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IMPACT OF CIVIL AVIATION INDUSTRY ON CHINA'S NATIONAL ECONOMY

(Presented by China)

EXECUTIVE SUMMARY

In recent years, the International Civil Aviation Organization (ICAO) has contributed to the establishment of a harmonized global civil aviation development landscape by facilitating cooperation among States, and providing economic policies, regulatory guidance, and reliable aviation data. This has helped address challenges in global aviation development, ensuring the sustainable growth of the civil aviation sector. Leveraging its expertise in data production, analysis, and forecasting, ICAO supports States in implementing tailored economic measures and optimizing resource allocation.

After seven decades of development, the global civil aviation industry has evolved into a more diverse and complete ecosystem. To advance the development of the sector, there is now an urgent need for science-based, systematic, and integrated methodologies — including classification standards, analytical models, and theoretical frameworks — that holistically evaluate all facets of the industry including manufacturing, transportation, infrastructure construction, science and education, digital transformation, management, and commercial services etc. Such tools will enable a thorough quantitative assessment of global civil aviation industry's contribution to the world economy, thereby promoting coordinated and balanced development of the industry.

In 2024, China's civil aviation sector thoroughly reviewed the classification standards and industrial measurement models from ICAO and related organizations, and through theoretical modeling and practical validation, while guided by the new development philosophy of "innovation, coordination, green development, openness, and sharing," the sector developed China's civil aviation industry's classification standards, the input-output table, the basic data profile, and the research report on the impact of civil aviation on China's national economy. These deliverables are used to guide high-quality development of China's civil aviation industry.

This basic research system has now been successfully applied in China's aviation planning, policy development, and resource allocation, making the industry's development significantly more scientifically sound, standardized, and forward-looking. China's civil aviation industry earnestly recommends these research results to ICAO and its Member States, for adoption as a universal tool that enables sustainable global aviation development and provides new theoretical paradigms and technical support to improve international aviation governance and achieve worldwide coordination in the industry.

[1] English and Chinese versions provided by China.

Strategic Goals:	This working paper relates to the Strategic Goal of the *Economic Development of Air Transport Assures the Delivery of Economic Prosperity and Social Well-being for All*.
Financial implications:	No additional resources required.
References:	

1. INTRODUCTION

1.1 **Adopting a scientific approach for assessing the contribution of the civil aviation industry to national economy has increasingly become a key topic for the industry.** Against the backdrop of a new wave of technological revolution and industrial transformation sweeping the globe, the world economic landscape is undergoing unprecedented and profound restructuring. As a core representative of strategic high-end industries, civil aviation—with its extensive industrial chains, broad coverage, and high value-added attributes—is deeply integrated into coordinated regional economic development, international trade systems, and emerging low-altitude economy domains. It has emerged as a critical barometer of national technological prowess and comprehensive competitiveness, and more fundamentally, a pivotal pillar for building a modern industrial system. Today, rationally evaluating the civil aviation industry's economic contribution stands at the forefront of industry priorities. Key challenges facing governments, industries and academia include how to apply systematic thinking to quantify aviation industry's contribution to the national economy, analyze synergy among different entities involved in the industrial and value chains, precisely identify development bottlenecks, and optimize policy frameworks. Establishing such an evaluation system is conducive not only to the aviation industry's own high-quality development, but also to unleashing the "aviation economy" multiplier effect, cultivating new economic growth drivers, and improving global industrial chain structures, and therefore it holds profound strategic significance. The outcomes will serve as an essential basis for States to optimize their industrial policies and enhance their global competitiveness, ultimately driving the civil aviation industry toward achieving higher-quality development in the new era.

1.2 **China's civil aviation sector has achieved significant progress in analyzing the industry's impact on the national economy, providing theoretical and technical support for sustainable global aviation development.** In recent years, China has been proactively exploring pathways for high-quality development in civil aviation—a pursuit in line with ICAO's vision for a sustainable global aviation system. To effectively achieve high-quality development, the Civil Aviation Administration of China (CAAC) collaborated with universities, research institutes, and academic institutions. Through extensive fieldwork and rigorous scientific validation, CAAC established the classification standards for China's civil aviation industry, and unveiled for the first time the industry's "genetic blueprint". A digital profiling of China's civil aviation sector has been conducted, precisely delineating the output scale and distribution of the sector and its elements. Additionally, an input-output table was made for China's civil aviation industry to probe into the mechanisms through which aviation influences the national economy. Building on these efforts, a *Report on the Impact of Civil Aviation on China's National Economy* was developed, along with some concrete policy recommendations made to enhance the industry's economic contribution. Since its release, the findings have garnered significant attention from government bodies, academia, and industry stakeholders. Pilot initiatives are underway in select regions, and the research outcomes are being widely applied across all operational domains of China's civil aviation industry.

2. DISCUSSION

2.1 China has defined in a science-based manner, China's first civil aviation industry classification standards from a holistic industry chain perspective. In line with the basic framework governing sector classification in global and Chinese national economy, this classification is made from a holistic industry chain perspective based on the essential operational models and economic-technical attributes in the industry while fully taking into account emerging models, innovative practices, and evolving trends within global aviation sector. The classification delineates eight major categories which are civil aviation manufacturing, air transport and operations, civil aviation support services, civil aviation infrastructure construction, civil aviation digital information, civil aviation science and education, civil aviation public administration, and auxiliary civil aviation services. These encompass 27 intermediate and 88 sub-categories, covering 16 relevant sectors across China's secondary and tertiary industries. Notably, 48 out of the 88 sub-categories are related to low-altitude economy.

2.2 China has precisely delineated the nation's pioneering panoramic digital profiling of the civil aviation industry. Through field research across 31 provinces, the research teams have engaged with government departments and competent authorities, key aviation industry entities, research and development (R&D) institutions, industry associations, and aerotropolis zones. Drawing on publicly available sources including government statistical yearbooks and bulletins, corporate websites, annual/financial reports, authoritative commercial databases, and field-collected data, basic information was compiled for over 27,000 key enterprises and institutions. As a result, a preliminary directory of key aviation enterprises has been developed and a basic database for China's civil aviation sector established. Through this "data profiling" initiative, the database comprehensively visualizes the industry's current status, geographic distribution, and full-industry-chain supply chain linkages among representative enterprises.

2.3 China has compiled its first input-output table for the civil aviation industry. Based on China's national input-output table (2017) and the input-output data from various civil aviation sub-sectors, this table disaggregates the economic input-output of various aviation sub-sectors from the national input-output table covering all industries, producing an input-output table for China's civil aviation industry. It provides comprehensive estimates of total output and value-added across all aviation sectors (8 major categories, 27 intermediate categories, and 88 sub-categories) for 2017 and 2023. It further quantifies the industry's contribution to China's national economy in these two years.

2.4 The Research Report on the Impact of Civil Aviation on China's National Economy has been completed, comprehensively exhibiting the research findings and proposing policy recommendations to enhance the industry's economic contribution and elevate civil aviation from a strategic industry to a strategic pillar industry. Preliminary calculations reveal that in 2017, China's civil aviation industry generated value-added of 653.1 billion yuan, accounting for 0.79 per cent of gross domestic product (GDP), and the sector's total value-added effect reached 1.1629 trillion yuan, representing 1.41 per cent of GDP. Initial estimates for 2023 indicate industry value-added of 1.0345 trillion yuan (0.8% of GDP) with a value-added effect of 2.086 trillion yuan (1.6% of GDP). These figures demonstrate sustained growth in China's civil aviation sector, increasing sector contributions to the national economy, and optimized industrial distribution. A coordinated development pattern has emerged, with the Beijing-Tianjin-Hebei region, Yangtze River Delta, Guangdong-Hong Kong-Macao Greater Bay Area, and Chengdu-Chongqing economic zone serving as primary drivers, supported by complementary development across other regions. Projections indicate China's civil aviation industry will increasingly bolster the national economy, with its value-added effect projected to reach 3 per cent of GDP by 2035 and potentially rise to 5 per cent by 2050. Civil aviation will become a pillar industry of strategic significance for China.

3. CONCLUSION

3.1 This study has developed a set of analytical tools for structural assessment of the civil aviation industry, yielding innovative research outcomes. These tools provide robust methodological support for comprehending the systemic and structural characteristic of the civil aviation sector, and scientifically formulating industrial development plans and policies. The tools were tested and optimized through pilot programs, demonstrating remarkable efficacy in guiding China's aviation sector toward high-quality development. Their scientific rigor and practical validity have been substantiated through real-world implementation. Consequently, we cordially invite ICAO and its Member States to take note of China's pioneering explorations and practices in civil aviation industry analysis. It's our expectation that this theoretical framework will contribute constructively to global aviation governance and industrial growth, and offer novel approaches and pathways to enhance worldwide collaborative development within the civil aviation sector.

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