



ASSEMBLY — 41ST SESSION

ECONOMIC COMMISSION

Agenda Item 37: Aviation Data — Monitoring and Analysis

AVIATION SATELLITE ACCOUNT

(Presented by the Council of ICAO)

EXECUTIVE SUMMARY

This working paper reports on the progress of the development of the Aviation Satellite Account (ASA) methodological framework for the measurement of the direct economic contribution of aviation to national economy, in accordance with the decisions of the 40th Session of the Assembly. Work has been carried out to validate the draft ASA methodological framework using data from national accounts and economic impact studies, as well as to assess the impact of the inclusion of aircraft manufacturing in the scope of the measurement of economic contribution of civil aviation. The recommendations of the Eleventh Session of the Statistics Division (STA/11) on the refinement of the methodological framework are also provided. The paper presents ICAO's future work in this area, including finalizing the ASA methodological framework document and promoting the application of ASA framework by States in coordination with the United Nations Statistics Division.

Action: The Assembly is invited to:

- a) note the progress made on the development of the ASA methodological framework including the validation and reconciliation as well as the recommendations of the STA/11;
- b) endorse the Organization's work plan as presented in paragraph 5; and
- c) consider the information contained in this paper for the update of Assembly Resolution A40-9, Consolidated Statement of continuing ICAO policies in the air transport field.

<i>Strategic Objectives:</i>	This working paper relates to Strategic Objective — <i>Economic Development of Air Transport</i> .
<i>Financial implications:</i>	The ICAO activities referred to in this paper are expected to be undertaken within the resources available in the 2023–2025 Regular Budget and/or from extra-budgetary contributions, including the Voluntary Air Transport Fund (TRAF), as guided by the ICAO Business Plan 2023-2025.

References:	Doc 10140, <i>Assembly Resolutions in Force</i> (as of 4 October 2019) Doc 10139, <i>Report of the Economic Commission of the 40th Session of the Assembly System of National Accounts, 2008</i> (2008 SNA) https://unstats.un.org/unsd/nationalaccount/sna2008.asp <i>A preliminary version of the ASA Methodological Framework Document</i> https://www.icao.int/Meetings/a40/Documents/Aviation_Satellite_Account_en.pdf <i>Report of the Eleventh Session of the Statistics Division (STA/11)</i> STA/11-WP/5 A41-WP/17-EC/7, Consolidated statement of continuing ICAO policies in the air transport field ICAO Business Plan 2023–2025
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1. INTRODUCTION

1.1 Recognizing that there has been no internationally-agreed standard on measuring the economic contribution of aviation to national economy, the 39th Session of the Assembly requested “*the Council to instruct the Secretary General to develop a methodological framework for the economic measurement of aviation activity, including aviation’s contribution to GDP, the number of jobs created by aviation, aviation consumption, and the impact of aviation on balance of payments*” (A39-15 refers).

1.2 Pursuant to the A39 decision, work has been undertaken by the Expert Advisory Group (EAG) established under the Aviation Data and Analysis Panel (ADAP) to develop an Aviation Satellite Account (ASA) methodological framework. The EAG was comprised of aviation data experts and national accounts specialists of Member States, the United Nations Statistics Division (UNSD) and other international organizations. The group has taken extensive advice from the UNSD.

1.3 The preliminary version of the ASA methodological framework document was presented to the 40th Session of the Assembly (A40), during which the Council was requested to continue the development of the ASA methodological framework and validate it through reconciliation of various data (A40-9 refers). Subsequently, further activities were carried out in accordance with the A40 decision.

2. DRAFT AVIATION SATELLITE ACCOUNT METHODOLOGICAL FRAMEWORK

2.1 A satellite account aims to cover a specific industry of particular importance or interest to national economy. To measure the economic contribution using an international standard, some sectors have already developed satellite accounts such as the Tourism Satellite Account and the Transport Satellite Account. The preliminary draft “Aviation Satellite Account” (ASA) methodological framework presented to the A40 aims to provide guidance on compiling a satellite account for measuring the direct economic contribution of aviation to national economy, in line with the *System of National Accounts, 2008* (2008 SNA)¹ adopted by the UN – an internationally-agreed statistical framework that provides a comprehensive, consistent and flexible set of macroeconomic accounts for policy-making, analysis and research purposes.

¹ <https://unstats.un.org/unsd/nationalaccount/sna2008.asp>

2.2 The document comprises seven chapters describing steps involved in setting up an ASA and five appendices including classifications and tables of the framework. It introduces the concept of ASA, and defines the scope of ASA measurement and the production boundary, i.e. the activities of aviation industry and the products that are supplied by the aviation activities, as well as the products that are used by the aviation activities to produce their output. In order to identify these aviation activities and products and allow for international comparability in the national accounts, they are mapped respectively with the International Standard Industrial Classification of All Economic Activities (ISIC) and the Central Product Classification (CPC). The detailed classifications are presented in Appendices 1 and 2 of the document².

2.3 The ASA methodological framework also consists of a set of tables, including the Supply and Use Tables (SUTs), which are an integral part of the 2008 SNA. The SUTs are prepared to estimate aviation's direct gross value added (GVA) and gross domestic product (GDP), etc.; describing: a) how products (goods and services) are brought into national economy (either as a result of domestic production or imports from other countries); and b) how those same products are used (as intermediate consumption, household final consumption, non-profit institutions serving households, general government final consumption, gross capital formation and exports). Other tables in the ASA are prepared to cover the generation of additional elements, both monetary and non-monetary, such as data on employment and indicators of output.

3. VALIDATION AND RECONCILIATION OF THE ASA METHODOLOGICAL FRAMEWORK

3.1 During the A40, a view was expressed at the Economic Commission that the accuracy of the estimated result of direct economic impacts should be validated by vetting the framework with stakeholder experts using aviation specific data to measure the economic impact of aviation in States where such data is available. An additional comment was also made on the consideration of the inclusion of aircraft manufacturing in the scope of the measurement of civil aviation industry.

3.2 To address the above comments, a series of exercises were carried out to validate and verify the draft ASA methodological framework by using data from States where both officially published study on economic contribution of aviation and national economic accounts are available. It was noted that the direct economic impacts attributable to air transport are compatible, owing to the application of the 2008 SNA in both frameworks, which is the international standard adopted by States worldwide for the compilation of national accounts statistics and macroeconomic accounting.

3.3 With regard to the inclusion of aircraft manufacturing, reconciliation was conducted to gauge the value added of aircraft manufacturing to a State's economy and assess the impact of the inclusion of aircraft manufacturing in the economic contribution of civil aviation industry. The results revealed that: a) obtaining detailed data on aircraft manufacturing for civil aviation is difficult due to the constraint of data availability; b) the assessment of its value added can be complicated and will entail estimation using data from various government and private sources; c) the underlining data in national accounts does not distinguish the civilian and non-civilian production; and d) the impact of the inclusion of the value added of aircraft manufacturing in civil aviation industry's contribution to national GDP will vary by States depending on the weight of such production in the State.

² https://www.icao.int/Meetings/a40/Documents/Aviation_Satellite_Account_en.pdf

4. RECOMMENDATIONS OF THE ELEVENTH SESSION OF THE STATISTICS DIVISION (STA/11)

4.1 The validation and reconciliation results were presented to the Eleventh Session of the Statistics Division (STA/11) in April 2022. Divergent views were expressed on the inclusion of aircraft manufacturing as civil aviation industry. Some were of the view that aircraft manufacturing is a critical component of aviation industry, and thus presenting it as a capital formation instead of including it in the scope of aviation would result in the loss of the information on value added and jobs generated by aircraft manufacturing. On the other hand, some believed that civil aviation activities, which are services oriented, are different from those of aircraft manufacturing, which have a different nature and also include the production for defence.

4.2 Further debate was made on whether the scope of ASA should focus on aviation transportation services or broader aviation activities. While some felt that focusing on transportation only may be narrow, others opined that the primary focus of civil aviation is to provide aviation transportation and service, and since many other industries such as fuel supply companies also contribute to aviation, the measurement of civil aviation contribution to the economy cannot encompass all these industries. There were also concerns that the inclusion of aircraft manufacturing may result in larger economic contribution of aviation than all modes of transportation as a whole.

4.3 Considering the divergent views expressed and the different use of the ASA by States, the Division agreed that the ASA methodological framework should provide flexibility for States to capture the economic contribution of aircraft manufacturing according to their needs while maintaining the core framework focusing on services. In this regard, the Division recommended the following: a) the current scope of civil aviation in the draft ASA methodological framework should be maintained without the inclusion of aircraft manufacturing; b) an additional chapter in the ASA methodological framework document should be developed to capture the economic contribution of aircraft manufacturing; and c) the EAG-ASA should undertake the task listed in b) and continue its work to finalize the ASA methodological framework document (Report of STA/11 refers).

5. FUTURE WORK

5.1 The ASA will enable States to make data-driven policy-making and evaluation for aviation development planning that is linked with national and/or regional development frameworks and strategies. Taking into account the aforementioned recommendations and in accordance with the ICAO Business Plan 2023-2025, Output DEV 3 – Enhanced capabilities of States to use aviation as an effective means to achieve economic development, the future work on the Aviation Satellite Account will focus on the following:

- a) finalizing the draft ASA methodological framework document by incorporating a new chapter to provide flexibility for States to capture the economic contribution of aircraft manufacturing;
- b) in coordinating with the UNSD, raising the awareness of the ASA and promoting its application by States, including national statistical offices, central banks, transport authorities and other ministries in charge of related portfolios such as finance, economic planning and trade; and

- c) providing assistance for States in the application of the ICAO ASA methodological framework for measuring the economic contribution of aviation.

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