
GLOSSARY

Aeronautics: the science and art of designing and constructing aircraft, also, the art or science of operating aircraft.

Aerospace Employment: annual average calculated as one-twelfth of sum of monthly estimates of total number of persons employed during a designated pay period by the aircraft, missile, space vehicle (NAICS 33641), and search, detection, and navigation instruments (NAICS 334451) manufacturing industries.

Aerospace Industry: the industry engaged in research, development, and manufacture of aerospace systems including: manned and unmanned aircraft; missiles; spacecraft; space launch vehicles; propulsion, guidance, and control units for all of the foregoing; and a variety of airborne and ground-based equipment essential to the test, operation, and maintenance of flight vehicles.

Aerospace Payroll: estimated on the basis of average weekly *earnings* for a given calendar year for *production workers* plus an estimated annual salary for other employees.

Aerospace Sales: the *AIA* estimate of *aerospace industry sales*, developed by summing: *DoD* expenditures for *aircraft, missiles*, and space-related *procurement* and *RDT&E*; *NASA* expenditures for *research and development* and space flight control and data communications; *outlays* for space activities by other U.S. government departments and agencies; commercial sales of space-related products; net domestic and export sales of civil aircraft, engines, and parts; *Foreign Military Sales* and commercial exports of military aircraft, missiles, propulsion, and related parts; sales of *related products and services* including: electronics,

software, and ground support equipment; and sales of *non-aerospace products* which are produced in aerospace-manufacturing *establishments* and which use technology, processes, and materials derived from the aerospace industry.

AIA: Aerospace Industries Association of America, Inc., formerly Aircraft Industries Association.

Air Carriers: the commercial system of air transportation, consisting of domestic and international scheduled and charter service.

Aircraft: all airborne vehicles supported either by buoyancy or by dynamic action. Used in this volume in a restricted sense to mean an airplane—any winged aircraft including helicopters, but excluding gliders and guided missiles.

Aircraft Agreement (Agreement on Trade in Civil Aircraft): negotiated in the Tokyo Round of the *Multilateral Trade Negotiations* and implemented January 1, 1980, providing for elimination of tariff and non-tariff trade barriers in the civil aircraft sector.

Aircraft Industry: the industry primarily engaged in the manufacture of aircraft, aircraft engines, and parts including propellers and auxiliary equipment. A sector of the *Aerospace Industry*.

Airframe: the structural components of an airplane, such as: fuselage, empennage, wings, landing gear, and engine mounts, but excluding such items as: engines, accessories, electronics, and other parts that may be replaced from time to time.

Airlines: see *Air Carriers*.

Appropriation (Federal Budget): an act of Congress authorizing an

agency to incur *obligations* and make payments out of funds held by the Department of the Treasury.

Assets, Net: the sum of all recorded assets after reducing such amount by allowance of reserve for bad debts, *depreciation*, and amortization, but before deducting any liabilities, mortgages, or other indebtedness.

Astronautics: the art and science of designing, building, and operating manned or unmanned space objects.

Average Weekly Hours: average hours for which pay was received; different from standard or scheduled hours.

Avionics: communications, navigation, flight controls, and displays.

Backlog: the *sales* value of *orders* accepted (supported by legal documents) that have not yet passed through the sales account.

Budget Authority: authority provided by the Congress; mainly in the form of *Appropriations*, which allows Federal agencies to incur *obligations* to spend or lend money.

Bureau of Economic Analysis (BEA): an agency of the Department of Commerce.

Bureau of Labor Statistics (BLS): an agency of the Department of Labor.

Bureau of the Census: an agency of the Department of Commerce.

Constant Dollars: calculated by dividing current (“then-year”) dollars by appropriate price *deflator* and multiplying the result by 100.

Deflator: index used to convert a price level to one comparable with the price level at a different time, offsetting the effect of inflation. The base period, which equals 100, is usually specified as either a given fiscal or calendar year.

Depreciation: the general conversion of the depreciable cost of a fixed asset into expense, spread over its remaining life. There are a number of methods, all based on a periodic charge to an expense account and a corresponding credit to a reserve account.

Development: the process or activity of working out a basic design, idea, or piece of equipment. See also *Research and Development*.

DoD: Department of Defense.

DoE: Department of Energy.

DoT: Department of Transportation.

Durable Goods Industry: comprised of major manufacturing industry groups with NAICS codes 321, 327, and 33. All major manufacturing industry groups in NAICS codes 31 and 322-326 are considered non-durable goods manufacturing industry groups.

Earnings: the actual return to the worker for a stated period of time. Irregular bonuses, retroactive items, payments of various welfare benefits, and payroll taxes paid by employers are excluded.

Average Hourly Earnings: on a “gross” basis, reflecting not only changes in basic hourly and incentive wage rates, but also such variable factors as: premium pay for overtime, late shift work, and changes in output of workers paid for an incentive plan.

Average Weekly Earnings: derived by multiplying *average weekly hours* by *average hourly earnings*.

Establishment: the basis for reporting to the Census of Manufacturers; an operating facility in a single location.

Evaluation (Department of Defense): determination of technical suitability

of material, equipment, or a system.
See *RDT&E*.

Expenditures (Federal Budget): see *Outlays*.

Export-Import Bank of the United States (Eximbank): created in 1934 and established as an independent U.S. government agency in 1945, Eximbank is designed "... to aid in financing and to facilitate exports..." Eximbank receives no *appropriations* from the U.S. Congress. It is directed by statute to: (1) offer financing that is competitive with that offered exporters of other countries by their official export credit institutions, (2) determine that the transactions supported provide for a reasonable assurance of repayment, (3) supplement, but not compete with, private sources of export financing, and (4) take into account the effect of its activities on small business, the domestic economy, and U.S. employment.

Exports: domestic merchandise including commodities which are grown, produced, or manufactured in the United States and commodities of foreign origin which have been changed in the United States from the form in which they were imported or which have been enhanced in value by further manufacture in the United States and which are traded or sold to other nations.

FAA: Federal Aviation Administration (formerly the Federal Aviation Agency), an agency of the Department of Transportation.

Facility: a physical plant or installation including: real property, building, structures, improvements, and plant equipment.

Fiscal Year (Federal Budget): beginning October 1, 1976, the fiscal years run from October 1 through September 30 and are designated by the year in which they end.

Flyaway Value: includes the cost of the *airframe*, engines, electronics, communications, armament, and other installed equipment.

Footnotes: common to many tables throughout this edition are the following:

E	Estimate.
NA	Not available/Not applicable.
p	Preliminary.
r	Revised.
Tr.Qtr.	<i>Transition Quarter</i> .
NOTE:	Detail may not add to totals because of rounding.

Foreign Military Sales (FMS): export *sales* to foreign governments arranged through the Department of Defense, whereby DoD recovers full purchase price and administrative costs; often mistakenly used to include foreign military aid and foreign commercial sales as well.

FY: see *Fiscal Year*.

GDP (Gross Domestic Product): the market value of goods and services produced by labor and property located in the United States.

General Agreement on Tariffs and Trade (GATT): a multilateral treaty among more than 100 governments whose primary mission is the reduction of trade barriers. The *World Trade Organization* was established January 1, 1995 to implement the agreement and provide a forum to discuss trade issues.

General Aviation: all civil flying except that of *air carriers*.

Helicopter: a rotary-wing *aircraft* which depends principally for its support and motion in the air upon

the lift generated by one or more power-driven rotors, rotating on substantially vertical axes. A helicopter is a *V/STOL*.

Heliport: an area, either at ground level or elevated on a structure, that is used for the landing and take-off of helicopters and includes some or all of the various facilities useful to *helicopter* operations such as: helicopter parking, hangar, waiting room, fueling, and maintenance equipment.

Helistop: a minimum facility *heliport*, but without such auxiliary facilities as: waiting room, hangar parking, etc.

ICBM: InterContinental Ballistic Missile, with a range of more than 5,000 miles.

Imports: classified as “general imports” or “imports for consumption.” This volume refers generally to “imports for consumption,” which are entries for immediate consumption plus merchandise withdrawn from bonded storage warehouses for consumption. Data are compiled from Import Entries filed with U.S. Customs officials and are in general based on the market value or price in the foreign country at the time of exportation of such merchandise, including the cost of containers and coverings, as well as other charges and expenses incidental to placing the merchandise in condition, packed and ready for shipment to the United States, but excluding import duties, insurance, freight, and other charges incidental to arrival of the goods in the United States. The foreign values of imported merchandise are converted into U.S. currency at the rate of exchange prevailing on the day the merchandise is shipped to the United States.

Income:

Net Operating Income: total *sales* less total operating costs.

Other Income and Expenses: includes interest income, royalty income, capital gains and losses, interest expense, cash discounts, etc.

Net Income (Before Income Taxes): *Net Operating Income* plus or minus *Other Income and Expenses*.

Net Income (After Income Taxes): *Net Income (Before Income Taxes)* less federal income taxes.

Lump-Sum Wage Payment: a one-time payment given in lieu of general wage increases and/or cost of living adjustments in labor settlements.

Manufacturing Industries: those *establishments* engaged in the mechanical or chemical transformation of inorganic or organic substances into new products, and usually described as plants, factories, or mills, which characteristically use power-driven machines and materials-handling equipment; also establishments engaged in assembling component parts of manufactured products if the new product is neither a structure nor other fixed improvement.

MDA: Missile Defense Agency, an agency of the Department of Defense.

Merchandise Trade Balance: the difference between the value of U.S. goods exported to other countries and foreign goods imported into this country. The trade balance is generally regarded as “favorable” when *exports* exceed *imports*—a trade surplus—and “unfavorable” when imports exceed exports—a trade deficit.

Missile: sometimes applied to space launch vehicles, but more properly connotes automated weapons of warfare, that is, a weapon which has an integral system of guidance, as opposed to the unguided rocket.

NAICS (North American Industry Classification System): a system developed by Canada, Mexico, and the U.S. government that groups *establishments* into industries based on a production-oriented concept in order to provide uniformity and comparability of statistical data and facilitate economic analyses between industries and the three North American countries.

NASA: National Aeronautics and Space Administration.

NATO: North Atlantic Treaty Organization.

New Obligational Authority (Federal Budget): see *Budget Authority*.

Non-Aerospace Products and Services: products and services other than *aircraft, missiles, space vehicles*, and related propulsion and parts, produced or performed by *establishments* whose principal business is the development and/or manufacture of aerospace products.

OASD: Office of the Assistant Secretary of Defense.

Obligations (Federal Budget): commitments made by Federal agencies to pay out money for products, services, or other purposes—as distinct from the actual payments. Obligations incurred may not be larger than *budget authority*.

Orders, Net New: the *sales* value of new orders (supported by legal documents) minus cancellations during the period.

Other Aerospace Products and Services: all conversions, modifica-

tions, site activation, other aerospace products (including drones), services, plus *research and development* under contract, defined as: *basic* and *applied research* in the sciences and in engineering and design and *development* of prototype products and processes.

Other Customers: all customers other than the U.S. government to include but not limited to: *air carriers*, private citizens and corporations, and state, local, and foreign governments.

Outlays: checks issued, interest accrued on the public debt, or other payments made, net of refunds and reimbursements.

Overtime Hours: that portion of the gross *average weekly hours* which was in excess of regular hours and for which premium payments were made.

Passenger-Mile: one passenger moved one mile.

Payroll, All Manufacturing: includes the gross *earnings* paid in the calendar year to all employees on the payroll of operating manufacturing *establishments*. Includes all forms of compensation paid directly to workers such as: salaries, wages, commissions, dismissal pay, all bonuses, vacation and sick leave pay, and compensation in kind; prior to such deductions as: employees' Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. Does not include employers' Social Security contributions or other non-payroll labor costs such as: employees' pension plans, group insurance premiums, and workmen's compensation.

Procurement: the process whereby the executive agencies of the Federal Government acquire goods and services from enterprises other than the Federal Government.

Production Workers: includes working foremen and all non-supervisory workers (including lead-men and trainees) engaged in fabricating, processing, assembling, inspection, receiving, storage, handling, janitorial services, product development, auxiliary production for plant's own use, and recordkeeping and services closely associated with the above production operations.

RDT&E (Department of Defense): Research, Development, Test, and Evaluation.

Related Products and Services: sales of electronics, software, and ground equipment in support of aerospace products, plus sales by aerospace manufacturing *establishments* of systems and equipment which are generally derived from the industry's aerospace technological expertise in design, materials, and processes, but which are intended for applications other than flight.

Research: see *Research and Development*.

Research and Development:

Research: systematic study directed toward fuller scientific knowledge or understanding of the subject studied. Research is classified as either basic or applied according to the objectives of the sponsoring agency.

Applied Research: with the objective of gaining knowledge or understanding necessary for determining the means by which a recognized and specific need may be met.

Basic Research: with the objective of gaining fuller knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications toward processes or products in mind.

Development: the systematic use of scientific knowledge directed toward the production of useful materials, devices, systems, or methods including design and development of prototypes and processes.

Independent Research and Development (IR&D): a term devised by the Department of Defense and used by Federal agencies to differentiate between a contractor's research and development technical effort performed under a contract, grant, or other arrangement (R&D) and that which is self-initiated and self-funded (IR&D).

Industrial Research and Development: research and development work performed within company facilities, funded by company or Federal funds, and excluding company-financed research and development contracted to outside organizations such as: research institutions, universities and colleges, or other non-profit organizations.

Rotorcraft: an *aircraft* which, in all its usual flight attitudes, is supported in the air wholly or in part by a rotor or rotors (i.e., airfoils rotating or revolving about an axis). See *Helicopter*.

Sales: net of returns, allowances, and discounts, the dollar value of shipments, including dealer's commissions, if any, which have passed through the sales account.

Satellite: a body that revolves around a larger body, such as the Moon revolving around the Earth, or a man-made object revolving about any body such as the Sun, Earth, or Moon.

SIC (Standard Industrial Classification): a system developed by the U.S. government to define the industrial composition of the economy, facilitating comparability of statistics. Beginning in 1997, progressively superseded by *NAICS (North American Industry Classification System)*.

Space Vehicle: an artificial body operating in outer space (beyond the Earth's atmosphere).

Stockholder's Equity: *assets* minus all obligations of the corporation, except those to stockholders. Annual data are average equity for the year (using four end-of-quarter figures). For details, see "Quarterly Financial Report for Manufacturing, Mining and Trade Corporations," compiled by the *Bureau of the Census*.

STOL: short take-off and landing *aircraft*.

Test (Department of Defense): an experiment designed to assess progress in attainment or accomplishment of *development* objectives (see *RDT&E*).

Thrust: the driving force exerted by an engine, particularly an *aircraft* or *missile* engine, in propelling the vehicle to which it is attached.

Ton-Mile: one ton moved one mile.

Total Obligational Authority: the sum of *budget authority* granted or requested from the Congress in a given year, plus unused budget authority from prior years.

Trade Balance: see *Merchandise Trade Balance*.

Transition Quarter (Tr. Qtr.): the three-month interval from July 1, 1976 to September 30, 1976 belonging to neither Fiscal Year 1976 nor Fiscal Year 1977. See *Fiscal Year*.

Turbine, Turbo: a mechanical device or engine that spins in reaction to a fluid flow that passes through or over it. Frequently used in "turbo-prop" or "turbojet."

UK: United Kingdom.

US: United States of America.

USA: United States Army, an agency of the U.S. Department of Defense.

USAF: United States Air Force, an agency of the U.S. Department of Defense.

USMC: United States Marine Corps, an agency of the U.S. Department of Defense.

USN: United States Navy, an agency of the U.S. Department of Defense.

Utility Aircraft: an aircraft designed for general purpose flying.

V/STOL: vertical short take-off and/or landing *aircraft*.

World Trade Organization (WTO): established in 1995 as a result of the "Uruguay Round" negotiations which included a major revision of the *General Agreement on Tariffs and Trade (GATT)*. The WTO's overriding objective is to help trade flow smoothly, freely, fairly, and predictably.