

PROCUREMENT OF LAUNCH VEHICLES AND SERVICES

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Abstract

Article I of the Outer Space Treaty declares that all states have the right to use outer space. However, if states do not have access to launch vehicles or services, their ability to exercise that right is limited. The character of legal regulations related to the procurement of launch vehicles and services thus becomes quite important. Due to concerns about missile proliferation in the aftermath of the superpower conflict, these regulations have become more restrictive at a time when most states are seeking fewer barriers to trade. This paper explores the apparent contradiction between these two trends, and makes recommendations for their reconciliation.

Introduction

This paper begins with a general discussion of the legal principles of public procurement and free trade, such as "national treatment," "transparency," and "juste retour," as they relate to launch activities. Second, the issue of state aids and other non-tariff trade barriers are examined in light of the trend towards commercialization and privatization of launch activities. Third, government and private procurement of launch vehicles and services are discussed, using the legal regulations of the United States as an example. Finally, the paper examines international procurement of launch vehicles and services, with a particular focus on the role of export controls and the Missile Technology Control Regime (MTCR).

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General Principles of Procurement and Trade

Launch vehicles and services have been largely exempt from the general principles of procurement and trade. The roots of most currently available launch vehicles can be traced back to highly classified military research and development programs. As a result, "procurement" was limited to qualified domestic commercial entities or to the state itself. The potential for launch vehicles to be used as delivery vehicles for weapons of mass destruction, or as weapons in themselves, has severely restricted international trade in this area. Another reason for procurement and trade restrictions is that, as with nuclear weapons, launch capability confers a certain political status to states that they are reluctant to share. Notwithstanding these impediments, the general principles of procurement and trade may yet be applicable to launch vehicles and services.

National Treatment

If a state consents to give "national treatment" in areas such as taxation, legal recourse, or procurement, it means that the state will treat foreign entities the same as it does domestic entities. The concept of national treatment gained prominence after World War II with the adoption of the General Agreement on Tariffs and Trade (GATT).¹ The United States has codified national treatment as one of its principal trade negotiating objectives.² With regard to trade in services, the objectives include "to reduce or to eliminate barriers to, or other distortions of, international trade in services, including barriers that deny national treatment and restrictions on establishment and operation in such markets."¹

In pursuing these objectives, however, U.S. negotiators "shall take into account legitimate United States domestic objectives including . . . essential security . . . interests and the law and regulations related thereto."⁴ As a result, because launch vehicles and services are covered under most of the same national security exemptions accorded to military programs, national treatment in the procurement and trade of launch vehicles and services has not yet been a principal negotiating objective of the United States.

Transparency

The term "transparency" refers to the character of a state's regulatory procedures. For example, if a state's procurement regulations are transparent, entities from other states would have the same information about the procedures as domestic entities. Like national treatment, transparency is a principal trade negotiating objective of the United States.⁵ In U.S. procurement law, transparency is a goal of the full and open competition required by the Competition in Contracting Act of 1984,⁶ as amended. With regard to launch vehicles and services, however, the United States, like other countries, has methods for limiting competition in procurement.

For example, the procurement regulations applicable to the National Aeronautics and Space Administration (NASA) provide for the exclusion of procurement sources in appropriate circumstances.⁷ NASA may limit full and open competition if there is only one responsible source and no other supplies or services satisfy agency requirements, if there is "unusual and compelling urgency," if the restriction is pursuant to an international agreement, or if the restriction is in the "public interest."⁸ As a result, while the general procurement policy of the United States promotes full and open competition, the procurement of launch vehicles and services can be limited to certain domestic entities through one or more of the above exceptions.

Juste Retour

The concept of "juste retour" is a relatively new principle in international procurement and trade. The European countries apply it as a safeguard for the inte-

gration process. Under the principle of juste retour, each state is to receive procurement contracts whose total value is proportional to that state's investment in a particular project or field of development. In the context of launch vehicles and services, the European Space Agency (ESA) is the coordinating agency, and each state expects to receive contracts with a total value proportional to its investment in ESA. In theory, the principle of juste retour promotes international cooperation by ensuring that each state receives its fair share of work. In practice, however, it may be difficult to spread the work proportionately, especially in advanced technology areas, such as launch vehicles and services, where not all states have comparable capabilities. Nevertheless, the principle of juste retour remains a goal of European projects, and can be expected to be applied to international space projects beyond Europe in the future.

State Aids and Other Non-Tariff Trade Barriers

Just as the international market for launch vehicles and services is distorted by exceptions to the general principles of procurement and trade, it is also distorted by state aids and other non-tariff trade barriers.

State Aids

"State aids" refers primarily to subsidies, both direct and indirect, for activities that states want the commercial sector to perform. Justifications for such subsidies range from promotion of technologies that the commercial sector otherwise would be reluctant to invest in on its own to the support of uncompetitive industries on grounds of national security. State aids include direct subsidies of cash infusions, low interest loans, loan guarantees, debt forgiveness, and tax incentives, such as accelerated depreciation or investment tax credits for research and development.

Historically, state aids have played a significant role in the development of emerging industries such as

the launch vehicle and services sector. For example, the aircraft industry benefited greatly from military spending in World War I, and has continued to benefit from military spending through the present day. Even in the civilian sector, the controversy over subsidies from European governments for the development of Airbus aircraft shows that the issue of state aids can continue to play a significant role even after the maturation of a particular industry. This situation is especially true in areas of strategic importance, such as aircraft, steel, or launch vehicles and services, where subsidies encourage production even if there is overcapacity in the worldwide market.

A recent attempt to subsidize the U.S. launch vehicle and services industry was the July 1, 1992 approval of the Commercial Space Competitiveness Act of 1992 by the Science, Space and Technology Committee of the U.S. House of Representatives. This bill, H.R. 3848, includes a provision in which the government would give matching grants to the commercial sector for improvements to the nation's commercial space launch infrastructure.⁹ The initiator of this provision was Representative Jim Bacchus (D-FL), whose district includes the Kennedy Space Center and Cape Canaveral Air Force Station. When he introduced his bill, Rep. Bacchus stated that the legislation "is a vital step toward ensuring that America's commercial space industry can compete with France, Japan and other countries that are substantially subsidizing their efforts."¹⁰ Senator Bob Graham (D-FL) has introduced a bill with a similar provision (S. 2789), which is pending in the United States Senate. While it is unlikely that this provision will become law before the end of this Congress, it shows that governments are looking for novel ways to promote their launch vehicle and services industries.

Other Non-Tariff Trade Barriers

State aids are perhaps the most prevalent, but by no means the only, type of non-tariff trade barrier. Other such barriers include technical specifications and standards, environmental and worker safety regulations, rules of origin and marking, and domestic content requirements. Perhaps the most notorious example of domestic content restrictions is the Buy American Act of 1988,¹¹ as amended. Presumably,

this legislation could be applicable to the procurement of non-U.S. launch vehicles and services.

Procurement of Launch Vehicles and Services in the United States

The U.S. government plays three different types of roles in the launch vehicle and services sector. The traditional, and still most common, role is the government as purchaser of launch vehicles and services from commercial entities. The second role, government as provider of launch services, gained prominence with the enactment of the Commercial Space Launch Act of 1984.¹² The third role is government as regulator and promoter of private transactions in the launch vehicle and services industry. This latter role was clarified by the Commercial Space Launch Act Amendments of 1988.¹³ Because Articles VI and VII of the Outer Space Treaty¹⁴ provide that states are internationally responsible and liable, respectively, for space activities conducted by domestic entities, governments always have some role in the procurement of launch vehicles and services. The different roles of government involvement in the launch vehicle and services industry simply reflect the various characters and extent of government involvement.

The Government as Purchaser of Launch Vehicles and Services

The traditional role of government as purchaser of launch vehicles and services has its roots in basic government contract law. For example, Section 203(c)(5) of the National Aeronautics and Space Act authorizes NASA

to enter into and perform such contracts, leases cooperative agreements, or other transactions as may be necessary in the conduct of its work and on such terms as it may seem appropriate, with any agency or instrumentality of the United States, . . . or with any person, firm, association, corporation, or educational institution. . . .¹⁵

Procurement of launch vehicles and services by NASA and other U.S. government agencies is conducted pursuant to the Federal Acquisition Regulation (FAR).¹⁶

The Government as Provider of Launch Services

In light of growing competition by the European Ariane launch vehicles, the U.S. government began to search for ways to promote the domestic commercial launch vehicle and services industry in the early 1980s. The result of these efforts was the Commercial Space Launch Act of 1984 (CSLA).¹⁷ This legislation established the Office of Commercial Space Transportation (OCST) in the Department of Transportation to license and regulate the commercial launch vehicle and services industry.¹⁸

The CSLA was intended to go beyond the mere regulation of the commercial launch vehicle and services industry. It was also designed to promote the development of the industry by making government facilities available to the commercial industry on a cost reimbursable basis, and by promoting the use of commercial launch vehicles and services by U.S. government agencies. Under the CSLA, government agencies would purchase launch services rather than the launch vehicles themselves. Therefore, unlike the traditional procurement approach, the government would not gain title to the launch vehicles.¹⁹ The use of government facilities by the commercial launch vehicle and services industry is usually based on a model agreement approved by NASA and the U.S. Air Force in 1983, and revised in 1988.²⁰

The Government as Regulator and Promoter of Private Transactions

The CSLA succeeded in generating interest in the commercial launch vehicle and services industry. However, a spate of launch failures in the mid-1980s resulted in a meteoric rise in insurance costs that stunted the growth of the fledgling industry.²¹ In response, Congress enacted the CSLA Amendments of 1988.²² Under the CSLA, commercial launch providers already were required to obtain liability insurance for claims by third parties.²³ However, with regard to liability between launch participants, the 1988 Amendments required each launch provider that received a license

from the OCST to obtain cross-waivers of claims from each launch participant.²⁴ In effect, Congress was reducing the insurance burden by requiring launch providers to obtain liability insurance only for third party claims, and by forcing launch participants to bear their own risk. The launch participants were then free to obtain separate insurance for their launch vehicles or satellites, or to self-insure their assets.

This policy of spreading risks among launch participants was tested in a federal court case regarding the launch failure of the International Telecommunications Satellite Organization (INTELSAT) satellite that was recently rescued by the U.S. Space Shuttle. In this case, Martin Marietta, the launch provider, obtained a launch license from the OCST, and entered into cross-waivers with INTELSAT as required by the CSLA Amendments of 1988. Martin Marietta's first argument was that, even absent express provisions, the new policy imputed cross-waivers into launch contracts that preempted any tort claims by INTELSAT for the launch failure. The court rejected this argument, noting that

Nowhere does the statutory language even begin to suggest that cross waivers will be imputed into contractual agreements which do not contain express cross waiver provisions. The statute requires only that the licensee include cross waivers in its contract. Should the licensee fail to comply with such requirements, the Department of Transportation has the power to revoke the launch provider's license or otherwise discipline the license holder. However, nothing in the language of the statute indicates that a launch participant cannot be held liable if the contract does not contain the required waivers.²⁶

The court also noted that the

license itself stated that if Martin Marietta failed to enter into cross-waivers for claims arising from launch failures, "Martin Marietta shall indemnify and be responsible for any and all liability, loss or damage resulting from such failure."²⁷

Once the court refused to give the cross-waivers preemptive force, INTELSAT was free to raise its tort claims of negligence, gross negligence, and negligent misrepresentation. However, the court refused to reach beyond the contract, stating that

In the case at bar, the parties had the opportunity to allocate the risk of economic loss to third parties, and were both sufficiently sophisticated to allocate the risk between themselves. Under Article 17.5.2 of this contract, INTELSAT agreed to assume responsibility for purchasing insurance to protect its property, but in fact, failed to purchase such insurance. Had it done so, the damage to INTELSAT's satellite and booster motor, as well as its lost profit, and costs to attempt rescue, could have been covered.²⁸

The court rejected the negligent misrepresentation theory, because "the contract itself imposes no duty on Martin Marietta to exercise due care to avoid negligence, and thus an action in tort is improper."²⁹ The court also denied the negligence and gross negligence claims stating that the intent of Congress was to bar recovery in all cases.³⁰

If this court were to invalidate the subject tort claim waivers as they apply to gross negligence, it would substantially undermine the protections Congress intended for commercial space launchers. Plaintiffs would be able to sue for damages on every imperfect space launch, simply by claiming under a gross negligence theory rather than an ordinary negligence theory. The resulting cost of litigation, as well as the potential exposure, would require launch providers

to obtain expensive insurance, if available, or alternatively to self insure and "bet the farm" on every space launch. This is precisely the situation Congress sought to avoid.³¹

The court's decision in Martin Marietta seems to implement the intent of Congress to spread the risk across launch participants, rather than requiring the launch provider to insure against all risks. However, after the contract issues were decided on November 19, 1991, the entire case was appealed by INTELSAT to the U.S. Court of Appeals for The Fourth Circuit on January 3, 1992. Oral argument at the Court of Appeals was held on June 3, 1992, and a decision on the legal conclusions of the district court could be issued by the time this paper is published.

The finding of no preemption is more likely to stand, because it has strong bases in both statutory construction and public policy. On the other hand, the district court's treatment of the tort claims is much weaker. For example, the very real differences between simple negligence and gross negligence were subsumed by the broad interpretation of congressional intent.

Notwithstanding possible modifications to the district court's decision, the Court of Appeals is likely to uphold the general intent of Congress. As more commercial entities procure, as well as supply, launch vehicles and services, it is essential that risks be spread among the participants. Due to the complexity and cost of space activities, participants in launch activities will undoubtedly be found to be sophisticated commercial actors who cannot rely on the courts to remedy their commercial deficiencies. This situation was recognized by the district court in Martin Marietta when it stated

As mankind ventures forth from the home planet, great hazards, known and as yet unknown, will confront us. Now, and perhaps for as long as the human race seeks to go where it has not

gone before, there shall be missions which cannot not be "safe" as that term is used in the context of terrestrial activities. Those who seek to explore, and to exploit, outer space should do so charged with acceptance of the unknown, and perhaps unknowable, perils to be faced in that vast and potentially hostile environment.³²

International Procurement and Export Controls

The international procurement of launch vehicles and services has greater risks and creates greater concerns than the allocation of risks among domestic entities. Because launch vehicles and other spacecraft have military, as well as civilian, capabilities, space-faring nations have national security interests in controlling launch vehicle proliferation. The method of control can be domestic or transnational.

U.S. Export Controls

In the United States, the current export control regime is administered by both the State Department and the Commerce Department. Many space-related exports are controlled by the State Department under the Arms Export Control Act (AECA)³³, as amended. Under the authority of the AECA, the State Department has issued the International Traffic in Arms Regulations (ITAR), which includes the United States Munitions List (USML).³⁴ On April 22, 1992, the State Department proposed amending the USML to create a new category for spacecraft to streamline export of communications satellites.³⁵ However, the export of launch vehicles will remain tightly controlled under Category IV of the USML.³⁶

While the export of complete launch vehicles and missiles is controlled under the USML, machinery and component parts that may be used in programs by other countries to develop launch vehicles can be considered "dual use" items. Such items may have both civilian and military uses, and their export is regulated by the Commerce Department under the Export Administration Act (EAA)³⁷, as amended. The EAA authorized the Commerce Department to issue the Export Administration Regulations

(EAR), which include the Commerce Control List (CCL).³⁸ The CCL is the counterpart to the USML, and includes dual use items.

On June 16, 1992, the Commerce Department amended the EAR to clarify "which destinations require a validated license when an exporter knows that the items will be used in the design, development, production or use of missiles."³⁹ The interim rule added a list of missile technology projects, countries and regions to Supplement No. 6 of Part 778 of the EAR. This list identified launch vehicle programs in Brazil, China, India, Iran, North Korea, Pakistan, South Africa and Middle Eastern countries as restricted destinations.⁴⁰

Although this rule for the first time listed specific countries and launch vehicle programs, it has been criticized for not also listing commercial entities. Countries "are not going to write a letter to some company saying 'we want to import some parts for our new missile.' It doesn't happen that way."⁴¹ Instead, countries wishing to circumvent the regulations would likely transship through corporations registered in third countries that are not subject to the restrictions. Nevertheless, the new rule shows that the United States is focusing greater attention on proliferation of launch vehicle technology to developing countries in the aftermath of the superpower conflict.

The Missile Technology Control Regime

The Missile Technology Control Regime (MTCR) was first established by the Group of Seven industrialized nations as a multilateral effort to control the proliferation of launch technology. Most countries with launch capability are either members of the MTCR or have stated that they will comply with its policies. However, the MTCR has neither formal authority nor power to enforce its policies. While the MTCR, like the Coordinating Committee on Multilateral Export Controls (COCOM), can coordinate policy on restricting exports of items that can be

used in launch vehicle programs, each state must implement those policies in its own regulations. The MTCR thus has limited direct influence on the international procurement of launch vehicles. Nevertheless, as more states obtain launch capabilities, the MTCR can play an important role in preventing misunderstandings, and in coordinating multilateral responses to specific issues.

Example: The Sale of Russian Rocket Engine Technology to India

In early May 1992, India reported that Russia would honor an agreement by the former Soviet Union to sell rocket engine technology to India.⁴² The Bush administration responded on May 11 with a two-year ban on U.S. trade with the Russian commercial space entity Glavkosmos and the Indian Space Research Organization (ISRO).⁴³ U.S. officials noted that the rocket engines were capable of powering launch vehicles that would have ranges beyond the threshold set by the MTCR, and that Russia had pledged to abide by the MCTR guidelines. U.S. State Department spokesman Richard Boucher stated that "neither guidelines nor our law make any distinction between the technology that is used in ballistic missiles and the technology for space-launched vehicles. The technology for both systems is virtually identical."⁴⁴ The head of Glavkosmos, Nikolai Semyonov, characterized the trade sanctions as retaliation for the loss of the Indian engine contract by U.S. contractor General Dynamics. "This is a hidden attempt to liquidate the space industry of Russia, which is quite competitive today on the world market."⁴⁵ Russian and Indian officials stated that U.S. sanctions would not prevent them from proceeding with the contract.

This example illustrates how commercial and military interests can come into conflict in the area of international procurement and trade in launch vehicles and services. On the one hand, the U.S. official is correct when he stated that the capabilities are virtually identical regardless of whether the intended use is commercial or military. On the other hand, as more countries obtain capabilities in launch vehicle technology, they will undoubtedly seek to capitalize on that expertise in the international market. This temptation is especially true for states in need of hard currency such as Russia

and China. Large developing countries with space expertise, such as India and Brazil, also have incentive to export launch vehicle technology to raise capital to service their foreign debts. In light of strong interests such as these, it will be difficult for developed countries to control the international procurement and trade of launch vehicles and services.

Conclusions and Recommendations

The preceding discussion shows that launch vehicles and services have a unique status in the world of procurement and trade. As a result of their dual civilian and military capabilities, launch vehicles and services have been largely exempt from the general principles of procurement and trade. In addition, they have also enjoyed protection from the international marketplace through state aids and other non-tariff trade barriers. In the United States, the government continues to play its traditional role as a purchaser of launch vehicles and services, and it has recently assumed the role of provider of launch services to the commercial sector. The U.S. government also plays the role of regulator and promoter of the launch vehicle and services industry by requiring that the risk of space activities be spread among launch participants. With regard to international procurement and trade, states regulate exports through domestic regulations such as the U.S. ITAR and EAR, and through multilateral efforts such as the MTCR. However, examples such as the sale of Russian rocket engine technology to India show that such efforts have their limitations.

If the current space-faring nations truly wish to prevent the proliferation of launch vehicle technology, they must address the legitimate interests of states seeking such capability. First, the space-faring nations must ensure that all states benefit from these activities. Reaching this goal does not require that each state have its own launch capability, because that would result in overcapacity in the worldwide market. Instead, all states should be assured access on reasonable

terms to launch services for peaceful uses of outer space. Second, the application of general principles of procurement and trade to the launch vehicle and services sector requires further study. Likewise, the impact of state aids and other non-tariff trade barriers on this industry also requires further study. The result of such studies may show that the prestige associated with having a launch capability would be diminished in a more competitive marketplace. Finally, states should seek ways in which to expand international cooperation in the procurement and trade of launch vehicles and services.

Notes

- 1 General Agreement on Tariffs and Trade, Oct. 30, 1947; 61 Stat. (5), (6); 55 UNTS 194 (1948), at Art. III.
- 2 19 U.S.C. § 2901.
- 3 19 U.S.C. § 2901(b)(9)(A)(i).
- 4 19 U.S.C. § 2901(b)(9)(B).
- 5 19 U.S.C. § 2901(b)(3).
- 6 Pub. L. 98-369, Title VII, July 18, 1984, 98 Stat. 1175.
- 7 48 C.F.R. § 1806.2.
- 8 48 C.F.R. § 1806.3.
- 9 "House Science Would Boost Commercial Launches, 'Voucher' Test," Aerospace Daily, July 2, 1992, at 14.
- 10 Halvorson, "Bill Would Help States Develop Commercial Space Industry," Gannett News Service, Nov. 25, 1991.
- 11 Pub. L. 100-418, Title VII, Aug. 23, 1988, 102 Stat. 1545.
- 12 Pub. L. 98-575, Oct. 30, 1984, 98 Stat. 3055, codified at 49 U.S.C. app. § 2601 et seq.
- 13 Pub. L. 100-657, Nov. 15, 1988, 102 Stat. 3900.
- 14 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the

Moon and Other Celestial Bodies, Jan. 27, 1967, 18 U.S.T. 2410, TIAS 6347, 610 UNTS 205 (effective Oct. 10, 1967).

- 15 42 U.S.C. § 2473.
- 16 Title 48, Code of Federal Regulations.
- 17 Supra, Note 12.
- 18 See 14 C.F.R. § 400 et seq.
- 19 Frankle, "Commercial ELV Services and the National Aeronautics and Space Administration: Concord or Discord?" Proc. 30th Colloq. L. Outer Space, at 216-223. (This discussion, by NASA's then Deputy General Counsel, explains NASA's practices between enactment of the CSLA in 1984 and the CSLA Amendments of 1988.)
- 20 Department of the Air Force, Expendable Launch Vehicle Commercialization, Model Agreement, Revision One, Feb. 12, 1988, reprinted in "Space Law and Related Documents", S. Print 101-98, 101st Cong., 2d Sess., at 547-563 (1990).
- 21 "Insurance and the U.S. Commercial Space Launch Industry," 100th Cong. 2d Sess., at 4-5 (Comm. Print 1988).
- 22 Supra, Note 13.
- 23 49 U.S.C. app. § 2615(a)(1)(A).
- 24 49 U.S.C. app. § 2615(a)(1)(C).
- 25 Martin Marietta Corp. v. INTELSAT, 763 F. Supp. 1327 (D.Md. 1991).
- 26 Id. at 1330.
- 27 Id., quoting the launch license.
- 28 Id. at 1332.
- 29 Id. at 1333.
- 30 Id. at 1333-34, citing S. Rep. No. 593, 100th Cong. 2d Sess. 14 (1988), reprinted in 1988 USCCAN 5525, 5538.

- 31 763 F. Supp. at 1334.
- 32 Id.
- 33 Pub. L. 90-629, Oct. 22, 1968, 82 Stat. 1320.
- 34 22 C.F.R. § 120 et seq.
- 35 57 Fed. Reg. 14671.
- 36 22 C.F.R. Part 121.
- 37 Pub. L. 91-184, Dec. 30, 1969, 83 Stat. 841.
- 38 15 C.F.R. § 799 et seq.
- 39 57 Fed. Reg. 26773.
- 40 Id. at 26774.
- 41 "New Missile Control Regulations Seen Falling Short of Need," Aerospace Daily, June 18, 1992, at 456-57.
- 42 Hazarika, "Moscow Affirms Sale of Technology to India," New York Times, May 7, 1992.
- 43 Smith, "U.S. Imposes Sanctions Against Russian, Indian Concerns Over Rocket Deal," Washington Post, May 12, 1992.
- 44 Id.
- 45 "Commercial Space Market Drives U.S. Sanctions, Russian Officials Say," Aerospace Daily, May 14, 1992, at 252-53.