aircraft was utilized on a variety of long-haul routes, primarily connecting Europe with North America, India and China. In contrast, Comlux Malta's 9H-MAC, a Boeing 737-500 which is also retrofitted for luxury business travel, is better suited for short-haul operations. The routes, as depicted in Panel B, focus on flights across Europe, the Middle East and occasional flights to Asia.

Figure 17: A focus on Large Business Jet Charter Operators

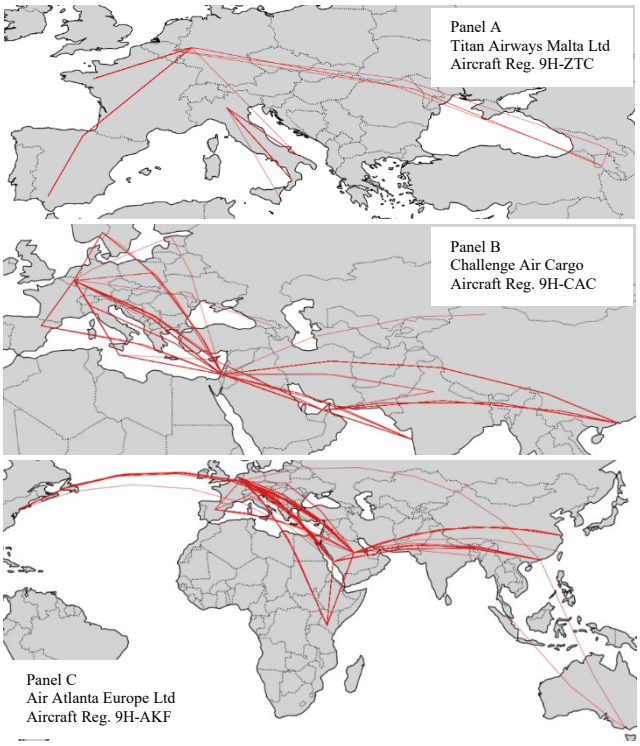


Note: Panels A-E show 2024 flights of most-flown Maltese-registered Large Business Jet aircraft by selected operators.

Source: Author's Calculations.

Finally, Figure 18 provides a detailed overview of cargo operations, highlighting the role of Maltese-registered cargo aircraft in bridging major global economic regions and supporting international trade flows. Panel A focuses on Titan Airways Malta's 9H-ZTC, which operated predominantly within Europe. In contrast, Panel B highlights Challenge Air Cargo's operations. As an Israeli airline, Challenge Air flew its aircraft to connect Tel Aviv with key global markets. Its primary operations included flights to and from Europe, as well as long-haul routes to India and China, reflecting its focus on linking Israel with critical trading partners in Asia and Europe. Panel C depicts Air Atlanta Europe's aircraft which was utilized by Saudia Airlines throughout the year. Operating from Saudi Arabia's main hubs in Jeddah and Riyadh, the aircraft connected the country with several countries across Europe, Africa, China, and even North America.

Figure 18: A focus on Cargo Operators



Note: Panels A-C shows all 2024 flights of most-flown Maltese-registered cargo aircraft by selected operators.

Source: Author's Calculations

The analysis presented in this section highlights the impressive global reach of Maltese-flagged aircraft in 2024. With almost 804,000 flights, the versatility and international relevance of Malta's aviation framework serves as a launchpad for global aviation operations. This global footprint is further emphasized by the diverse range of operations supported by the Maltese aircraft registry.

Today, the Maltese Aircraft Register has evolved into a global platform supporting a wide variety of international operators with vastly different business models. The figures illustrate how Maltese-registered aircraft are utilized for a broad spectrum of purposes, including scheduled passenger services, private charters, cargo operations, and lease agreements. Passenger airlines leverage the registry to operate extensive route networks, connecting regions across Europe, North America, Asia, and beyond. These operations cater to a wide range of business models, from low-cost carriers operating high-frequency routes to airlines focused on hub-and-spoke models. The registry has also become important for the charter and ACMI leasing market, where flexibility is key. Operators use Maltese-registered aircraft to address seasonal demand, provide additional capacity, or support specialized routes, ensuring that airlines around the world can respond to dynamic market needs.

4. Estimating the Carbon Footprint of Maltese-flagged aircraft

While the previous sections highlight how the Maltese aircraft registry plays a wide-reaching role in the global aviation industry, it is equally important to address the environmental costs associated with aviation.

Aviation is a significant and growing source of greenhouse gas emissions, contributing approximately 2.5% of global energy-related CO_2 emissions in 2023, equivalent to over 950 million metric tons of CO_2 (International Energy Agency, 2025). Aircraft rely heavily on fossil fuels to power their operations, emitting not only carbon dioxide (CO_2) but also contrails and nitrogen oxides (NO_x), which amplify warming effects due to their high-altitude release. In Europe alone, aviation emissions

are projected to grow by up to 52% by 2050 under a base scenario, driven by increasing demand for flights (EUROCONTROL, 2024). Despite advances in fuel efficiency and the development of sustainable aviation fuels (SAF), aviation remains one of the most challenging industries to decarbonize, with a target to achieve net-zero emissions by 2050 relying on technological innovation and proactive policy action (IATA, 2021).

Among the various aviation activities, private jets are particularly detrimental to the environment. As shown later in this analysis, these aircraft, emit significantly more CO_2 per passenger per kilometre than commercial flights. Furthermore, private jets are frequently used for short-haul routes that could often be covered by more sustainable alternatives such as rail travel, exacerbating their inefficiency.

However, even within civil passenger aviation, significant variations in environmental impact exist. The age of an aircraft and the technology of its engines and fuel systems play a critical role in determining its efficiency and emissions. Newer aircraft equipped with the latest fuel-efficient engines and lightweight materials consume significantly less fuel per passenger compared to older models, reducing their carbon footprint. Conversely, older planes often have outdated technology, consume more fuel, and emit higher levels of pollutants. For airlines operating fleets with varying aircraft ages, the choice of aircraft on specific routes can have a notable effect on overall emissions.

The adoption of more efficient technology, such as next-generation engines and biofuel integration, has the potential to mitigate aviation's environmental impact. However, the slow turnover of aircraft fleets due to the high cost of new planes means that older, less efficient models often remain in operation for decades, delaying progress in reducing emissions. These factors highlight the importance of not only focusing on the type of aviation activity—private or commercial—but also examining the technology and efficiency of the aircraft being used.

In this section, I delve into the carbon footprint of Maltese-flagged aircraft flights in 2024, examining both the environmental implications of private jet operations and the broader differences within commercial aviation based on fleet age and technology.

4.1 Methodology

The analysis presented here is based on a comprehensive database of flights by Maltese-flagged aircraft, as detailed in the preceding sections. Although the database is constructed on aircraft listed on the Maltese registry by end-2024, it is important to note that registration and de-registration dates during 2024 have been taken into consideration when constructing such database. Despite the detailed analysis, the data used to compute these estimates is subject to limitations. First, in line with the previous section, flights by helicopters, light aircraft, and microlights are excluded from the carbon emission calculations. Nonetheless, these are anticipated to contribute only marginally to overall emissions and are considered negligible. Secondly, the carbon emissions of some particular flights could not be calculated due to GPS disruptions, particularly in areas near Russia's borders during 2024. These disruptions were a result of Russia's hybrid warfare tactics against EU countries, which caused significant interference with GPS data and rendered emissions calculations for certain flights incomplete (BBC, 2024; The Times, 2024; Reuters, 2024). Therefore, the emission calculations in this section are likely to be slightly underestimated due to the exclusion of these missing flights. Moreover, this analysis focuses exclusively on the direct environmental impact of aviation, specifically emissions from flight operations. Indirect emissions from ancillary activities, such as ground transportation, aircraft maintenance, and airport operations, are not included in this estimation.

Using public data on flight paths I estimate the great circle distance of each flight performed by all aircraft included on the Maltese register. For each flight, the distance covered is combined with data on type of aircraft and engine, thus applying a bespoke carbon calculation framework developed specifically for Malta. I then use ICAO Carbon Emissions Calculator methodology (ICAO, 2024) to

estimate the quantity of fuel burned per flight based on aircraft and engine type. To this, I add fuel burned during taxiing at airport. Finally, the amount of fuel burned was converted into CO_2 emissions using a standard conversion factor.

Therefore, this methodology provides a specific value of fuel burned and CO_2 emissions per flight, which can then be aggregated into totals for further analysis. These aggregated figures enable a deeper understanding of the overall carbon footprint and offer valuable insights for policy-making and the development of targeted strategies to mitigate aviation emissions.

Box 1: A Hypothetical Flight from Malta to Rome

To understand the magnitude and nature of differences in emissions across flight operations by aircraft on the Maltese registry, consider a case study of a flight from Malta International Airport to Fiumicino Airport in Rome. The great circle distance between the two airports is 688 kilometres, with a flight time of just over one hour. All results discussed hereunder are summarised in Table 1.

Looking at the carbon footprint of civil passenger flights I use an actual 18-year-old Airbus A320, equipped with two CFMI CFM56 engines. This particular type of aircraft, which was formerly operated by KM Malta Airlines until their gradual replacement in 2024, burns approximately 4,243 kilograms of fuel on this route. This results in 13,408 kilograms of CO_2 emissions. Assuming a seat load factor of 90%, the CO_2 emissions per passenger amount to 82.77 kilograms, with the CO_2 per passenger per kilometre standing at 0.10 kilograms.

Similarly, a 17-year-old Boeing 737-800 operated by Malta Air Limited for Ryanair, also equipped with two CFMI CFM56 engines, burns slightly less fuel at 4,197 kilograms and emits 13,261 kilograms of CO_2. Due to Malta Air's higher seating capacity – primarily achieved by eliminating business-class sections and configuring a more efficient seat layout – the CO_2 emissions per passenger drops to 77.96 kilograms, a 4.8-kilogram reduction compared to KM Malta's previous Airbus A320. Still, the CO_2 per passenger per kilometre is identical across the two aircraft and stands at 0.10 kilograms.

Meanwhile, analysing the same route flown by Universal Air's 16-year-old De Havilland Canada Dash 8-400, equipped with two Pratt & Whitney PW100 turboprop engines, presents an interesting contrast. For the same flight, this aircraft burns significantly less fuel at 1,883 kilograms, emitting 5,950 kilograms of CO_2. At face value, the turboprop aircraft appears more environmentally friendly due to its lower absolute emissions. However, when accounting for seat capacity, the CO_2 emissions per passenger are higher at 84.75 kilograms per person, since the Dash 8-400 is much smaller and carries significantly fewer passengers. In fact, the CO_2 per passenger per kilometre stands at 0.11 kilograms. This example highlights the importance of considering both total emissions and passenger load when evaluating the environmental performance of different aircraft types.

Fleet modernization brings substantial improvements in fuel efficiency and emission reduction. For instance, KM Malta's new Airbus A320neo, powered by two CFMI LEAP engines, burns 721 kilograms less fuel on the same route when compared to its predecessor. This translates to a reduction of 2,279 kilograms of CO_2 emissions, a 17% decrease. The CO_2 emissions per passenger drops to 73.60 kilograms, while the CO_2 per passenger per kilometre drops to 0.09 kilograms. Additionally, the A320neo offers other advantages, such as significantly reduced noise pollution during take-off and landing.

Similarly, Ryanair's two-year-old Boeing 737-MAX, also equipped with two CFMI LEAP engines, achieves a fuel burn reduction of 546 kilograms per flight, emitting 1,724 kilograms less of CO_2 – a

13% reduction compared to the older 737-800. With its higher seat capacity, the CO_2 emissions per passenger further decreases to 65.1 kilograms, whilst the CO_2 per passenger per kilometre drops even further to 0.08 kilograms. This improvement is attributed not only to the reduced emissions of the newer aircraft but also to its ability to accommodate more passengers, spreading the emissions over a larger number of travellers.

Let us now consider the same route operated by VistaJet's Bombardier Challenger 350 equipped with two Honeywell HTF7350 engines. The small, 9-year-old private jet has a maximum capacity of 8 passengers. This flight burns 1,963 kilograms of fuel, emitting 6,202 kilograms of CO_2. At face value, this amount may appear significantly lower than the emissions of a civil passenger aircraft. However, when computed on a per-passenger basis, the CO_2 emissions reach a staggering 861.38 kilograms per passenger, whilst the CO_2 per passenger per kilometre rises to 1.09 kilograms.

This pattern is also observed in large commercial aircraft retrofitted as luxurious business jets. While their higher seat capacity leads to somewhat lower emissions per passenger, the CO_2 per passenger on this case study flight still ranges between 229.57 and 368.36 kilograms, depending on the specific aircraft configuration. Although these figures are an improvement over small private jets, they remain significantly higher than those of civil passenger aircraft.

Table 1: Carbon Footprint of a hypothetical flight from Malta to Rome.

Aircraft	Type	Age (Yrs)	Operator	Fuel Burned (KG)	CO_2 Emitted (KG)	Number of Passengers (assuming 90% Seat Load Factor)	CO_2 per passenger (KG/pass.)	CO_2 per passenger per Kilometre (KG/pass./km)
Airbus A320	Commercial	18	KM Malta	4,243	13,408	162	82.77	0.10
Boeing 737-800	Commercial	17	Malta Air	4,197	13,261	170	77.96	0.10
Airbus A320neo	Commercial	1	KM Malta	3,522	11,129	151	73.60	0.09
Boeing 737-8200	Commercial	2	Malta Air	3,651	11,537	177	65.07	0.08
De Havilland Dash 8	Commercial	16	Universal Air	1,883	5,950	70	84.75	0.11
Bombardier Challenger 350	Business Jet	9	VistaJet	1,963	6,202	7	861.38	1.09
Airbus A340	Large Business Jet	24	Air X Charter	10,491	33,152	90	368.36	0.47
Boeing 737-500	Large Business Jet	34	Comlux Malta	3,662	11,570	50	229.57	0.29

Source: Author's Calculations

This analysis underscores the disproportionate environmental impact of small private business jets, which, despite their lower total emissions, are vastly more polluting on a per-passenger basis compared to larger civil aircraft. This box also highlights the critical importance of optimizing passenger load and advancing fleet modernization to reduce aviation's carbon footprint effectively.

4.2 The Carbon Footprint of Maltese-flagged aircraft in 2024

Using the methodology outlined above, I find that the more than 800,000 flights by Maltese-flagged aircraft in 2024 covered a combined distance of over 1,020 million kilometres. This resulted in the consumption of approximately 4,554 million kilograms of fuel, releasing a total of 14,390 million kilograms (14.39 million metric tons) of CO_2 into the atmosphere (see Table 2).

Breaking this down by aircraft type, Civil Passenger Aircraft were responsible for the majority of emissions, accounting for 13,318 million kilograms. Cargo Aircraft contributed 583 million kilograms, followed by Business Jets with 476 million kilograms, and Large Business Jets with 13.6 million kilograms. However, it is crucial to underscore that these estimates are likely conservative, as discussed in the limitations. The exclusion of certain flights and incomplete data—especially those affected by GPS disruptions—suggests that the actual carbon emissions could be even higher.

Table 2: Carbon Footprint of Maltese-flagged aircraft flights in 2024

Aircraft Type	Fuel Burned (KG)	CO_2 Emitted (KG)	Distance Travelled (KM)
Civil Passenger Aircraft	4,215 million	13,318 million	905 million
Cargo	184 million	583 million	19 million
Business Jets	151 million	476 million	95 million
Large Business Jets	4.3 million	13.6 million	723 million
Total	**4,554 million**	**14,390 million**	**1,020 million**

Source: Author's Calculations

4.3 Policy Implications: Supporting Malta's Aviation Industry Amid Climate Goals

The success of Malta's aviation industry has generated profound and multifaceted economic benefits, positioning the country as a key player in the global aviation landscape. Directly, the sector contributes to the national economy by fostering high-quality job creation across various skill levels, from pilots, engineers, and ground staff to administrative and regulatory professionals. The industry also drives investment in infrastructure, such as maintenance, repair, and overhaul (MRO) facilities, and supports ancillary services like aircraft leasing and financing, which have solidified Malta's reputation as a leading jurisdiction for aviation services. These direct contributions are complemented by the sector's ability to attract international business and enhance Malta's global connectivity, making it an attractive destination for foreign direct investment and international commerce.

Indirectly, the aviation industry plays a role in stimulating other sectors of the Maltese economy. For instance, tourism is heavily reliant on the aviation sector's ability to connect the island to global markets implying that Malta's aviation sector indirectly contributes to the growth of hospitality, retail, and cultural industries. Furthermore, the presence of a thriving aviation industry generates secondary economic activities by creating demand for local suppliers, professional services, and technology providers. This ripple effect extends across the economy, amplifying the aviation sector's overall impact.

In terms of fiscal contributions, the aviation industry is a significant source of tax revenue for the government through corporate taxes, airport charges, and employment-related contributions. The

growth of the registry, now comprising a diverse fleet of commercial, private, and cargo aircraft, underscores Malta's ability to compete in a highly dynamic global market. However, sustaining this growth requires careful attention to emerging challenges, particularly those related to administrative capacity, regulatory compliance, and environmental sustainability.

As Malta's aircraft registry continues to grow, the associated administrative and regulatory demands increase exponentially. The expansion not only requires more resources to process registrations and oversee compliance but also places greater pressure on the existing workforce and infrastructure to maintain the high standards that have earned Malta its reputation as a global aviation hub. This growth necessitates ongoing investment in technical expertise, digital systems, and infrastructure to support the complex tasks of safety audits, airworthiness certification, and regulatory oversight.

Malta's regulatory aviation framework is currently recognized for its efficiency, transparency, and adherence to global standards, making it an attractive jurisdiction for aircraft operators, lessors, and owners. However, sustaining these standards becomes increasingly challenging as the registry expands. Without adequate investment, the risk of delays, bottlenecks, or lapses in compliance increases, which could undermine the confidence of stakeholders who rely on Malta's reputation for excellence. In addition, as global aviation standards evolve to address emerging challenges—such as cybersecurity, environmental regulations, and advanced technologies like unmanned aerial systems—the burden on Malta's regulatory framework will only intensify.

Policymakers must take proactive measures to ensure that the authorities responsible for managing the registry, are equipped with the necessary resources. This includes increasing funding for workforce training, upgrading digital systems to streamline operations, and fostering collaboration with industry stakeholders to identify and address potential gaps. Strategic investments in cutting-edge technologies, could enhance efficiency and transparency, enabling Malta to process applications and monitor compliance more effectively. By staying ahead of these challenges, Malta can solidify its position as a leading player in the global aviation industry, ensuring long-term growth, stability, and international confidence in its capabilities.

In addition to operational challenges, Malta's aviation sector faces mounting environmental pressures. Aviation accounts for a considerable share of global carbon emissions, and the European Union has implemented ambitious measures to decarbonize the sector in line with broader climate goals. These policies focus on reducing emissions through market-based mechanisms, sustainable fuel adoption, and operational efficiencies. In this context, Malta's aviation industry requires a supportive framework to adapt to these regulatory changes while remaining competitive.

In conclusion, Malta's aircraft registry underscores the country's strategic importance in global aviation. By equipping the industry with the necessary resources and embracing robust sustainability measures, Malta can maintain its leadership in aviation, address environmental challenges, and ensure long-term economic resilience.

5. Conclusion

Malta's aircraft registry has emerged as a remarkable success story, showcasing the country's ability to leverage its strategic geographic location, EU membership, and business-friendly regulatory framework to achieve significant growth. By the end of 2024, the registry had expanded to include 913 aircraft, supporting a wide range of operations, from commercial airlines to private jet charters and cargo services. This growth reflects Malta's appeal to global operators, drawn by its efficient registration processes, adherence to EU aviation standards, and attractive fiscal incentives. The registry's role in enabling connectivity and supporting diverse business models underscores its strategic importance in the global aviation industry.

The scale of activity under the Maltese flag in 2024 highlights the registry's extensive operational reach. Nearly 804,000 flights were conducted, covering a combined distance of 1,020 million kilometres and serving over 1,500 airports across more than 170 countries. These operations facilitated global connectivity, supported economic development, and reinforced Malta's role as a versatile hub for aviation. The registry caters to operators with varying needs, from the high-frequency operations of low-cost carriers such as Ryanair Group to the premium services of private jet operators like VistaJet. This adaptability has cemented Malta's reputation as a leader in aviation, capable of supporting operators across all segments of the industry.

In 2024, these aircraft consumed approximately 4,554 million kilograms of fuel, releasing 14.39 million metric tons of CO_2 into the atmosphere. It is important to note that this analysis focuses exclusively on the direct environmental impact of aviation, specifically emissions from flight operations. Indirect emissions from ancillary activities, such as ground transportation, aircraft maintenance, and airport operations, are not included in this estimation.

This paper highlights that as Malta's aircraft registry continues to expand, the associated administrative and regulatory demands will grow significantly. While Malta is recognized for its world-class aviation regulatory framework, maintaining these high safety, regulatory, and administrative standards amidst growth is essential. Failure to do so risks overburdening the system and eroding Malta's hard-earned competitive edge in the global aviation industry. Policymakers must therefore ensure that relevant authorities and stakeholders are equipped with adequate resources and tools to sustain the country's leadership in aviation.

Ultimately, Malta's aircraft registry is a testament to the nation's ability to excel in a highly dynamic and competitive global industry. Its long-term success, however, will depend on balancing continued growth with a commitment to operational sustainability in an increasingly environmentally conscious regulatory landscape. By supporting authorities, collaborating with stakeholders, and proactively addressing emerging regulatory challenges, Malta can ensure that its aviation sector remains both economically competitive and environmentally responsible.

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Annex 1

Table 3: Full list of different aircraft on Maltese registry by manufacturer

Manufacturer	No. of Aircraft	Manufacturer	No. of Aircraft
Airbus S.A.S	262	Piaggio Aviation S.p.A.	2
The Boeing Company	256	Thruster Air Services Ltd	2
Bombardier Inc	148	Avions Pierre Robin	1
Textron Aviation Inc	38	Best Off BP 943 Aerodrome	1
Embraer S.A.	29	ICP Srl	1
Dassault Aviation	25	S.A.L. snc	1
Gulfstream Aerospace Corp.	18	Reno Psaila	1
De Havilland Aircraft of Canada	17	Southdown International Ltd.	1
Costruzioni Aeronautiche TECNAM S.p.A.	11	TL-Ultralight	1
Diamond Aircraft Industries	11	Pearce JR	1
Pilatus Aircraft Limited	10	The Light Aircraft Co. Ltd.	1
Piper Aircraft Inc.	9	Morris Motors Ltd.	1
Airbus Helicopters	9	Flylab srl	1
ATR GIE Avions de Transport Régional	8	Evektor	1
Cirrus Design Corporation	7	Cicare S.A.	1
Leonardo S.p.A.	6	CFM-Metal-FAX	1
Airbus Canada Limited Partnership	3	BRM Construções Aeronáuticas	1
Learjet Inc.	3	Rotorway International	1
MHI RJ Aviation ULC	3	Schweizer Aircraft Corporation	1
Polaris Motor s.r.l.	3	Robinson Helicopter Company	1
Viking Air Limited	2	Reims Aviation Company	1
Flysynthesis	2	Solar wings Ltd.	1
Aerospool spol. s.r.o.	2	Comco Ikarus GmbH	1
Pipistrel doo Ajdovscina	2	Halley KFT	1
Randkar SA	2	Sukhoi Civil Aircraft	1

Source: Author's Calculations

Annex 2

Table 4: Full list of different aircraft on Maltese registry by model

Aircraft Model	No. of Aircraft	Aircraft Type	Aircraft Model	No. of Aircraft	Aircraft Type
Boeing 737-800	161	Aeroplane (land)	AW139	2	Helicopter
Airbus A320	122	Aeroplane (land)	Puma Sprint	2	Microlight
BD-700	82	Aeroplane (land)	HR 100-210	1	Microlight
Airbus A321neo	71	Aeroplane (land)	Ortolan Sherwood	1	Microlight
Boeing 737-8200	43	Aeroplane (land)	Flylab Tucano	1	Microlight
CL-600	40	Aeroplane (land)	BRM Okavango	1	Microlight
BD-100	26	Aeroplane (land)	CFM Shadow	1	Microlight
Airbus A330	19	Aeroplane (land)	EV-97 Eurostar 2000R	1	Microlight
EMB-500	16	Aeroplane (land)	RP-KESTREL	1	Microlight
Airbus A320neo	16	Aeroplane (land)	Dynamic WT-9	1	Microlight
DHC-8-400	15	Aeroplane (land)	Cicare 8	1	Helicopter
Airbus A321	15	Aeroplane (land)	Raj X-Air	1	Microlight
Falcon 7X	15	Aeroplane (land)	X-Air 582	1	Microlight
Boeing 737 MAX 8	12	Aeroplane (land)	S.A.L. Kitfox III	1	Microlight
Gulfstream GVI	11	Aeroplane (land)	PC6	1	Aeroplane (land)
Boeing 737-400	11	Aeroplane (land)	AW189	1	Helicopter
Airbus A340	9	Aeroplane (land)	DHC-8-100	1	Aeroplane (land)
Cessna 560XL	8	Aeroplane (land)	B300	1	Aeroplane (land)
ATR 72	8	Aeroplane (land)	Piper PA-32R	1	Aeroplane (land)
DA 42	7	Aeroplane (land)	RRJ-95B	1	Aeroplane (land)
Boeing 747-400	6	Aeroplane (land)	Boeing 787-8	1	Aeroplane (land)
SR22	6	Aeroplane (land)	AS 350 B3	1	Helicopter
Airbus A319	6	Aeroplane (land)	Savannah	1	Microlight
PC-12/47E	6	Aeroplane (land)	Dynamic WT-9	1	Other
Cessna 525	6	Aeroplane (land)	Cessna 340A	1	Aeroplane (land)
Piper PA-28	5	Aeroplane (land)	TL-2000 Sting Carbon	1	Microlight
Beechcraft B200GT	5	Aeroplane (land)	Storch CL Flysynthesis	1	Microlight
Tecnam P2002JF	5	Aeroplane (land)	Storch Anfibio	1	Microlight
Gulfstream GVII	5	Aeroplane (land)	Skyranger V Max	1	Microlight
ERJ 190-100 ECJ	5	Aeroplane (land)	Cessna U206G	1	Aeroplane (land)
Boeing 747-400F	4	Aeroplane (land)	P2006T	1	Aeroplane (sea)
Falcon 10	4	Aeroplane (land)	EMB-145	1	Aeroplane (land)
DA 62	4	Aeroplane (land)	EC135 T2	1	Helicopter
EMB-135	4	Aeroplane (land)	Boeing 757-200	1	Aeroplane (land)
EC 135 T1	4	Helicopter	Cessna 550 Bravo	1	Aeroplane (land)
PC-24	3	Aeroplane (land)	109S	1	Helicopter
Cessna 172	3	Aeroplane (land)	Falcon 50	1	Aeroplane (land)
CL-600-2E25	3	Aeroplane (land)	EC135 T3	1	Helicopter
Boeing 737-500	3	Aeroplane (land)	EC 130 T2	1	Helicopter
Boeing 737-300	3	Aeroplane (land)	Tecnam P2006T	1	Aeroplane (land)
ERJ 190-200 LR	3	Aeroplane (land)	Boeing 737-505	1	Aeroplane (land)
Tecnam P92-JS	3	Aeroplane (land)	Piper PA-34	1	Aeroplane (land)
Falcon 2000	3	Aeroplane (land)	SF50	1	Aeroplane (land)
Cessna 510	3	Aeroplane (land)	Pegasus Panther XL-S	1	Microlight

BD-500	3	Aeroplane (land)	Ikarus C42B	1	Microlight
Boeing 777-300ER	3	Aeroplane (land)	Apollo Delta Jet 2	1	Microlight
Boeing 767-300BDSF	3	Aeroplane (land)	Cessna 550 (Bravo)	1	Aeroplane (land)
Polaris Flying Inflatable	3	Microlight	Learjet 35	1	Aeroplane (land)
P.180 Avanti	2	Aeroplane (land)	Tecnam P2010	1	Aeroplane (land)
Thruster T600N	2	Microlight	Piper J3C-65	1	Aeroplane (land)
DHC-6-300	2	Aeroplane (Amphibian)	DH82A Tiger Moth	1	Microlight
Cessna 550 (Citation II)	2	Aeroplane (land)	Cessna F 172M	1	Aeroplane (land)
Cessna 650 Citation VI	2	Aeroplane (land)	Cessna 182	1	Aeroplane (land)
Boeing 777-200ER	2	Aeroplane (land)	DHC-8-300	1	Aeroplane (land)
Falcon 900	2	Aeroplane (land)	Beechcraft 1900D	1	Aeroplane (land)
Cessna 680	2	Aeroplane (land)	A109E	1	Helicopter
Learjet 45	2	Aeroplane (land)	AW109SP	1	Helicopter
Airbus A380	2	Aeroplane (land)	EC135 P2	1	Helicopter
Virus SW 121	2	Aeroplane (land)	Piper PA-46	1	Aeroplane (land)
Airbus A318	2	Aeroplane (land)	R66	1	Helicopter
Gulfstream GIV-X	2	Aeroplane (land)	Schweizer 269C-1	1	Helicopter
Boeing 737-700	2	Aeroplane (land)	A-600N Talon	1	Helicopter

Source: Author's Calculations

Annex 3

Table 5: Full list of Operators on Maltese registry by total number of flights

Operator	Total Flights	Operator	Total Flights
Malta Air Limited	351,824	Challenge Air Cargo Limited	1,135
Wizz Air Malta Limited	130,135	Titan Airways Malta Limited	1,015
Avion Express Malta Ltd	56,689	Valletta Airlines Ltd.	830
LAUDA EUROPE Limited	46,068	Avcon Jet Malta Ltd.	776
VistaJet Limited	36,808	Air Charter Scotland Europe Ltd.	741
Eurowings Europe Limited	33,018	TAG Aviation (Malta) Ltd.	691
SmartLynx Airlines Malta Ltd	30,806	Av8Jet Charter Ltd	539
Aeroitalia S.r.l.	17,093	Hyperion Aviation Ltd.	474
Touristic Aviation Services Ltd	15,961	Bridges Air Cargo Ltd	448
KM Malta Airlines Limited	12,286	Elitavia Malta Ltd.	440
Mel Air Limited	9,791	Comlux Malta Ltd	376
Air X Charter Limited	6,385	TJS (Malta) Ltd.	372
Sky Alps S.r.l	5,784	Aelia S.R.L	353
Flexjet Operations Malta	5,699	Gestair Aviation Malta Limited	208
Hi Fly Limited	4,226	Privajet Ltd.	155
SkyUp MT Limited	4,210	Jet Aviation Flight Services Malta	146
Blue Bird Airways SA	3,867	Rockfield Malta Limited	131
Luxwing Ltd	3,309	Kemmunett Ltd.	111
Freebird Airlines Europe Ltd	2,933	Maleth Aero AOC Limited	71
Air Atlanta Europe Limited	2,928	Executive Airlines Limited	60
Galistair Trading Limited	2,754	Wings & Waves Limited	47
Malta Air Travel Ltd	1,946	Air Corporate s.r.l.	40
Air Horizont Ltd	1,934	FliteWatch Limited	28
4 Airways Limited	1,535	AstonJet Limited	20
Harmony Jets Limited	1,531	NAC Aviation 29 DAC	4
Wilmington Trust SP Services Ltd	1,429	Bank of Utah	4
Airhub Airlines Limited	1,304	UMB Bank	3
Universal Air Charter & Management Ltd	1,298	AAA B787 1 Limited	1
Alliance Executive Jets Ltd	1,223	DAT Leasing A/S	1

Source: Author's Calculations