Sundstrand Corporation and Subsidiaries, Petitioner v. Commissioner of Internal Revenue, Respondent

Docket No. 26230-83

UNITED STATES TAX COURT

96 T.C. 226; 1991 U.S. Tax Ct. LEXIS 12; 96 T.C. No. 12

February 19, 1991, Filed

DISPOSITION:

[**1]

Decision will be entered under Rule 155.

SYLLABUS:

During 1977 and 1978, petitioner and its subsidiaries manufactured and sold numerous products, including the constant speed drive (CSD), an extremely complex avionic device used to drive an airplane engine's generator at a constant speed regardless of the speed of the engine. In 1974, petitioner decided to expand the operations at SunPac, petitioner's wholly owned foreign subsidiary located in the Republic of Singapore, to include the production of CSD's. Pursuant to a license agreement entered into in July 1975, petitioner gave SunPac the exclusive right to use petitioner's industrial property rights for the manufacture of certain CSD spare parts in Singapore; the nonexclusive right to sell the spare parts anywhere in the world; the nonexclusive right for SunPac or its customers to use the parts anywhere in the world; the right for SunPac to subcontract in Singapore to third parties the partial manufacture of the spare parts; and the authorization for SunPac's use of petitioner's trademarks which petitioner normally used in the sale of similar products. Petitioner also agreed to furnish copies of the existing industrial property rights [**2] petitioner used in the manufacture of the products and to give SunPac reasonable technical assistance for the startup of SunPac's manufacture of the spare parts. SunPac agreed to pay to petitioner for these rights and for the assistance rendered to SunPac a royalty of 2 percent of the net selling price of each spare part manufactured and sold by SunPac. Petitioner purchased all of SunPac's output through 1978 at petitioner's catalog price less a 15-percent discount pursuant to a distributor agreement petitioner and SunPac entered into in 1976. *Held*, respondent abused his discretion under *sec.* ***482,*** *I.R.C.* 1954, when he determined that SunPac acted as a subcontractor of petitioner. *Held, further*: The royalty contained in the license agreement did not constitute an arm's-length consideration for the use by SunPac of petitioner's intangibles, and the transfer price of petitioner's catalog price less a 15-percent discount did not constitute an arm's-length consideration for the SunPac parts petitioner purchased from SunPac. However, respondent's sec. **482** adjustments were unreasonable. Sec. 1.482-2(b), (d), and (e), Income Tax Regs., applied to determine the proper sec. **482** [**3] adjustments. *Held, further*, petitioner is entitled to claim foreign tax credits for 1977 and 1978 applicable to Singapore income taxes paid on the royalty payments SunPac made to petitioner for those years. *Held, further*, petitioner is not subject to increased interest under sec. 6621(c).

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[**4]

COUNSEL:

John C. Klotsche, Michael Waris, Jr., James M. O'Brien, Mark A. Oates, Bertrand M. Harding, Jr., Robert H. Albaral, and *Neil D. Traubenberg*, for the petitioner.

Reid M. Huey, Joel D. Arnold, Elaine H. Geer, and *David L. Zoss*, for the respondent.

JUDGES:

Hamblen, *Judge*.

OPINIONBY:

HAMBLEN

OPINION:

[*231] Respondent determined deficiencies of $ 1,569,156 and $ 5,931,159 in petitioner's n1 Federal income tax for taxable years ending December 31, 1977, and

[*232] December 31, 1978, respectively (hereinafter sometimes referred to as the years in issue).

- - - - - - - - - - - - - - - - - - -Footnotes- - - - - - - - - - - - - - - - - - -

n1 The term "petitioner" is used to reference Sundstrand Corp. singularly and does not refer to its domestic subsidiaries which joined in the consolidated Federal tax returns for taxable years 1977 and 1978.

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STATEMENT OF ISSUES

The issues involved in this case are as follows:

1. Whether respondent's allocations of gross income under section **482** n2 for the years in issue were arbitrary, capricious, and unreasonable.

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n2 All section references are to the Internal Revenue Code of 1954 as amended and in effect for the years in issue unless otherwise indicated. All Rule references are to the Tax Court Rules of Practice and Procedure unless otherwise provided.

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[**5]

2. Whether royalties paid to petitioner by Sundstrand Pacific (Pte) Ltd. (hereinafter referred to as SunPac), petitioner's wholly owned foreign subsidiary located in the Republic of Singapore, for the years in issue for certain intangible property rights SunPac acquired from petitioner were paid at an arm's-length consideration under section **482.**

3. Whether the prices paid by petitioner to SunPac for certain spare parts sold to petitioner by SunPac during the years in issue were paid at an arm's-length consideration under section **482.**

4. Whether petitioner is entitled to foreign tax credits under section 901 for the years in issue for Singapore income taxes imposed on royalties paid to petitioner by SunPac for those years.

5. Whether petitioner, a publicly held manufacturing corporation, is subject to the increased interest of section 6621(c); n3 more specifically, whether there has been a "valuation overstatement" in each year as described in section 6621(c)(3)(A)(i).

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n3 Respondent raised this issue by amendment to answer. His amendment to answer refers to sec. 6621(d). This section was redesignated as sec. 6621(c) by sec. 1511(c)(1)(A) of the Tax Reform Act of 1986, Pub. L. 99-514, 100 Stat. 2085, 2744. For simplicity, we will refer to this section as sec. 6621(c). [Sec. 7721(b) of the Omnibus Budget Reconciliation Act of 1989, (hereinafter referred to as OMBR-1989) Pub. L. 101-239, 103 Stat. 2106, 2399, repealed sec. 6621(c) effective for returns with a due date (determined without regard to extensions) after Dec. 31, 1989.]

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[**6]

FINDINGS OF FACT

Some of the facts have been stipulated and are found accordingly. The stipulation of facts, the supplemental

[*233] stipulation of facts, and the attached exhibits are incorporated herein by this reference.

I. BACKGROUND

A. *In General*

Sundstrand Corp. is a Delaware corporation with its principal offices in Rockford, Illinois. During the taxable years in issue, petitioner was a public corporation whose stock was traded on the New York Stock Exchange, the Midwest Stock Exchange, and the Pacific Stock Exchange. During taxable years 1977 and 1978, petitioner and its consolidated subsidiaries maintained their books and filed their Federal income tax returns on the accrual method of accounting, using a calendar year.

Petitioner was incorporated in 1910 as an amalgamation of two Rockford-based machine tool companies. Petitioner's two original product lines were machine tools and hydraulic equipment.

During 1977 and 1978, petitioner manufactured and sold products in three broad product areas: (1) Power transmission, (2) heat and fluid handling, and (3) advanced technology. The power transmission line includes transmissions and fuel pumps for nonaviation vehicular [**7] and industrial applications. The heat and fluid handling line includes refrigeration units, compressors, and pumps for various industrial applications. The advanced technology line includes aviation and nuclear power components and machine tools. n4

- - - - - - - - - - - - - - - - - - -Footnotes- - - - - - - - - - - - - - - - - - -

n4 Petitioner sold its domestic machine tool business in 1977 and its foreign machine tool business in 1978 to White Consolidated Industries, Inc.

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Petitioner's advanced technology group is responsible for the aviation division. Petitioner's advanced technology group manufactures a number of aviation products, including, among other things, constant speed drives (hereinafter referred to as CSD's), see *infra*, generators, and controls; electric motors to drive pumps, fans, compressors, and actuators; pumps; engine start systems; air turbine motors; primary and secondary flight controls consisting of power drive units, gearboxes, linear and rotary actuators, and asymmetric and torque-limiting brakes for commercial and

[*234] military aircraft and the space shuttle; [**8] auxiliary power units; missile and space vehicle power systems to supply hydraulic, electrical, or pneumatic power; digital flight data recorders; cockpit voice recorders; digital avionic systems; ground proximity warning systems; stall warning systems; anti-ice systems; environmental control systems; movie and stereo music entertainment systems; and refrigeration systems for galleys and water coolers.

In 1977 and 1978, petitioner's aviation division consisted of four product groups: (a) Electric power, (b) mechanical, (c) energy, and (d) nonproprietary products. The electric power division's principal product line for those years was the CSD. This case involves intercompany transfers of aviation parts which are component elements of the CSD.

Internal reports prepared by petitioner for 1977 and 1978 show the following financial information for the aviation division:

	1977 (rounded)	1978 (rounded)
Net sales		
Aviation division	$ 197,459,299	$ 202,697,381
Electric power	95,602,807	100,024,291
CSD's	94,079,416	
CSD's-commercial		54,768,192
CSD's-military		38,024,583
Gross profit		
Aviation division	63,134,426	52,547,719
Electric power	46,749,110	37,467,642
CSD's	46,104,306	
CSD's-commercial		18,443,813
CSD's-military		15,967,530
Net earnings before taxes		
Aviation division	7,276,206	(791,151)
Electric power n5	31,469,801	19,234,513
CSD's	32,090,582	
CSD's-commercial		7,878,933
CSD's-military		9,519,823

[**9]

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n5 The mechanical, energy, and nonproprietary divisions reported net losses for 1977; the mechanical and energy divisions reported net losses for 1978. The record does not show a breakdown of earnings for the electric power division by product line other than for the CSD's.

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[*235] B. *The CSD*

During World War II, the General Electric Co. (hereinafter referred to as General Electric) was the system manager and did the system testing for the U.S. Air Force's B-36 aircraft program. The B-36 program began production in 1946. Petitioner, as a subcontractor of General Electric, was the hydraulics manufacturer for the B-36. The B-36 was a large bomber which needed a great deal of electric power. This power had to come from the shaft of the aircraft engine. Since the engine runs at different speeds, such as at takeoff and landing, to get a constant frequency out of the generator n6 a device had to be interposed between the aircraft engine and generator to drive the generator at a constant speed regardless of the [**10] speed of the engine. Petitioner designed and developed the CSD for this purpose. General Electric designed the generator and its controls as well as the governor for the CSD.

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n6 The generator generates the electricity that is used for all of the avionics equipment on the airplane.

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Petitioner has manufactured the CSD since 1946. The first commercial applications of petitioner's CSD's were in the Douglas DC-8 and the Boeing 707 aircraft programs which began production in 1956. Petitioner does not hold any patents on the design of the CSD or CSD parts but does hold some patents on the manufacturing process for CSD parts. The record does not disclose the extent or value of any such patents.

The BOE60 application is a CSD model used on certain Boeing 707 and 727 aircraft. The total number of piece parts in a BOE60 CSD unit is 1,047. Of these, petitioner or its subsidiaries manufacture 249 parts (23.8 percent); subcontractors manufacture **482** parts (46 percent) to petitioner's specifications; and others manufacture [**11] 316 parts (30.2 percent) to industry standards. The parties have stipulated that these numbers, and the percentage in each category, are typical of all petitioner's CSD units manufactured and sold during 1977 and 1978.

[*236] 1. *Operation*

An aircraft's engines are the primary power source in jet aircraft. In addition to providing the flight power, the engines also run the aircraft's generators which produce the electrical power for the aircraft. A CSD is a hydromechanical transmission mounted on an aircraft's jet engine which takes a variable input speed from the engine gearbox and converts it to a constant output speed to power the aircraft's generator. The major functional units of the CSD are the differential, the hydraulic unit, and the governor. They work together to transfer the torque provided by the engine to the generator at a controlled, constant speed. Each engine pod of the aircraft contains one engine, one CSD, and one generator. The CSD prevents, for example, the airplane's lights from brightening as the engines are revved.

A hydraulic differential drive transmits power from the engine to the generator by hydraulics. Between 1946 and 1961, petitioner produced [**12] hydraulic differential CSD's. The hydraulic differential CSD, however, requires an overhaul every 500-1000 flight hours and its weight and size make it unattractive for utilization on the commercial jet aircraft which began production in the late 1950s.

In 1959, variable speed constant frequency (hereinafter referred to as VSCF) technology emerged as a serious competitor to petitioner's CSD. The VSCF converts the variable frequency produced by the generator to a constant frequency by electrical means.

Until 1960, petitioner's hydraulic CSD's were the best products on the market for jet aircraft. However, petitioner recognized the limitations of its hydraulic CSD and, in 1960, undertook an ambitious development program to redesign its CSD to meet the VSCF threat. Petitioner's development efforts produced, in 1961, the axial gear differential CSD (hereinafter referred to as the AGD CSD). The AGD CSD, a hydraulic differential device, relies primarily on mechanical parts rather than hydraulics to transmit power from the engine to the generator. The first AGD CSD was ordered in 1961.

The AGD CSD revolutionized hydromechanical transmission technology by establishing new standards [**13] for weight, size, reliability, and performance. The AGD CSD improved reliability by increasing the unit's operating time between

[*237] overhauls. It reduced weight and size. Moreover, the AGD CSD improved efficiency due to the efficacious power path of the differential gear set.

The development of the integrated drive generator (hereinafter referred to as the IDG) in 1968 also helped petitioner stave off the advent of the VSCF. The IDG is a refinement of the AGD CSD. It employs most of the principles of the AGD CSD but has a better method of oil-cooling the generator so that the CSD and the generator are more intimately wedded to each other. It also makes a further reduction in the size and weight of the package.

Since developing the CSD in the late 1940s, petitioner has been selected as the transmission contractor on substantially all Western commercial and military jet aircraft programs. Of the CSD's manufactured in the United States starting with year ordered 1946 and ending with year ordered 1978, there were 103 programs or applications for the CSD; Sundstrand was selected for 88 of those applications.

The AGD CSD commenced the ascendancy of petitioner as a dominant [**14] manufacturer and seller worldwide of CSD's for aircraft jet engines. After 1959, virtually every competitive airframe contract pitted petitioner's AGD CSD against the VSCF system. Petitioner's CSD's were selected for most of the airplane programs between 1959 and 1978. After approximately 1964, other competitors' CSD's became somewhat obsolete because of petitioner's AGD CSD. Between 1963 and 1978 there were 55 aircraft applications of the CSD manufactured in the United States; Sundstrand was selected for all but one of these applications.

In the early 1970s, however, petitioner's CSD unit was replaced by a VSCF system on the A-4 airplane, a moderately small military application. Moreover, in 1977, McDonnell Douglas, at the urging of the U.S. Navy, selected a VSCF system on the F-18 airplane program, a very large application.

Evans W. Erikson (hereinafter referred to as Mr. Erikson), at the time of the trial petitioner's chairman of the board and chief executive officer, attributes petitioner's success in the CSD market to petitioner's willingness to invest heavily in research and development on new and

[*238] improved CSD's, which no other company was willing to do. Indeed, [**15] according to Mr. Erikson, since 1959, petitioner has spent more money on the continued development of CSD's than all of its competitors combined.

2. *Marketing CSD's*

The CSD primary market consists of unit sales to airframe manufacturers such as Boeing and McDonnell Douglas for installation on new aircraft, generally called original equipment manufacturer units (hereinafter referred to as OEM units). The competitive selection process begins as much as 2 years before the airframe manufacturer makes the final decision to produce the aircraft. At this stage, petitioner (as would its competitors) provides the manufacturer with information concerning its CSD unit. Additionally, petitioner works with the airframe manufacturer to determine the program's requirements. After the airframe manufacturer identifies the company selected to build the engine for the program, petitioner works with the engine company as well. Thus, at the end of the first stage of the competitive selection process, petitioner has a reasonably complete technical definition of its proposal should the airframe manufacturer decide to proceed with construction of that airplane program.

The second stage in the selection [**16] process begins when the airframe manufacturer commits to build the aircraft. At this time, the airframe manufacturer issues a "request for proposal" to the various OEM unit manufacturers. Petitioner defines the engineering aspects of the unit in detail and extensively reviews the customer's specifications to satisfy all design requirements. Moreover, petitioner analyzes its costs to supply the particular aircraft program.

3. *Pricing CSD's*

Petitioner groups its expected program costs into (1) nonrecurring costs and (2) recurring costs. Nonrecurring costs are one-time startup costs associated with the unit's development. Nonrecurring costs include development and qualification costs, certification and flight testing costs, special tooling, and test equipment. Recurring costs are costs associated with the production and installation of the

[*239] OEM units. Recurring costs include all material, labor, and overhead costs as well as an allocation of general and administrative, marketing, and corporate expenses.

Petitioner includes in its cost consideration projected product support and warranty costs, which generally amount to approximately 3 to 5 percent of the sales price. [**17] As part of the original contract, petitioner provides a training program associated with the installation of the OEM unit and also provides periodic training classes for the airlines.

Once petitioner has qualified its nonrecurring and recurring costs, petitioner determines the OEM unit bid price. Petitioner prices its OEM units to recover both recurring and nonrecurring costs. Additionally, petitioner includes in its program bid what it considers to be a reasonable profit on each particular unit.

In determining the price, petitioner considers the number of units the airframe manufacturer specifically asks petitioner to build and the period of time the airframe manufacturer asks petitioner to commit to a firm, fixed price to satisfy the first 3 or 4 years of the manufacturer's production run (the initial launch period). At the end of the initial launch period, petitioner and the airframe manufacturer enter into a new contract, repricing the OEM units for an additional 3 years. This repricing process can be repeated as many as seven to eight times during the life of a program.

The severity of the competition for the program directly affects petitioner's OEM bid price. Petitioner [**18] typically prices its OEM units at a level which makes them immediately profitable to petitioner. n7 On some aircraft programs, airframe manufacturers have selected petitioner as the CSD OEM manufacturer even though petitioner was not the lowest bidder.

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n7 In the case of the 747 program, however, the severe competition caused petitioner to offer a bid price slightly below costs for the initial launch period. Nonetheless, petitioner intended to price the OEM units over this program's life in such a way as to make the OEM unit sales profitable overall to petitioner.

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[*240] C. *Spare Units and Spare Parts*

1. *Sales*

In addition to manufacturing and selling OEM units, petitioner also sells spare CSD units (hereinafter referred to as spare units) and spare parts. A spare unit is any unit not originally installed in the airplane by the airframe manufacturer. Spare unit customers are primarily commercial airlines who place spare units strategically throughout their flight routes in the event of a CSD failure. [**19] Some spare units are sold directly to the airframe manufacturer for resale as either part of a general provisioning package with the airline or as a quick-change engine kit.

Petitioner's commercial products support department is responsible for petitioner's sales of spare parts and spare units. This activity consists principally of order administration and order processing functions. No marketing or selling activities are undertaken to sell spare parts and spare units in the commercial market. Throughout the 1970s, petitioner's product support had an extremely poor reputation. During this time, petitioner was 50-percent delinquent in delivering spare parts.

Historically, petitioner generally supplies the spare parts for the units on which it has the CSD contract. Once an airframe manufacturer selects petitioner's CSD unit for an aircraft, petitioner is virtually assured of the spare unit and spare parts market for the life of the airframe program, often for as long as 20 years.

2. *Pricing*

a. *Spare units*.

Petitioner sets its spare units price as a function of the OEM unit price. When spare units are first priced for a new program, petitioner usually charges the OEM unit [**20] price plus 50 percent. Petitioner reviews the pricing of the spare units once a year or so and slowly increases the price to as much as two to two and one-half times the price of the OEM unit. During the early 1970s, the spare unit price was 150 to 200 percent of the OEM unit price. By the late 1970s, petitioner increased that ratio to 200 to 250 percent of the OEM unit

[*241] price. Petitioner does not have published catalog prices for spare units. It quotes these prices by telephone. However, at any given time all customers are charged the same price for the spare units.

b. *Spare parts*.

Petitioner publishes an annual catalog (the spare parts price list) which states the sales prices for petitioner's spare parts (hereinafter referred to as the catalog price). Petitioner sells substantially all of the commercial spare parts shown in the spare parts price list at 100 percent of the catalog price at the time the order is placed regardless of whether the customer is an airframe manufacturer or an airline. n8

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n8 There is evidence in the record that in approximately 1 percent of the spare part sales for 1977 and 1978, the invoice price was less than the catalog price. The record does not explain why the catalog price was not charged for these sales.

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[**21]

Petitioner arrives at the spare parts prices in two ways. First, it looks at the catalog prices for similar kinds of parts. Then petitioner compares the total breakdown of the parts that go into a spare unit to ensure that the total cost of the sum of the spare parts which would comprise an assembled CSD does not exceed the price of a spare unit after taking into consideration the cost of assembling and testing the spare unit.

II. THE STARTUP OF CSD OPERATIONS AT SUNPAC

A. *Background*

Up to 1974, the aviation division had two manufacturing facilities: Rockford, Illinois, and Denver, Colorado. The Denver facility was the primary CSD parts manufacturer for the aviation division. The Rockford facility primarily was the manufacturer of the outside housings for CSD's. It also was responsible for the final assembly of the CSD's and testing of petitioner's CSD products.

In 1974, petitioner's Rockford and Denver CSD facilities operated at full capacity or what petitioner's management considered to be full capacity. n9

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n9 There was testimony at the trial that at the time the decision was made to have SunPac manufacture CSD spare parts, petitioner's management believed the existing CSD facilities already were too large to be efficient and were operating at full capacity. Petitioner presented no expert testimony or supporting documentary evidence to establish conclusively that, in an accounting sense, the facilities were at theoretical capacity, practical capacity, or normal capacity during this time. Nevertheless, from the record here, we are convinced that, for petitioner's purposes, its existing CSD facilities were operating at least at normal capacity -- that is, at a realistic measure of capacity. See W.B. Meigs, C.E. Johnson, and R.F. Meigs, Accounting: The Basis for Business Decisions 954-955 (4th ed. 1977). Thus, we are convinced that, had petitioner not constructed the Singapore CSD facility, it nonetheless would have

constructed another CSD facility at this time either in the United States or elsewhere.

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[**22]

[*242] In 1974, petitioner believed that there would be an expansion in the commercial airline and military aircraft business in the late 1970s and the early 1980s. Petitioner further believed that there would be a corresponding upswing in its CSD business. Petitioner needed extra capacity to meet the projected increased demand.

Petitioner believed that its plants in Rockford and Denver already were too large. Therefore, it did not want to expand those facilities further to accommodate its anticipated increased production. Petitioner needed to look elsewhere for future possible expansion. It examined its operations in Singapore for this purpose because of the lower labor rates there, certain tax and other incentives offered by the Republic of Singapore, and the availability of English-speaking workers.

SunPac was incorporated under the laws of the Republic of Singapore on October 20, 1971. SunPac is and has always been a wholly owned subsidiary of petitioner. During the taxable years in issue, SunPac had a November 30 fiscal year and maintained its books on an accrual method of accounting.

Petitioner organized SunPac to manufacture parts and assemblies for a pneumatic sander [**23] product line sold by petitioner's machine tool division. n10 SunPac began its manufacturing operations in a leased facility in 1972. As of March 31, 1974, SunPac had accumulated losses of S$ 334,899. n11 SunPac's pneumatic sander operation was a very low-technology facility by American standards.

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n10 SunPac also manufactured belt grinder parts for petitioner or one of its subsidiaries and pole pieces under subcontract for Litton.

n11 The letter "S" before a dollar amount represents Singapore currency. Where no "S" appears before a dollar amount, the amount is in U.S. dollars.

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In early 1974, petitioner reorganized its operating units, combining its machine tool division and aviation division into the advanced technology group. Following the reorganization, the advanced technology group assumed operational control of SunPac and its pneumatic sander business.

[*243] In April 1974, petitioner's manager of advanced manufacturing planning, Robert Schaller (hereinafter referred to as Mr. Schaller), prepared a report [**24] for Mr. Erikson, at that time the group vice president of petitioner's advanced technology group. Mr. Schaller wrote the report preparatory to Mr. Erikson's forthcoming visit to the Far East, including a stop in Singapore. Mr. Erikson had asked Mr. Schaller to investigate the possibility of SunPac's subcontracting parts for the aviation division. Mr. Schaller concluded that with additional investment and substantial effort and cooperation from everyone, the Singapore operation could be highly profitable within the year 1975.

Mr. Erikson traveled to the Far East in May 1974 with Kenelm Groff (hereinafter referred to as Mr. Groff), who was in charge of petitioner's contract administration and product support. In Singapore Mr. Erikson and Mr. Groff visited SunPac's facility as well as other plants owned by Japanese and American manufacturers. They also met with representatives of the Singapore Economic Development Board (hereinafter referred to as the EDB), various bankers and businessmen, and the U.S. Ambassador. Mr. Erikson was not impressed with SunPac, observing that it produced a poorly constructed product under "garage shop" conditions.

Upon his return from Singapore, Mr. [**25] Erikson asked the general manager of the aviation division to have manufacturing personnel prepare a study analyzing the feasibility of manufacturing commercial CSD parts in Singapore. On July 17, 1974, a report on this subject was presented to the advanced technology group management (hereinafter referred to as the July report). The July report was primarily the work of Mr. Schaller and Larry Myers (hereinafter referred to as Mr. Myers), the then manager of manufacturing engineering at petitioner's Denver, Colorado, facility.

The July report recommended an investment by SunPac of $ 4.2 million in plant and equipment to make certain CSD parts. It concluded that petitioner could earn a return on the investment of 23.5 percent taking into account tax considerations, with a payout in 5.6 years. The advanced technology group's management rejected the July report because the rate of return on investment without including

[*244] tax considerations was considered inadequate. The presenters were ordered to reevaluate the project.

On July 31, 1974, a revised report (hereinafter referred to as the final report) was presented to the advanced technology group's management. The final [**26] report included more CSD parts and required a larger capital investment by SunPac. The final report was based on a capital investment of approximately $ 5.5 million calculated as follows:

Item	1974	1975	1976	1977	Total
Land and site prep.	$ 384,000				$ 384,000
Building		$ 300,000	$ 545,250		845,250
Building equipment		300,000	279,299		579,299
Machines and equipment		278,301	2,474,827		2,753,128
Startup		183,000	183,000	$ 160,000	526,000
Supplies inventory		50,000	400,000		450,000
Total	384,000	1,111,301	3,882,376	160,000	5,537,677

It calculated a profitability index of 15.2 percent and a payout in 6.5 years without considering the tax consequences and 23 percent and 5.7 years considering the tax consequences.

A revised request for authorization for expenditure prepared in October 1976 reflects the following investment for the SunPac facility:

Item	1974	1975	1976	1977	Total
Capital	$ 1,026,000	$ 1,096,000	$ 4,683,471	$ 560,000	$ 7,365,471
Expense		183,000	183,000	160,000	526,000
Working funds		50,000	400,000		450,000
Total	1,026,000	1,329,000	5,266,471	720,000	8,341,471

The revised request [**27] for authorization shows a profitability index of 2.5 percent and a payout of 9.3 years.

The final report projected Singapore sales, including factors for growth and price escalation, for 1975 through 1984 as follows:

Year	Projected sales
1975	$ 1,066,500
1976	2,435,300
1977	12,357,200
1978	18,021,900
1979	20,667,700
1980	22,920,900
1981	25,526,600
1982	28,399,200
1983	31,530,900
1984	35,041,300

[*245] The advanced technology group's management and petitioner's corporate management approved the final report in August 1974. Also in August 1974, petitioner's management authorized an expenditure of $ 5,537,677 for SunPac based upon the recommendations and calculations contained in the final report. Petitioner's board of directors approved the final report in October 1974.

Mr. Erikson recognized that, in order to transfer the CSD technology to SunPac successfully, petitioner would have to have expatriates live in Singapore for a couple of years. Petitioner realized that SunPac would require considerable technical support from petitioner in order to succeed as a CSD manufacturer. Petitioner recognized that its technical personnel would have to supervise, train, [**28] and upgrade the Singapore workers' skills to meet petitioner's standards. The final report recommended that implementation of all phases be controlled by petitioner's technical personnel on site in Singapore. According to the final report, technical support would be needed on site for as long as 4 years in the following areas: print interpretation, process and tool liaison, operator machine instruction, supervision instruction, and other.

B. *SunPac Parts Selection*

In order to maximize profitability, by increasing technology and its investment in phases, petitioner planned to introduce gradually families of parts at SunPac, thereby progressing from parts with the lowest to the highest technology. The families of parts were carefully selected to optimize performance and minimize the use of special processes. Mature spare parts were selected for which the engineering drawings would change very little.

Petitioner's manufacturing personnel used petitioner's commercial spare parts gross report as the universe of potential CSD parts for SunPac to manufacture. The commercial spare parts gross report was a 5-year forecast of commercial parts sales on a part-by-part basis and set [**29] forth

[*246] petitioner's spare parts requirements for approximately 15,000 parts. After review, the manufacturing personnel identified between 2,500 and 3,000 petitioner-manufactured parts as potential candidates for SunPac manufacture and sale (hereinafter referred to as the parts candidates).

Petitioner's manufacturing personnel then reviewed the engineering blueprints for each of the parts candidates and excluded from consideration those parts candidates that also were available by purchase from vendors. The remaining parts candidates were organized into multiple categories based on similarities in manufacturing. In sum, petitioner identified 1,200 specific parts candidates, which were divided into 33 categories (family classes) based on similarities in the parts' manufacturing processes. Parts considered had to have a long program life which would offer petitioner a very forecastable load for the plant at SunPac. Other required characteristics included bulk quantity production and high profit margin potential. Petitioner planned for SunPac to produce only parts which were fully qualified and for which the manufacturing and inspection techniques had been completely proven. [**30]

In identifying SunPac's parts candidates, nine processes used in the manufacture of specific CSD parts were identified that were capital intensive or presented environmental or other special considerations (the special processes). The nine special processes were (a) electron beam welding (EBW), (b) electrical discharge machining (EDM), (c) electrochemical milling machining (ECM), (d) diffusion bonding, (e) lead pot bonding, (f) high pressure flushing and cleaning, (g) general heat treating, (h) general plating, and (i) Gleason die quenching. n12 Three of the special processes -- EDM, lead pot

[*247] bonding, and high pressure flushing and cleaning -- were not used in the production of any of SunPac's parts candidates. Petitioner equipped SunPac with the machinery necessary to perform the general heat treating, general plating, and Gleason die quenching processes around April 1976. During 1977 and 1978, SunPac did not possess the machinery necessary to perform the EBW, ECM, and diffusion bonding processes.

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n12 Electron beam welding is a welding process whereby the metals of two parts are melted together in a vacuum by focusing a beam of electrons on the weld joint. Electrochemical machining is a milling process in which a solution of electrolyte (a salt water composition) is squirted through the center of an electrode and an electrical charge is sent from the electrode through the electrolyte thereby eroding away the metal on the piece part. Diffusion bonding is a technique to bond bronze plate and bronze bushings to the cylinder block using a combination of temperature and pressure that allows the two dissimilar metals to start to melt at the grain boundary level and intermingle with each other without the use of a bonding agent. General heat treating (as performed at SunPac) involves hardening and carburizing, requiring a series of different furnaces operating at different temperatures. General plating (as performed at SunPac) consists of plating copper to a part for the heat treating operation and then removing the plating from the part; or depositing silver, nickel, or chrome on the surface of a steel part to keep the part from corroding; or plating chromic anodize or sulfuric anodize on aluminum to protect the raw aluminum. Gleason die quenching is a press operation used in the heat treating department to hold a heated part in place when the part is put into oil to quickly reduce its temperature.

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[**31]

C. *Phasing In the Sunpac CSD Operations*

The technical study which was part of both the July report and the final report proposed several phases of the manufacturing process at SunPac. In phase I, petitioner intended to have SunPac manufacture parts denominated as "group A." Group A parts are non-heat-treated parts and have minimal special processes applied to them. Some of the parts are produced from castings or forgings. Group A parts could be started and finished by SunPac.

Phase II anticipated an expansion of the manufacturing facility, including land acquisition.

Phase III and phase IV overlapped and were considered wholly phase III in the final report. Phase III planned for the expansion of the manufacturing capabilities to include those parts contained in "group B." These parts required relatively simple heat treating or other special processes to be performed in petitioner's U.S. CSD facilities. Up to 60 percent of the labor content of these parts was performed in the United States.

Phase V provided for the introduction of "group C" parts. Group C parts were sent over from the United States in a semifinished condition (e.g., pistons and blocks) for completion by [**32] SunPac. Petitioner forecasted that it would perform up to 60 percent of the labor on group C parts.

During phase VI, petitioner planned to introduce "group D" parts to SunPac. Group D parts would be comprised of between 60- and 100-percent SunPac labor.

Petitioner intended to treat SunPac as one of its suppliers during phases I, II, and III. According to the final report, for phases III, V, and VI more specialized personnel (such

[*248] as metallurgists, chemists, gear technicians, and precision grinding specialists) would be required on site in Singapore for as long as needed after implementation.

Petitioner anticipated selling SunPac parts as spares as well as using SunPac parts in the manufacture of petitioner's CSD's. Petitioner estimated that its internal use of SunPac parts could be up to 50 percent of SunPac's production. Petitioner intended to purchase all initial SunPac parts and to continue to distribute SunPac parts for a reasonable time until SunPac itself developed the capability to distribute the SunPac parts. Petitioner also intended to maintain dual sourcing capabilities n13 for parts licensed to SunPac to assure airline customers that petitioner would continue [**33] to have the ability to source the part domestically in the event that an alternative source became necessary.

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n13 Dual sourcing capabilities mean that simultaneously there would be more than one manufacturing source for a particular part.

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Once SunPac's 1,200 parts candidates were organized into family classes, petitioner's manufacturing personnel proceeded to determine the types and number of pieces of equipment necessary to SunPac's operation.

D. *Financing SunPac*

1. *Loans*

With the EDB's assistance, SunPac entered into loan negotiations with the Development Bank of Singapore (hereinafter referred to as the bank). In November 1974, SunPac obtained a S$ 11,500,000 term loan from the bank. This loan was subject to an interest rate of 9.5 percent per year and was to be used solely for land acquisition, factory construction, and equipment acquisition and installation. It was repayable in 14 equal 6-month installments, with the first installment due the earlier of 3 years from the date of the first disbursement [**34] or December 1, 1977.

SunPac also received a S$ 3,760,000 line of credit from the bank in November 1974. The line of credit plus any capitalized interest was payable on demand and subject to interest at a rate of 0.5 percent above the prevailing prime lending rate in Singapore or as determined by the bank.

[*249] Petitioner guaranteed both loans as a condition of SunPac's obtaining the loans.

During 1975, the EDB loaned SunPac S$ 1,500,000 over a 5-year period at an interest rate of 9 percent for SunPac's training program. Petitioner also guaranteed this loan.

2. *Training Grants*

Petitioner anticipated that considerable expenditures would be needed beyond any grants given by the Republic of Singapore to train the Singaporean workers in the production of CSD parts. Because of the complexity in manufacturing aircraft quality parts, petitioner realized that in order to obtain a quality system in Singapore which would be acceptable to the FAA, a significant effort would be needed in training the Singaporean workers.

In January 1975, SunPac submitted an industrial training grant proposal (hereinafter referred to as the industrial training grant) to the EDB. The industrial training [**35] grant contemplated the training at SunPac's facility of 115 Singaporean nationals by June 30, 1977. Additionally, in January 1975, SunPac submitted an overseas training scheme proposal (hereinafter referred to as the overseas training grant) to the EDB, requesting that the EDB share equally in the expenses to train four Singaporean nationals at petitioner's Rockford, Illinois, and Denver, Colorado, facilities.

On April 23, 1975, the EDB agreed to a maximum financial subsidy of the Overseas Training Grant of S$ 48,765. In January 1976, the EDB formally approved an industrial training grant of S$ 867,000.

III. CONSTRUCTING, EQUIPPING, AND STAFFING THE FACILITY

A. *The Land*

On November 7, 1974, SunPac entered into an agreement with the Singapore Housing and Development Board which granted SunPac a net ground lease on 9.8 acres in the Bedok industrial park. The lease is for 60 years beginning on December 1, 1974, provided that SunPac constructed its proposed facility on the land within an 18-month period

[*250] from December 1, 1974, or as extended solely at the discretion of the Housing and Development Board. The lease requires a nonrefundable premium payment of S$ 2,565,312 [**36] and an annual license fee of S$ 12.

B. *The Equipment*

SunPac acquired the machinery and equipment necessary to its production of CSD parts from three sources during 1975 and 1976. First, SunPac transferred to the new facility a few lathes, drills, and grinders that had been used in its pneumatic sander operation. Second, petitioner transferred certain retrofitted used equipment to SunPac in exchange for capital stock. Finally, petitioner purchased new or used equipment in the United States which it sold to SunPac at the equipment's fair market value.

1. *Equipment Transferred from Petitioner*

In a letter to respondent dated January 6, 1975, petitioner requested a ruling under section 367 that its transfer of used machinery and its associated tools and gages to SunPac in exchange for additional shares of SunPac stock was not in pursuance of a plan having as one of its principal purposes the avoidance of Federal income taxes and that no gain or loss would be recognized on the transaction under section 351. In its request for a ruling, petitioner represented the following facts, among others, to respondent:

(1) Payments to petitioner by SunPac pursuant to any technical agreement [**37] would be equal to the fair market value of the assistance rendered and/or licenses granted.

(2) Petitioner would not transfer to SunPac any property of which, at the time of the transfer, petitioner was a licensor or lessor, except property of which SunPac was the lessee or licensee.

On April 29, 1975, respondent sent a letter to petitioner regarding the proposed transaction (hereinafter referred to as the ruling). Based on the representations petitioner made to respondent regarding this proposed transaction, respondent ruled that:

(1) The proposed transaction as described by petitioner is not made in pursuance of a plan having as one of its

[*251] principal purposes the avoidance of Federal income taxes within the meaning of section 367.

(2) No gain or loss will be recognized to petitioner on the transfer of the property solely in exchange for SunPac's stock (section 351(a)).

(3) The basis of SunPac's stock received by petitioner will be the same as the basis in the property exchanged for the stock (section 358(a)(1)).

(4) The basis of the property received by SunPac will be the same as the basis of the property in the hands of petitioner immediately before the exchange (section [**38] 362(a)).

In the ruling respondent, among other things, stated the following:

Specifically no opinion is expressed as to the tax consequences of the transaction described in the Agreement. Further, no opinion is expressed as to the tax treatment of the transaction under the provisions of any of the other sections of the Code and Regulations which may also be applicable thereto, or to the tax treatment of any conditions existing at the time of, or effects resulting from, the transaction which are not specifically covered by the above rulings.

Respondent has neither modified nor revoked the ruling since its issuance.

2. *Equipment Purchased*

SunPac purchased the following equipment from petitioner at fair market value:

	1975	1976	1977
		(in thousands)	
Machinery	$ 206	$ 743	$ 273
Tools and gages	20	34	323
Perishable tools	27	87	416

Approximately 60 percent of SunPac's machinery and equipment in 1976 consisted of new equipment.

C. *Staffing the Facility and Training the Employees*

In 1975, SunPac shut down its pneumatic sanders facility and terminated all its employees. Based on mechanical aptitude and skills tests, SunPac rehired those employees whom [**39] it determined could perform the tasks necessary to

[*252] manufacture aerospace products. SunPac added to this work force by hiring graduates of the EDB technical schools.

To properly train its employees, SunPac established an extensive in-house training program for all factory employees. This training program was based on the training program petitioner used in its U.S. facilities.

The first training sessions began at SunPac in April 1975. Trainees initially received 16 weeks of primary training in machining and allied skills. Graduates of the EDB technical schools received only 12 weeks of initial classroom instruction, however. At the conclusion of the initial training program, the employees were classified as class C operators (i.e., beginning machinists). The employee who received additional classroom and on-the-job training advanced to a class B operator (i.e., intermediate machinist) and then to a class A operator (i.e., skilled machinist). It takes approximately 2 years for a class C operator to achieve class A operator status. Due to the manufacturing skills required to produce CSD parts, it takes 4 to 6 years for any machine operator to achieve optimum productivity. [**40]

In 1975, four of SunPac's employees came to the United States to spend 1 year at petitioner's Denver facility to learn technical and managerial skills. SunPac planned for these employees to assume supervisory positions in the future.

IV. THE BEDOK FACILITY

During 1975 and 1976, SunPac began to phase in parts in the various family classes based on SunPac's relative technical expertise and process capabilities. All of SunPac's 1975 production was dedicated to training.

SunPac commenced operations at the Bedok facility in April 1976. In 1977, the building consisted of a 41,351-square-foot factory and a 9,568-square-foot two-story office complex. In May 1978, SunPac presented to the EDB plans to expand its Bedok facility. The planned expansion would increase SunPac's total investment in Singapore to approximately S$ 48,700,000 and expand the facility to 171,801 square feet.

As of December 31, 1977, SunPac employed a total of 220 individuals. The number of employees increased to 276

[*253] individuals as of December 31, 1978. The majority of SunPac's factory employees are graduates of EDB technical schools.

During 1977 and 1978, Mr. Groff, Mr. Myers (at that time SunPac's managing [**41] director), and a solicitor from SunPac's Singapore law firm comprised SunPac's board of directors.

A. *Organization*

SunPac's managing director is responsible for its day-to-day operations. In the beginning of 1977, SunPac was organized into seven major operational departments: (1) Manufacturing, (2) manufacturing engineering, (3) quality assurance, (4) production planning, (5) plant engineering, (6) accounting, and (7) personnel. The manager of each department reports directly to the managing director. SunPac added an additional group, the products support group, in 1977.

In 1977, except for the accounting and personnel managers, SunPac's managing director and department managers were U.S. expatriates. The accounting and personnel managers were Singaporeans. All of the U.S. expatriates had been employed by petitioner before transferring to SunPac. In 1978, three Singaporeans were department managers.

Sundstrand Service Corp., a domestic subsidiary of petitioner, paid the salaries of the U.S. expatriates. Sundstrand Service Corp. charged back to SunPac, on a current basis, 100 percent of the compensation paid to SunPac's managing director. Sundstrand Service Corp. also charged [**42] back to SunPac, on a current basis, a percentage of SunPac's manufacturing manager's compensation. The remaining expatriates' compensation was considered a technical assistance cost recoverable through the 3-percent technical assistance fee, see *infra*.

1. *The Manufacturing Department*

During 1977 and 1978, SunPac employed 84 and 116 manufacturing personnel, respectively, in its manufacturing department. SunPac's manufacturing department performs a full range of manufacturing processes including lathing, milling, drilling, broaching, grinding, heat treating, plating,

[*254] deburring, honing, and assembly. SunPac manufactures piece parts and a few subassemblies from piece parts that it manufactures in whole or in part.

2. *The Manufacturing Engineering Department*

By the end of 1978, SunPac employed 26 individuals in its manufacturing engineering department. SunPac's manufacturing engineering department is responsible for maintaining the facility's tooling, troubleshooting problems which develop on the shop floor, maintaining the technical packages for the various parts manufactured by SunPac, making process changes to the technical plans, suggesting changes to petitioner [**43] regarding the parts, and training employees. SunPac's manufacturing engineering department, however, may not make changes to the design print (the engineering blueprint).

3. *The Quality Assurance Department*

SunPac's quality assurance department is responsible for creating, n14 rewriting, and maintaining the quality manual. SunPac employed 41 quality assurance employees in 1977 and 50 quality assurance employees in 1978. SunPac's quality assurance personnel activities are in addition to the quality control functions performed by SunPac's manufacturing personnel. SunPac's quality assurance personnel also perform final inspection on sample parts before the parts are placed in finished inventory.

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n14 SunPac drafted its quality manual in 1975 and 1976 based on petitioner's quality manual.

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SunPac reworks or scraps parts it finds are defective. During 1975 and 1976, SunPac experienced a production scrap rate of approximately 35 percent, which fell to 27.1 percent in 1977 and to 15.2 percent in 1978. During 1977 and [**44] 1978, SunPac incurred scrap production costs of S$ 1,675,355 and S$ 1,105,238, respectively.

4. *The Production Planning Department*

The production planning department confirms suggested orders from petitioner, releases orders for raw materials to the shop floor, and controls the flow of parts through the manufacturing process. The production planning department

[*255] also is responsible for SunPac's purchasing activities, shipping and receiving, and preservation packing.

SunPac manufactures parts based on petitioner's forecast rather than on firm purchase orders placed by petitioner. SunPac directly purchases all manufacturing and office supplies that are available in Singapore. SunPac purchases equipment and tooling available only in the United States through petitioner. SunPac employed 18 people in its production planning department in 1977 and 28 people in 1978.

5. *The Products Support Department*

In the latter half of 1977, SunPac established a products support department. In 1978, SunPac employed three individuals in its products support department.

B. *Materials Purchases*

To comply with limitations of the Federal Aviation Administration (hereinafter the FAA) [**45] as a condition for SunPac's receiving parts manufacturer approval certification, see *infra*, in 1977 and 1978, SunPac purchased all raw materials and components from petitioner. SunPac purchased principally from petitioner barstock, castings, forgings, industry standard parts, and semifinished parts for the cylinder block. SunPac incurred freight and insurance expenses related to these purchases. Singapore did not impose customs duties on the raw materials and semi-finished parts SunPac purchased from petitioner.

SunPac purchased materials based on petitioner's forecasted order suggestions. Due to long procurement lead times, SunPac placed its orders for raw materials 6 months before SunPac needed the raw materials for its production. SunPac owned the materials it purchased from petitioner. Petitioner was not required to purchase from SunPac all of the forecasted parts.

Petitioner determined the price it charged SunPac for these materials using a cost-plus price method.

[*256] V. APPLICATION FOR TAX RELIEF

A. *Relief Available*

Pursuant to the Singapore Economic Expansion Incentives (Relief from Income Tax) Act, 1967 (hereinafter referred to as the incentives act), [**46] the Government of Singapore grants "pioneer enterprises" certain Singapore tax benefits. A pioneer enterprise's income may be wholly or partially exempt from Singapore taxation for a period from 5 to up to 15 years depending upon whether it receives a "pioneer certificate," an "expansion certificate," and/or an "export enterprise certificate." The EDB is responsible for evaluating incentive applications made under the incentives act.

1. *Pioneer Certificate*

To qualify for a pioneer certificate, a company must commit to a fixed capital expenditure of not less than S$ 1 million. A pioneer enterprise holding a pioneer certificate is entitled to tax relief for a period of 5 years commencing on its "production day." n15 During this 5-year tax relief period, the pioneer enterprise is wholly exempt from tax on its income arising from production of pioneer products. See part II, secs. 5 and 6 of the incentives act.

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n15 The "production day" is defined as the day specified on the pioneer certificate. Part I, sec. 3(1) of the Economic Expansion Incentives (Relief from Income Tax) Act, 1967 (hereinafter referred to as the incentives act). This day, unless amended, is "the day on or before which it is expected that the pioneer enterprise will commence to produce in marketable quantities the product specified in such certificate." Part II, sec. 5(3)(a) of the incentives act.

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[**47]

2. *Expansion Certificate*

Existing enterprises that expand their operations in Singapore can qualify for an expansion certificate if the company commits to "new capital expenditure" n16 which exceeds S$ 10 million. A pioneer enterprise that qualifies for an expansion certificate is exempted from Singapore taxation for up to an additional 5 years commencing on the "expansion day" n17 on the "expansion income" generally in

[*257] excess of the income derived before the expansion. See part III, secs. 17-19 of the incentives act.

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n16 "New capital expenditure" is defined as an "expenditure incurred by a company in the purchase of productive equipment which is intended to increase its production or profitability." Part III, sec. 17(3) of the incentives act. "Productive equipment" is defined as machinery or plant. Part I, sec. 3(1) of the incentives act.

n17 The "expansion day" is defined as the day specified in the expansion certificate. Part I, sec. 3(1) of the incentives act. This day is "the date on or before which the productive equipment shall be put into operation." Part III, sec. 17(4) of the incentives act.

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[**48]

3. *Export Enterprise Certificate*

To qualify for an export enterprise certificate, a company has to produce an export product approved by the Government of Singapore. An export enterprise generally is entitled to an exemption from Singapore tax on 90 percent of its "export income" in excess of the balance of the "export profit" as determined by statute. This exemption generally is for 5 years or, if the export enterprise is a pioneer enterprise, for 3 years in addition to the 5-year pioneer enterprise tax relief period. However, in specified circumstances, the relief period can be extended to a period aggregating 15 years. See part IV, secs. 20-23, 28-30 of the incentives act.

B. *SunPac's Applications for Tax Relief*

On or about August 30, 1974, SunPac, through petitioner, submitted an application for pioneer enterprise status under the incentives act for its proposed CSD operations in Singapore. n18 In addition to the 5-year tax exemption normally granted under a pioneer certificate, SunPac requested a 3-year export enterprise certificate to commence upon the expiration of its pioneer certificate. SunPac also sought to have exempt from tax any payments made by SunPac [**49] to petitioner's advanced technology group for rendering temporary technical and management assistance to SunPac, developing the new plant, and training Singaporean nationals. Moreover, SunPac requested exemption for the payment of reasonable sums "in the nature of royalty fees or the like" to petitioner for technical data and manufacturing rights. Furthermore, SunPac sought to have exempt from Singapore duties any spare parts returned from petitioner to SunPac to be sold to Singaporean airlines during the time SunPac acted as a subcontractor to the advanced technology group.

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n18 In February 1972, SunPac had filed an application with the EDB for pioneer enterprise status for its pneumatic sander operation. The EDB formally granted SunPac a pioneer certificate for that operation in December 1973.

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[*258] SunPac's pioneer application stated that "no royalty fees are contemplated at the present time" to be paid to petitioner. Furthermore, according to the application, SunPac intended --

at the outset to act as a [**50] subcontractor to [petitioner's] Advanced Technology Group for the proposed aerospace product parts. It is, however, [petitioner's] long range goal to establish the capability to distribute and sell such parts directly from Singapore. One key factor essential to the establishment of this capability are [sic] [petitioner's] planned efforts to achieve FAA approval of its Singapore aerospace product parts manufacturing activities.

SunPac requested that the Government of Singapore (1) share in the cost of training Singaporean nationals in the United States; (2) assist in finding qualified nationals for training in the United States and participate in agreements with those trainees wherein the trainees agreed to continue their employment with SunPac for a reasonable number of years; and (3) share reasonably in the cost of training Singaporean nationals at SunPac's facility.

In the cover letter to the EDB, petitioner represented that SunPac anticipated it would continue to manufacture also for many years to come the pneumatic sander parts, belt grinder parts, and pole pieces for which it had earlier been granted a pioneer certificate.

In the application for pioneer status, petitioner proposed [**51] the following timetable for planning, construction, and production:

(a) Date of acquisition of site: 4th quarter 1974.

(b) Date of order of machinery: start 4th quarter 1974.

(c) Date of complete arrival of all machinery: 1st quarter 1977.

(d) Commencement date of building construction: 1st quarter 1975.

(e) Completion date of building construction: 3rd quarter 1976.

(f) Commencement date of machinery installation: 3rd quarter 1976.

(g) Completion date of machinery installation: 1st quarter 1977.

(h) Commencement date of trial production: 2nd quarter 1977.

(i) Commencement date of initial production (in marketable quantities): January 1, 1978.

(j) Commencement date of full production: 3rd quarter 1978.

Petitioner represented in its application for pioneer status that its annual output in the United States over the last 3 years of the aerospace spare parts it proposed to produce in Singapore in the future was as follows:

[*259]

Year	Sales value
1971	S$ 7.8 million
1972	9.0 million
1973	10.9 million

Petitioner further represented that its total spare parts market projections for 1974 through 1977 (primarily satisfied by its U.S. facilities since marketable parts quantity [**52] production at SunPac was not expected until 1978) were as follows:

Year	Market
1974	S$ 13.1 million
1975	15.0 million
1976	17.3 million
1977	19.1 million

Petitioner also represented that its forecasted annual output of the proposed product parts for 1978 through 1982 was as follows:

Year	Sales value
1978	S$ 22.3 million
1979	25.5 million
1980	28.3 million
1981	31.4 million
1982	34.9 million

SunPac forecasted a 39.5-percent gross profit margin for the sales of its products. n19

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n19 Gross income of S$ 23,608,668 (including S$ 1,249,000 income from projected sales of pneumatic sander parts, belt grinder parts, and pole pieces) less manufacturing costs of S$ 14,272,484 resulting in a gross profit of S$ 9,336,184.

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On September 19, 1974, the EDB advised SunPac that the minister for finance had agreed, in principle, to grant SunPac both a pioneer certificate and an export enterprise certificate for the manufacture of aviation products and related components, and industrial machines and equipment, [**53] related products, and components. The pioneer certificate and export enterprise certificate required SunPac to commence production of commercial aviation spare parts no later that July 1, 1977, and to invest at least S$ 10 million in fixed assets by June 30, 1979.

The minister for finance issued to SunPac pioneer certificate No. 494 on January 5, 1978. Pursuant to this pioneer certificate, SunPac received pioneer status for a 5-year

[*260] period plus export enterprise status for an additional 3-year period. On January 5, 1978, the minister for finance also issued to SunPac export enterprise certificate No. 73, which extended SunPac's export enterprise status for an additional 7 years if SunPac invested at least S$ 45 million in fixed assets by the end of the pioneer status period and implemented the phase II expansion project which petitioner had proposed to the EDB by letter dated July 11, 1975.

The record is not clear as to what extent the Government of Singapore granted the additional relief SunPac sought in its applications for tax relief.

VI. PARTS MANUFACTURER APPROVAL

A. *In General*

The manufacture of aircraft is subject to governmental regulation in the United [**54] States and foreign countries. In the United States, the FAA controls the production of aircraft through its certification programs.

Before an airplane is built, the FAA reviews the aircraft design (including components such as engine, CSD, and generator), the engineering test data, and analyses. The FAA then issues an FAA type certificate of approval to the airframe manufacturer if the type design configurations meet a particular type design and are found to be airworthy.

Next, the aircraft is produced under the airframe manufacturer's quality control system. The FAA then issues a production certificate. Every airplane coming off the assembly line also is issued an airworthiness certificate certifying that the aircraft meets its type design and is in condition for safe operation.

The aircraft certification process and its associated costs are strictly the responsibility of the airframe manufacturer. While manufacturers of the aircraft's components are not directly involved, during the certification process component manufacturers such as petitioner provide engineering assistance and data to the airframe manufacturer if requested.

Upon completion of the aircraft certification process, [**55] the aircraft's component manufacturers may apply for parts

[*261] manufacturer approval (hereinafter sometimes referred to as PMA) from the FAA. A PMA holder has the right to build an FAA-approved part. To receive a PMA, the parts manufacturer must establish that its facility and quality procedures are adequate to allow the manufacturer to produce consistently parts which conform to the part's engineering drawings and specifications which are approved as part of the airframe manufacturer's airworthiness certificate. A separate PMA is issued for each facility at which the manufacturer produces parts. PMA certification is not limited to the original manufacturer of the part.

Some foreign countries also have a PMA-type procedure. The United States recognizes the PMA procedures of some foreign countries through reciprocity agreements with the FAA. In the mid-1970s, no reciprocity agreement existed between the United States and Singapore.

The FAA requires U.S. airlines to buy only PMA parts. Most foreign airlines also require FAA-PMA, or its equivalent, on the parts they buy.

B. *SunPac's Application for PMA*

The FAA does not normally issue an FAA-PMA certificate to a facility [**56] located outside of the United States because of the surveillance and audit requirements needed to maintain certification. Nonetheless, on January 19, 1976, petitioner requested that the FAA expand petitioner's PMA approval to include the SunPac facility. At that time, petitioner's Denver and Rockford facilities each had separate PMA certification.

Additionally, in a letter dated April 30, 1976, petitioner asked the FAA to establish a "reimbursable agreement" between the U.S. Government and the Government of Singapore providing for FAA participation towards PMA approval and quality assurance system acceptance for the parts to be manufactured at the SunPac facility. In explaining the reasons for petitioner's decision to manufacture commercial spare parts in Singapore, the letter explained, in part, as follows:

Reasons for this decision in 1974 were varied and were influenced most significantly by Advanced Technology managements' [sic] long term look at a) evolving market conditions for spare part requirements for the

[*262] [petitioner] products used on the world's civil air transports and b) the significant possibilities for added product sales potentials with the emerging market [**57] and industries in this part of the world.

With respect to the civil air transport spare parts, approximately 50% of these parts are marketed outside of the U.S. with this percentage increasing annually. Many of these spare parts are for out-of-production aircraft components making it increasingly more difficult to support same in a larger component oriented manufacturing environment. Many of the older civil aircraft are in airline operations in the Far East and South Pacific and it was believed this trend might well continue.

The experiment with the Machine Tool product was generally successful in that [petitioner] learned that limited quantity production such as will be increasingly required for many aircraft component spare parts appears reasonably achievable in Singapore with a factory designed for same, a trainable work force and a stable government enjoying very good relations with the U.S. Government. It also appeared that such market conditions and projections could be satisfied without dislocation of present operations, i.e. [petitioner] U.S. operations expected and planned growth in the aerospace product field would over the future years be significantly greater than any [**58] allocation of work to [SunPac].

The letter further described the planned use of SunPac parts as follows:

The parts to be produced by [SunPac] in Singapore are primarily for spare part requirements of airlines around the world using aircraft equipped with [petitioner] components * * * The primary aircraft component for which these parts are for is the [petitioner CSD]. While the purpose of [SunPac] parts manufacture is to satisfy the aforementioned airline spare part market requirements, Sundstrand Operations may also, from time to time, use some of the parts in its repair and/or manufacture of [petitioner] aircraft components.

Additionally, in this letter and in other communications with the FAA, petitioner described the operations of SunPac as follows: (1) Key management positions in Singapore would be staffed with people from petitioner's Rockford and Denver facilities with long experience in similar jobs; (2) all engineering drawings would be controlled by petitioner in Rockford; (3) all detailed manufacturing and inspection planning would be done by petitioner; (4) the quality assurance program would be the same program as applied in petitioner's Rockford and Denver plants; (5) [**59] all raw materials which go into the finished products would be purchased and certified in Rockford or Denver; (6) only parts which are fully qualified and for which the manufacturing and inspection techniques have been completely

[*263] proven would be produced in Singapore; and (7) SunPac would only do minor assembly work.

The FAA conducted an on-site audit of SunPac's facility and quality procedures to determine whether SunPac met the FAA's standards for PMA certification. On June 15, 1977, the FAA advised petitioner that it would issue a PMA to SunPac and that the following five limitations would be attached to SunPac's PMA:

(1) PMA letter would be issued with a 5-year limitation, at which time a reevaluation by petitioner and FAA would take place;

(2) SunPac quality manual would be required as controlling document;

(3) all raw materials, manufacturing processes, and special product-oriented service must be furnished by petitioner Denver/Rockford (any deviation must be approved by Pacific FAA region);

(4) designated manufacturing inspection representatives (DMIR's) would not be issued until joint financial reimbursement agreement was available; and

(5) a copy of all engineering [**60] drawings referenced in the PMA letter for end items and a complete parts list breakdown of the parts to be manufactured in Singapore must be forwarded to the Pacific Honolulu FAA office.

On July 1, 1977, the FAA issued to SunPac a letter (the original PMA letter) advising SunPac that the FAA granted to SunPac parts manufacturer approval to produce the parts listed in a supplement enclosed with the letter. The original PMA letter incorporated four of the five FAA proposed limitations cited on June 15, 1977. (The original PMA letter did not request a complete parts list breakdown of SunPac's parts.) However, on November 22, 1977, the FAA reissued the PMA certification letter (the revised PMA letter) to clarify that SunPac's PMA was limited to the manufacture of replacement piece parts only.

During 1977 and 1978, SunPac manufactured parts for which it had not received PMA approval.

[*264] VII. THE TECHNICAL ASSISTANCE AND LICENSE AGREEMENT

A. *The SunPac License Agreement*

On July 15, 1975, petitioner and SunPac entered into a technical assistance and license agreement (hereinafter referred to as the SunPac license agreement). Under article II of the SunPac license agreement, [**61] petitioner gave SunPac (1) the exclusive right and license to use petitioner's industrial property rights n20 for the manufacture of products in Singapore; (2) the nonexclusive right and license to sell the products in any country of the world; (3) the nonexclusive right to use the products, including the right for SunPac's customers to use the products in any country of the world; (4) the right for SunPac to subcontract in Singapore to third parties the partial manufacture of the products; and (5) the authorization for SunPac's use in its sale of the products the trademarks of petitioner which petitioner normally used in the sale of similar products.

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n20 Defined in article I as all manufacturing information, designs, engineering drawings, specifications, and patents owned or controlled by petitioner relating to the items set forth in exhibit A to the technical assistance and license agreement.

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Under article III of the SunPac license agreement, petitioner agreed to furnish copies of existing industrial property rights [**62] as used by petitioner in the manufacture of products and reasonable technical assistance for the startup of SunPac's manufacture of the products. The products referred to in the SunPac license agreement were certain parts to the CSD specifically set forth in exhibit A of the SunPac license agreement.

Under article V of the SunPac license agreement, SunPac agreed to pay to petitioner a royalty fee in consideration of petitioner's industrial property rights made available and licensed to SunPac and in consideration of all assistance rendered to SunPac. The royalty fee as set forth in the SunPac license agreement was 2 percent of the net selling price of each product manufactured and sold by SunPac. The SunPac license agreement defined the net selling price as the invoice price of products sold by SunPac which were subject to royalty fee payments under article V, exclusive of any marketing service charges, discounts, or commissions (if given), and less any packing, freight, transportation, insurance

[*265] costs, sales, added value or gross receipts taxes, customs duties, and other such charges levied and based upon such sale. SunPac was to pay this 2-percent royalty fee until [**63] the cumulative total amount of royalties paid was equal to the original costs of petitioner's development design and engineering of the industrial property rights plus the cost of all assistance rendered to SunPac by petitioner when such assistance cost was not otherwise paid to petitioner.

The SunPac license agreement stated that it was the parties' intent that, within 8 years, the royalty payment obligations would equal the original cost of development design, engineering, and petitioner's assistance costs. The SunPac license agreement stated further that, if it appeared that the royalty fee of 2 percent would not be sufficient within 8 years to equal the cost of development design, engineering, and assistance costs, the parties would amend the SunPac license agreement to increase the royalty fee or if necessary the term of the SunPac license agreement. Exhibit A to the SunPac license agreement set forth the products covered by the SunPac license agreement and petitioner's original cost of development design and engineering of the industrial property rights.

The SunPac license agreement further provided that the royalty payments would be made within 180 days after the end of each [**64] calendar year and would accrue when a customer was invoiced for the products by SunPac. The royalty fee was payable to petitioner's account in U.S. dollars. If, under the laws of Singapore and/or any tax convention with the United States, SunPac had to deduct taxes from sums or fees due petitioner under the SunPac license agreement, the deduction would be limited to the amount of taxes SunPac actually paid.

Finally, in consideration of the right to use petitioner's trademark, SunPac agreed to pay petitioner $ 1,000 within 12 months after the date of the SunPac license agreement. The record does not show whether this payment was ever made.

The SunPac license agreement further provided that the assistance costs which petitioner incurred would be set

[*266] forth in an amendment to the SunPac license agreement to be attached as exhibit B.

B. *Amendments to the SunPac License Agreement*

The parties amended the SunPac license agreement 11 times between April 14, 1976, and May 1, 1979.

1. *Amendments Nos. 1 through 10*

Amendment No. 1, executed April 14, 1976, deleted in its entirety the original exhibit A of the SunPac license agreement and substituted a new exhibit A to add [**65] additional parts; included the initial exhibit B reflecting total assistance costs incurred by petitioner through December 31, 1975, of $ 729,266; and amended the payment terms. As amended, the payment terms provided further that if at the end of any of the 8 years, the applicable cost of development design, engineering, and assistance costs had not been totally liquidated by royalty fee obligations, SunPac would pay petitioner the full unliquidated balance of such costs at the time the royalty fee payments were next due. The substituted exhibit A depicted original development design and engineering costs of $ 78,776.42.

Amendments Nos. 2 through 9 substituted new exhibits A or B to the SunPac license agreement. Amendment No. 10, executed November 22, 1978, substituted exhibit B and depicted total technical assistance costs for 1976 and 1977 of $ 1,216,582 and $ 1,298,701, respectively.

2. *Amendment No. 11*

When petitioner entered into the SunPac license agreement in 1975, it anticipated that all of the technical assistance costs would be recovered fully by way of the royalty payments. Thus, petitioner did not intend to charge SunPac separately for technical assistance outside [**66] of the SunPac license agreement. Petitioner provided a great deal of training and technical assistance to SunPac because SunPac was an entirely new startup operation. The parties, therefore, executed amendment No. 11 to the SunPac license agreement to provide additional compensation to petitioner for the technical assistance it rendered to SunPac for all sales on or after July 1, 1977.

[*267] Amendment No. 11, executed on May 1, 1979, amended the royalty provisions to provide as follows:

5-A. In consideration of [petitioner's] Industrial Property Rights made available and licensed hereunder and to provide [petitioner] a reasonable profit for any assistance rendered to [SunPac] in conjunction herewith, [SunPac] agrees to pay to [petitioner], subject to the provisions of paragraphs 5-A(1) and 5-A(2) below, a royalty fee of two percent (2%) of the net selling price of each Product manufactured and sold by [SunPac] during the terms of this Agreement.

5-A(1) The parties agree that in order to assure the [petitioner] of a reasonable minimum royalty return hereunder that such royalty payments to [petitioner] shall in total amount to no less than the original cost to [petitioner] for [**67] the development design and engineering of said Industrial Property Rights for each Product. [Petitioner] has agreed to provide its best estimate of such original cost to [petitioner] for the development design and engineering for each Product at the time each such Product is included under this Agreement (it being recognized by the parties that such cost is not a current cost to [petitioner]). All such Products and said original cost of development design and engineering therefor are to be set forth in Exhibit "A" attached hereto.

5-A(2) Further, in establishing the foregoing royalty fee rate of two percent (2%) and the requirements of paragraph 5-(A)(1) it is intended that the royalty payment obligations of [SunPac] to [petitioner] under this Agreement shall be equal to or greater than such original cost of development design and engineering in no more than eight (8) years from the date of establishment hereunder of any original cost of development design and engineering (i.e. the setting forth of same in said Exhibit "A"). If at any time it appears that such royalty obligations shall not within any said eight (8) year period be as great as such applicable original cost of development [**68] design and engineering, the parties agree that they shall promptly enter into an Amendment to this Agreement whereunder said royalty fee rate shall be increased in such a manner so as to assure that said intent is achieved. In any event if at the end of any of said eight (8) year period royalty fee obligations hereunder are not equal to or greater than the applicable cost of development design and engineering [SunPac] shall pay [petitioner] a sum equal to the full difference between said royalty obligations and costs, at the time royalty fee payments are, or would otherwise be, next due under the Agreement. Such payments will be subject to the provisions of paragraphs 5-F, 5-G and 5-H.

In provision 5-B, SunPac agreed to pay petitioner for any assistance rendered to SunPac outside of Singapore. This assistance was defined as offshore assistance. Section 5-B(2) states as follows:

[*268] To facilitate payment of all such Offshore assistance costs to [petitioner] [SunPac] agrees, commencing with Products sold by [SunPac] from 1 July 1977 and thereafter, to pay to [petitioner] a fee of one and one-tenth percent (1.1%) of the net selling price of each Product sold by [SunPac], said [**69] payments to continue only until the total of all such Offshore assistance costs have been paid to [petitioner].

Section 5-B(2)(i) provides that the 1.1-percent assistance rate was intended to pay petitioner the cost of the technical assistance within 8 years and further provided that, should it appear that this goal would not be reached, the percentage rate could be increased and further that, if the cost of the technical assistance was not paid off within the 8-year period, SunPac would pay petitioner the full unliquidated balance at the time offshore assistance fee payments were or otherwise would be next due under the SunPac license agreement.

In section 5-C SunPac agreed to pay petitioner also for the cost of assistance rendered to SunPac in Singapore. Assistance in Singapore was defined as onshore assistance. SunPac agreed to pay petitioner from July 1, 1977, and thereafter 1.9 percent of the net selling price of each product sold by SunPac until the total of onshore assistance cost had been paid.

Section 5-C(2)(i) states that it was the intent of the parties that the 1.9 percent would pay the cost of the onshore technical assistance within 8 years and that, if it appeared [**70] that this 8-year goal was not going to be achieved, the rate could be increased to achieve that goal and that, at the end of 8 years, if the onshore assistance cost had not been totally liquidated by this 1.9 percent, then SunPac would pay petitioner the full unliquidated balance of the unpaid onshore assistance cost at the time onshore assistance fee payments were or would otherwise be next due under the SunPac license agreement.

Section 5-D provides for amendments to the SunPac license agreement to insure that the obligations for payment of fees would be met. Section 5-E provides that SunPac would pay petitioner a lump-sum payment of $ 1,000 within 12 months after the date of the SunPac license agreement for the right to use petitioner's trademarks. Sections 5-F and 5-G restate the payment terms and tax withholding

[*269] provisions contained in the SunPac license agreement as originally executed.

Section 4 of this amendment No. 11 provides as follows:

Notwithstanding the provisions of paragraphs 5-F and 5-H set forth above in this Amendment, Offshore assistance fee and Onshore assistance fee obligations under the Agreement relative to Product sales made by [SunPac] from 1 July [**71] 1977 through 31 December 1978 shall all be considered as accruing in the calendar year 1978 and initial payments relative to same may be made no later than 1 October 1979, so as to not place [SunPac] in apparent payment and reporting default hereunder.

C. *Payments Under the SunPac License Agreement*

Pursuant to article V of the SunPac license agreement, SunPac paid to petitioner the following amounts for 1977 and 1978: n21

	Sales	
Month	1977	1978
January	$ 475,674.21	$ 426,482.01
February	488,633.71	1,597,720.08
March	392,015.05	1,538,114.74
April	463,509.00	1,117,570.77
May	474,836.29	1,554,429.65
June	588,061.01	1,985,560.32
July	615,417.36	1,589,510.88
August	1,027,026.53	1,803,369.90
September	545,428.71	2,011,348.06
October	596,786.10	2,088,747.01
November	324,825.11	2,057,262.39
December	619,732.07	909,048.27
Total	6,611,945.15	18,679,164.08
Royalty at 2%	132,238.90	373,583.00

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n21 Royalty payments for 1976 were $ 34,425.

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Exhibit B to amendment No. 11 sets forth [**72] the offshore assistance cost from December 31, 1975, through January 1, 1978, and onshore assistance cost for the same period as follows:

Period	Offshore	Onshore
1/1/75-12/31/75	$ 408,628	$ 320,628
1/1/76-12/31/76	622,715	593,867
1/1/77-6/30/77	203,696	452,171
7/1/77-12/31/77	186,394	456,440
1/1/78-12/31/78	321,119	1,014,455

[*270] SunPac did not pay any technical assistance fees to petitioner under the 3-percent provision set forth in amendment No. 11 during 1977 and 1978. By a credit note dated November 1, 1979, SunPac informed petitioner that SunPac had credited petitioner for the 3-percent technical assistance fee as follows:

Sales 7/1/77 through 11/30/77	$ 3,109,483.81
Sales 12/1/77 through 12/31/78	19,298,896.15
Total	22,408,379.96
Times 3% equals	672,251.40

D. *Operations Under the SunPac License Agreement*

SunPac receives from petitioner a separate technical package for each licensed part. The technical package contains an engineering blueprint showing the finished part's design and other specifications. The technical package also contains a set of job instruction sheets describing each manufacturing and inspection operation. [**73] If petitioner makes a design engineering change to a licensed part, petitioner sends SunPac a copy of the revised engineering print. If this causes SunPac to rework the part, SunPac bears the cost of rework.

Petitioner provided technical assistance to SunPac by, among other things, training SunPac's personnel at petitioner's facilities in the United States and by providing manufacturing engineering assistance in resolving manufacturing problems. Technical assistance items which petitioner considers reimbursable under the SunPac license agreement include the following: costs of petitioner's manufacturing engineering department to conduct SunPac's training program, costs associated with training Singaporean nationals in the United States, costs of U.S. trainers in Singapore, travel and salary expenses for manufacturing operation personnel for trips to Singapore, telephone and telex communications expenses, plant engineering support, U.S. coordinator expenses, charges for processing and related functions, miscellaneous costs such as "fair share" support of Singapore American School and Denver purchasing activity, and costs generated by the contract data manager as required for updating [**74] of license.

[*271] Petitioner rendered technical assistance to SunPac in 1977 and 1978 in the following amounts:

Technical assistance item	1977	1978
U.S. trainer in Singapore	n22 $ 999,275	$ 865,217
Operational support personnel	78,656	25,839
Telephone and telex expense	75,442	145,240
Plant engineering support	17,050	
U.S. coordinator	27,940	81,260
Processing	186,822	171,550
Miscellaneous	4,180	
Total	1,389,365	1,289,106

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n22 The evidence shows $ 908,611. This amount is understated by $ 90,664 because the compensation of two expatriates who joined SunPac in 1977 was included erroneously in administrative expenses for that year.

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Petitioner also incurred $ 36,604 n23 in administrative assistance costs (costs not contained in SunPac manufacturing costs) in 1977 which were not reimbursable under the SunPac license agreement. Petitioner incurred $ 46,468 in administrative assistance costs in 1978.

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n23 The record shows that petitioner incurred $ 127,000 in administrative assistance costs for 1977. However, $ 90,664 of this amount erroneously includes compensation of two of SunPac's expatriates who joined SunPac in 1977. See *supra* note 22.

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[**75]

Petitioner has a standard provision in its license agreements which gives it the right to charge its licensees for costs it incurs incident to the assistance rendered to the licensees by petitioner's technical representatives. It was not petitioner's practice, however, to charge its unrelated licensees separately for technical assistance.

VIII. THE DISTRIBUTOR AGREEMENT

A. *Terms of the Distributor Agreement*

On April 14, 1976, petitioner and SunPac entered into an agreement (hereinafter referred to as the distributor agreement) appointing petitioner as a nonexclusive worldwide distributor for any parts manufactured for sale by SunPac for use in or in support of air vehicle applications (hereinafter referred to as SunPac parts). Pursuant to the distributor agreement, SunPac agreed to sell SunPac parts to petitioner at the price set forth for each part in attachment A to the distributor agreement. Attachment A lists by part number and name each SunPac part and its price. The prices listed in attachment A of the distributor agreement equaled 85

[*272] percent of the prices shown in petitioner's current spare parts price list. Petitioner did not specify in the distributor [**76] agreement that the transfer price would be catalog price less a 15-percent discount to permit revisions, up or down, in the pricing should its experience under the agreement show that an adjustment in price was warranted.

The distributor agreement further provides that attachment A shall be revised from time to time to reflect part number changes and additions, and/or changes in prices. The distributor agreement was amended 11 times up through 1978 to update the parts and prices in attachment A.

The distributor agreement places no obligation on petitioner as to the use, resale, or other disposition of SunPac parts. Petitioner pays SunPac the catalog price less a 15-percent discount on all purchases regardless of whether petitioner sells the parts to others or uses them itself. Petitioner and SunPac intended to operate under the distributor agreement only until SunPac's direct distribution system could be implemented.

The distributor agreement contains no express provision specifying when payments from petitioner for the SunPac parts it purchases are payable. SunPac gave petitioner 6 months to pay for the SunPac parts it purchased. Petitioner took full advantage of the 6-month-payable [**77] terms and at times took even longer to pay SunPac for the SunPac parts.

In February 1977, petitioner examined its costs to distribute parts as spare parts only. Petitioner concluded then that there was no need to change its pricing system for SunPac parts.

B. *Relationship to U.S. Customs Valuation*

In early 1976 petitioner approached the U.S. Customs Service (hereinafter sometimes referred to as U.S. Customs) to attempt to reach a consensus as to the valuation for Customs purposes of parts imported from Singapore. Two valuation methods which could be used for this purpose are (1) the "U.S. value" method, which uses the price at which the imported product sells on the open U.S. market less appropriate cost and profit adjustments or (2) the "constructed value" method, which uses the foreign manufacturer's

[*273] actual production costs increased by an appropriate profit markup.

Petitioner proposed that:

(1) The "U.S. value" method be used to establish the dutiable value of SunPac's parts for U.S. Customs purposes.

(2) The dutiable value would be equal to petitioner's catalog price for the SunPac parts less a 15-percent discount.

(3) SunPac would reimburse petitioner for certain [**78] assistance costs pursuant to the SunPac license agreement.

Petitioner represented to U.S. Customs in a letter dated March 19, 1976, that petitioner estimated sales to petitioner of parts to be manufactured by SunPac (considering inflation, net 15-percent discount) to be as follows:

Year	Estimated sales
1976	$ 1,500,000
1977	4,700,000
1978	10,200,000
1979	13,600,000
1980	17,000,000
1981	21,000,000
1982	25,000,000
1983	29,000,000
1984	32,000,000
1985	35,000,000
1986	38,000,000
1987	41,000,000

Petitioner further represented to U.S. Customs that petitioner estimated royalty income from and assistance costs to SunPac as follows:

Year	Royalty income n1	Technical assist./ gen. value	Original cost design devel. & engineering	Cost of modifying processing	Admin. assist. costs n1
1975		n2 $ 639,033	n2 $ 78,777	n2 $ 90,233	.079207
1976	$ .03	715,000	70,000	117,000	.09
1977	.09	352,000	70,000	117,000	.02
1978	.20	127,000	70,000	117,000	.02
1979	.27		30,000	30,000	.02
1980	.34		35,000	35,000	.02
1981	.42		40,000	40,000	.02
1982	.50		45,000	45,000	.02
1983	.58		50,000	50,000	.02
1984	.64		55,000	55,000	.02
1985	.70		60,000	60,000	.02
1986	.76		65,000	65,000	.02
1987	.82		70,000	70,000	.02

[**79]

n1 In millions.

n2 Actual costs.

[*274] In addition, petitioner represented to U.S. Customs direct and indirect experience with other distributors of aircraft/aircraft engine component parts as follows:

Direct U.S. Experience

Standard Aircraft -- 20% off catalog.

Have inventory stocking.

Customers were mainly:

-- airlines,

-- engine repair stations.

Paid transportation.

Advised 20% was minimum difference they could agree to for a profitable operation. For other manufacturers indicated up to 50% off catalog is practice.

Indirect U.S. Experience

Industrial Procurement Services who handles support of French Falcon Aircraft in U.S. obtain 20 + % off catalog for aircraft parts they procure from France for distribution in U.S.

Have some inventory.

Customers:

-- aircraft users,

-- aircraft repair stations.

Handle field service and warranty administration.

Assume they pay duty and transportation from France.

Allison distributors buy from Allison at 40% off parts catalog.

Have inventory.

Pay U.S. transportation.

Customers:

-- engine operators,

-- engine repair stations.

Handle all field service and warranty administration.

Beech, Lear and Cessna similarly sell [**80] to distributor network at 20 + % off.

Cooper, Van Dussen, Anglo American and others have wanted to be our distributor. Minimum amount off catalog was always 20%.

[*275] *Direct Foreign Experience*

Avio Diepen, Netherlands -- 20% off catalog.

Inventory some.

Transportation generally paid by Avio.

Customers:

-- Fokker,

-- airlines,

-- engine manufacturers,

-- foreign government agencies.

Hawker De Havilland, Australia -- 20% off catalog.

Inventory some.

Transportation generally paid by Hawker.

Customers:

-- own engine repair for customers,

-- charge catalog for parts used,

-- engine operators,

-- foreign government agencies.

Nissho-Iwai Ltd., Japan -- 10% off catalog.

Sales representative only, no inventory.

Transportation to Japan & duty if any paid by their customers

Customer:

-- Japanese government agencies,

-- engine component stations,

-- aircraft/engine component licensed manufacturers.

In support of the transfer price for U.S. Customs purposes, petitioner justified the 15-percent difference between the catalog price (the U.S. sales price) and the distributor agreement purchase price as follows:

Estimated Breakdown of 15-Percent Difference Between Catalog and Distributor Purchase Price (Averaged Over All Imports) [**81]

		Percent of catalog prices
Distributor costs:		
Transportation costs		1.0%
Duty		1.0 to 5.0
General & administrative:		
Brokerage costs	0.5%	
Administrative costs	2.0	
Interest, taxes, storage, etc.	5.0	7.5
Total		9.5 to 13.5
Distributor profit range based on cost estimate		5.5 to 1.5

Based on petitioner's representations to it, the U.S. Customs Service agreed to accept the "U.S. value" method for valuation of dutiable SunPac parts. The U.S. Customs

[*276] Service, however, concluded that, due to certain administrative assistance costs not reimbursed to petitioner or carried as a cost to SunPac, the proper U.S. value was 86 percent of the catalog price rather than the 85 percent proposed by petitioner.

Since the inception of SunPac's CSD operations, for U.S. Customs purposes petitioner consistently has imported SunPac CSD parts at a price equal to 86 percent of the catalog price.

C. *Market for SunPac Parts*

In October 1975, petitioner performed a distribution study for SunPac-designated parts (hereinafter referred to as the distribution study). The distribution study used 1,104 spare parts [**82] considered for SunPac manufacture and reflected the market for these spare parts as follows:

	Percent of sales	
		Estimated
Location of airline customer	1974	1979
United States	66%	51%
Canada and South America	8	11
Europe, Africa, and the Middle East	21	32
Far East	5	6

1974 sales of SunPac-designated parts by distribution area used in the distribution study were as follows:

Area	Sales
United States, Canada, and South America	$ 5,940,895.84
Europe, Africa, and the Middle East	1,659,341.29
Far East	426,008.80
Total	8,026,245.93

This distribution study listed petitioner's ten largest airline spare parts customers based on 1974 sales as follows: United Airlines, Trans World Airlines, Delta Airlines, Pan American, the Societe Anonyme Belge d'Exploitation de la Navigation Aerienne (Sabena Belgian World Airlines) (hereinafter referred to as SABENA), American Airlines, Western Airlines, Japan Airlines, Eastern Airlines, and Air Canada.

Customers and quantity of orders expected for each category of parts as reflected in the distribution study were as follows:

[*277]

	Group A	Group B	Group C	Group D	Total anticipated
Number of customers	90	114	114	114	
Estimated number of orders per year	1,200	1,400	1,200	3,800	7,600

[**83]

D. *Sales of SunPac Parts*

Throughout 1977 and 1978, SunPac's operations consisted of the manufacture of aviation spare parts, which were used for petitioner's CSD's and other end items. All of SunPac's gross income for 1977 and 1978 came from the sale of SunPac parts to petitioner (other than some miscellaneous commission and interest income). All of these sales to petitioner were made under the distributor agreement at the catalog prices published in the spare parts price list, if available, less a 15-percent discount. In 1978, in addition to the sale of SunPac parts to petitioner, SunPac shipped spare parts with a spare parts price list value of $ 247,786 to SABENA pursuant to a consignment agreement entered into in 1978. SunPac began making sales to SABENA under the consignment agreement in 1979. See *infra*.

All of SunPac's sales to petitioner were made f.o.b. Singapore. During 1977, petitioner purchased SunPac parts totaling $ 6,595,000. During 1978, petitioner purchased SunPac parts totaling $ 18,605,000.

According to the Forms 2952, Information Return with Respect to Controlled Foreign Corporations, petitioner filed relating to SunPac for its fiscal years ended [**84] November 30, 1977, and November 30, 1978, SunPac's gross receipts and net earnings before taxes for those periods were as follows:

	11/30/77	11/30/78
Gross receipts	$ 6,142,610	$ 18,318,000
Net earnings	2,573,000	12,848,000

A portion of the parts purchased by petitioner from SunPac failed to meet petitioner's specifications. Upon closer inspection, these parts were: (a) Deemed acceptable as is, (b) deemed acceptable after rework by petitioner, or (c) scrapped. Petitioner's total rework and scrap costs with

[*278] respect to these parts amounted to $ 347,373 for 1977 and $ 140,481 for 1978. During 1977 and 1978, petitioner did not charge SunPac for the rework and scrap costs of the SunPac parts.

Petitioner (a) resold SunPac parts at the catalog price to the airlines, (b) used them as spare parts in its overhaul and repair activities, (c) used them in the manufacture of subassemblies which were sold as spare parts, or (d) used them in the manufacture of OEM or spare units. Petitioner paid SunPac the catalog price less 15 percent regardless of the use to which it put the part.

The sale of commercial spare parts represented around 10 or 11 percent of petitioner's [**85] business for 1977 and around 14 or 15 percent for 1978. Petitioner made no additional investment in physical assets to distribute SunPac parts pursuant to the distributor agreement. Between 10 to 15 percent of the time of petitioner's commercial products support department was spent distributing SunPac parts.

Petitioner projected distribution costs as a percentage of catalog prices for 1977 of 11.8 percent and experienced actual distribution costs of 12 percent. Petitioner projected distribution costs as a percentage of catalog price for 1978 of 12.1 percent and incurred actual costs to distribute of 9.2 percent.

Petitioner incurred U.S. Customs duties with respect to SunPac parts of $ 237,758 and $ 880,585 during 1977 and 1978, respectively. Petitioner also incurred freight, insurance, and broker costs of $ 39,372 and $ 110,762 during 1977 and 1978, respectively. Petitioner's duty, freight, and insurance costs for SunPac parts were reflected in the overhead expenses allocated to SunPac parts.

During the years in issue, petitioner and SunPac maintained "dual sourcing capabilities" for CSD parts. SunPac sold 287 different SunPac parts to petitioner during its 1977 fiscal year. [**86] SunPac sold a total of 312 different SunPac parts to petitioner during its 1978 fiscal year.

SunPac also manufactured 73 "single-sourced" parts in 1977 and 91 "single-sourced" parts in 1978.

During 1977 and 1978 SunPac shipped roughly 30 different parts to petitioner in an unfinished state. Petitioner's cost to finish these incomplete SunPac parts, exclusive of

[*279] inspection costs, totaled $ 29,600 and $ 113,604 for 1977 and 1978, respectively. Petitioner did not charge SunPac the costs incurred to finish the incomplete parts. The record does not show the fair market value of the unfinished SunPac parts immediately before and immediately after petitioner completed the manufacturing process on these parts. Petitioner concedes that at arm's length, SunPac should be charged back petitioner's costs incurred with respect to certain defective and unfinished parts in the amount of $ 631,000 for 1977 and 1978, computed as follows:

	1977	1978	Total
Cost to rework parts	$ 106,606	$ 56,987	$ 163,593
Cost of scrapped parts	240,767	83,494	324,261
Cost to finish parts	29,600	113,604	143,204
Total	376,973	254,085	631,058

Due to parts design complexity, the [**87] special processes and machinery, the manufacturing know-how, and the large manufacturing startup costs, generally petitioner could not purchase the parts manufactured by SunPac from unrelated vendors. During 1977, petitioner did not purchase from outside sources any of the parts produced by SunPac. During 1978, petitioner purchased from outside sources eight of the parts produced by SunPac. Petitioner's total purchases of these eight parts amounted to $ 3,400. SunPac's total revenue from sales to petitioner for these same eight parts in 1978 was $ 54,154. The record does not show the quantity of these eight parts purchased from the third-party manufacturers or the quantity of these eight parts manufactured by SunPac.

During 1977 and 1978, SunPac was at the low end of the learning curve for CSD production. Therefore, it probably was the least efficient plant then producing CSD parts.

IX. LUCAS TRANSACTIONS

Since the early 1950s, petitioner has entered into various agreements with Lucas Industries, Inc. (hereinafter referred to as Lucas), and/or its predecessors in interest regarding petitioner's CSD's. n24 Lucas is a public corporation, unrelated to petitioner, traded on the [**88] London Stock Exchange.

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n24 The first agreement, the 1953 general license, see *infra*, was entered into between Sundstrand Machine Tool Co., petitioner's predecessor name, and English Electric Co., Ltd. (hereinafter referred to as English Electric). On June 25, 1960, petitioner assigned to its subsidiary, Sundstrand International Corp. S.A., its patents, trademarks, and manufacturing rights relating to the 1953 general license. Sometime later, Sundstrand International reassigned to petitioner all patents, trademarks, and manufacturing rights it had acquired under the assignment. For simplicity, we will use "petitioner" to refer to Sundstrand Machine Tool Co., petitioner, and/or Sundstrand International Corp. S.A.

In 1969, English Electric sold the part of its business which manufactured and sold CSD's to Rotax Ltd. (hereinafter referred to as Rotax), a subsidiary of Lucas Industries Ltd. In the early 1970s, Rotax was merged into Lucas Aerospace Ltd., also a subsidiary of Lucas Industries Ltd. To minimize confusion, hereinafter we will use "Lucas" to refer to English Electric, Rotax, Lucas Aerospace Ltd., and/or Lucas Industries Ltd., unless reference to the specific company is required for clarification.

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[**89]

[*280] A. *License Agreements*

1. *The 1953 General License*

On November 27, 1953, petitioner and Lucas entered into a CSD license agreement (hereinafter referred to as the 1953 general license). The 1953 general license, among other things, granted Lucas (a) the exclusive right to manufacture CSD units and spare parts in the United Kingdom for both commercial and military applications; (b) the exclusive right to sell such CSD's and spare parts in the United Kingdom subject to petitioner's reservation of the right at all times to use and sell in the United Kingdom CSD's manufactured by petitioner in the United States; and (c) the nonexclusive right to use and sell throughout the British Commonwealth CSD's made in the United Kingdom for aircraft and guided missile use, together with the nonexclusive right to sell CSD's, components, and spare parts made in the United Kingdom in all countries of the world where they are shipped from the United Kingdom as part of a complete aircraft engine-drive-alternator assembly made in the United Kingdom or as part of a complete aircraft or a complete guided missile made in the United Kingdom.

The agreement also granted Lucas the right to [**90] use the Sundstrand trademark and further required Lucas to place the Sundstrand trademark on each CSD and transmission it manufactured, except where prohibited by the British Government.

The 1953 general license further provided Lucas complete access to all of petitioner's know-how, including design and development rights for all CSD's under production, and to

[*281] any improvements, changes, and modifications made to those CSD's. Moreover, petitioner agreed to furnish technical assistance, at Lucas' expense, to assist Lucas in the manufacture, assembly, inspection, testing, and servicing of the CSD's. Lucas also, at its own expense, could send a technical representative to petitioner's Rockford, Illinois, facility to observe and study petitioner's methods in the manufacture, assembly, inspection, testing, and servicing of CSD's.

The 1953 general license provided for payments as minimum royalties of $ 37,500 each on January 10, 1954, and March 10, 1954. In addition, the 1953 general license required royalty payments to petitioner on sales as follows:

(1) 6 percent on total net selling price up to and including 2,780,000 pounds;

(2) 3-1/2 percent on total net selling price in [**91] excess of 2,780,000 pounds and up to 5,560,000 pounds;

(3) 2 percent on total net selling price in excess of 5,560,000 pounds; with

(4) 1/6 of the royalties to be rebated until the rebate equals $ 75,000.

The 1953 general license also provided that if petitioner sold CSD's in the United Kingdom other than through Lucas, petitioner must pay Lucas a commission of 5 percent on the net selling price of the CSD's.

Lucas agreed to be responsible for any claims, except patent infringement claims of third parties, arising from the sale or use of the CSD's it manufactured and to indemnify and hold petitioner harmless from all liability for any claims arising from the manufacture, sale, or use of CSD's made by Lucas.

In addition, Lucas agreed to inform petitioner of any inventions, improvements, or modifications in petitioner's CSD's made by Lucas' employees. Moreover, Lucas gave petitioner a free, exclusive license in the United States and a nonexclusive license elsewhere in the world to use any of those inventions, improvements, and modifications.

The 1953 general license was for a term of 15 years and would extend automatically for 1 or more 5-year periods unless terminated by written notice [**92] given 2 years before the expiration date.

[*282] 2. *Amendments to the 1953 General License*

a. *The 1960 amendment.*

By amendment executed November 3, 1960, petitioner gave Lucas, among other things, the nonexclusive right to sell CSD's made in the United Kingdom in Belgium, France, Holland, Italy, Luxembourg, Portugal, Spain, and West Germany (hereinafter referred to as the listed countries), but only where the CSD's were shipped as part of a complete drive-alternator assembly, including associated electrical equipment designed by petitioner; and the nonexclusive right to sell in the listed countries spare parts for CSD's and associated electrical equipment but only to purchasers of those drive-alternator assemblies and then only for use by the purchasers as spare parts for the drive-alternator assemblies. The royalty fee for these sales was 10 percent of the net selling price and was not subject to the one-sixth rebate.

b. *The 1962 amendment.*

By amendment executed June 30, 1962, petitioner gave Lucas, among other things, the nonexclusive right and license to sell CSD's manufactured by Lucas in the United Kingdom, and spare and replacement parts for these CSD's, to Svenska [**93] Aeroplan Aktiebolaget (SAAB) and/or to the Royal Swedish Air Board for use only on a new fighter aircraft projected to be manufactured in Sweden. The royalty fee for these sales was 10 percent of the net selling price. This royalty also was not subject to the one-sixth rebate.

c. *The 1964 amendment.*

By amendment executed sometime in 1964 (hereinafter referred to as the 1964 amendment), petitioner gave Lucas and its sublicensees, among other things, the exclusive right to sell in the United Kingdom and the nonexclusive right to sell in France, CSD's manufactured wholly in the United Kingdom or partly in the United Kingdom and partly in France for use on or in connection with the Concorde (a supersonic transport then being proposed for manufacture by a joint arrangement between the Governments of Great

[*283] Britain and France), n25 and the nonexclusive right to use and sell throughout the world the Concorde CSD's.

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n25 The money for the Concorde program was to come jointly from the Governments, respectively, of France and Great Britain. These countries insisted on coproduction of most of the parts of the aircraft, including the CSD. The 1953 general license did not give Lucas the right to sublicense petitioner's CSD technology in France; but for Lucas to get the Concorde contract, Lucas had to sublicense the CSD to a French company. Therefore, petitioner and Lucas amended the 1953 general license to provide for the sublicense of petitioner's CSD technology to a French company. Auxilec was selected as the sublicensee since it was the French company the French Government had nominated for the Concorde program. (Auxilec in fact never manufactured CSD parts.) Petitioner provided substantial technical and marketing assistance to help Lucas convince the Concorde airframe manufacturer of the viability of the AGD CSD and get the Concorde contract. Petitioner was not directly reimbursed for this technical and marketing assistance.

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[**94]

The 1964 amendment also gave Lucas the nonexclusive right to sell throughout the world spare and replacement CSD's and spare parts for use on the Concorde as long as the Concorde remained in regular commercial service. The 1964 amendment further gave Lucas the right to have manufactured in France CSD's for the Concorde under a sublicense to Auxilec, a French company.

Exhibit B to the 1964 amendment is an agreement dated July 28, 1964, among petitioner, Lucas, and Auxilec (hereinafter referred to as the Tripartite agreement). The Tripartite agreement relates to the Concorde aircraft. In the Tripartite agreement Auxilec agreed, among other things, to sell CSD's for the Concorde only to Lucas or petitioner except for its right to supply spare parts of its own manufacture or of Lucas' manufacture to French operators of the Concorde in France and to maintain or overhaul CSD's in France for French operators of the Concorde. Auxilec agreed to pay Lucas a royalty of 8.5 percent of the net selling price of all CSD parts (including spare parts) manufactured and/or sold by Auxilec (except the royalty would be 10 percent on sales of CSD spare parts for use in the Concorde to purchasers other [**95] than Lucas).

Further, in the Tripartite agreement, Lucas agreed to pay petitioner a royalty of 8.5 percent of the net selling price to the manufacturer or user of the Concorde aircraft of all CSD's and spare parts manufactured and sold by Lucas and/or Auxilec (unless the royalty payable by Auxilec was 10 percent, in which case Lucas would pay petitioner a 10-percent royalty). Lucas also agreed to pay petitioner a royalty of 8.5 percent of the net selling price of all parts

[*284] manufactured by Lucas of the transmission then known as the variator of the Auxivar including components and spare parts and sold by Lucas for the Concorde provided that the royalty would not be less than 1.5 percent of the net selling price to the manufacturer or user of the Concorde of the complete Auxivar and electrical generating system comprising the variator-alternator assembly. The royalty rates applicable to the Concorde CSD were in lieu of the rates otherwise specified in the 1964 amendment to the 1953 general license.

During the 1960s, the Concorde's British manufacturer, British Aircraft Corp., projected the Concorde would be a substantial commercial program. It projected it would manufacture [**96] and sell 200 Concorde aircraft to airlines throughout the world. Each Concorde would require four CSD units.

The 1964 amendment further amended the basic royalty payment provisions to provide a royalty fee of 6 percent of the net selling price up to £ 2,780,000 pounds and 3.5 percent of the net selling price over £ 2,780,000.

In addition, for a 2-percent royalty for 15 years (hereinafter referred to as the sunset royalty provision), the 1964 amendment gave Lucas the nonexclusive right to use worldwide all unpatented technical information supplied by petitioner following the termination by notice of the 1953 general license.

The 1964 amendment further provides that the agreement would continue until December 31, 1978, and thereafter from year to year unless terminated by not less than 5 years written notice.

3. *The 1966 General License*

On May 19, 1966, but effective January 1, 1966, petitioner and Lucas entered into an agreement whereby they canceled the 1953 general license and simultaneously entered into a new license (hereinafter referred to as the 1966 general license). The 1966 general license for the most part incorporated the terms and provisions of the 1953 general license, [**97] as amended, including the sunset royalty and Concorde CSD provisions. The royalty fee provisions were amended to provide royalties on the sales of CSD's (including

[*285] spare parts) of 3.5 percent of the total net selling price (hereinafter referred to as the basic royalty fee) except for sales of CSD's or spare parts in the listed countries in which case the royalty fee remained at 10 percent; the sales of certain reservoirs in which case the royalty fee was 6 percent; and the payment provisions in exhibit B. Exhibit B to the 1966 general license was not made a part of the record; however, from the text of the 1966 general license, it appears that exhibit B is same exhibit B which was an attachment to the 1964 amendment, that is, the Tripartite agreement between petitioner, Lucas, and Auxilec pertaining to the Concorde.

4. *Amendments to the 1966 General License*

a. *The first 1968 amendment*.

An amendment executed January 1, 1968, rewrote a provision of the 1966 general license to give Lucas and its sublicensees a nonexclusive right to sell CSD's and spare parts made in the United Kingdom in the listed countries but only for use on aircraft first flown n26 in those countries, [**98] or for use in guided missiles manufactured in any of those countries. The basic royalty fee was amended to 3.5 percent of the net selling price of all CSD's (including spare parts) sold for the use of the Government of the United Kingdom and 5 percent of the total net selling price of CSD's (including spare parts) sold to most purchasers other than for use of the Government of the United Kingdom. In addition, the royalty fee for CSD's and spare parts sold in the listed countries was decreased to 6.5 percent of the net selling price.

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n26 "Aircraft first flown" was defined to be applicable to each individual aircraft and to refer to its initial flight. In the 1966 general license as executed, Lucas had the nonexclusive right to sell CSD's made in the United Kingdom in the enumerated countries but only where the CSD's were shipped from the United Kingdom as a part of a complete drive-alternator assembly, including associated electrical equipment designed by petitioner.

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b. *The TU-144 amendments*.

The 1966 general [**99] license was further amended on January 1, 1968, and May 31, 1968, to authorize Lucas to sell a specified number of CSD's to Aviaexport, an agency of the Soviet Union, for use on the Soviet TU-144 commercial

[*286] aircraft. The royalty fees for these sales were (1) the greater of (i) 10 percent of Lucas' net selling price to Aviaexport of all transmissions and CSD's and spare parts for them, and 10 percent of all payments made by Aviaexport for engineering fees, qualification testing, prototype testing, prototypes, and other similar matters or (ii) 6 percent of the total contract price charged to Aviaexport for the transmissions and/or CSD's and alternators (if any) and 6 percent of the payments made by Aviaexport for engineering fee, qualification testing, prototype testing, prototypes, tooling (including special tooling), and other similar matters, and (2) 10 percent of all spare transmissions and/or CSD's and spare parts for them.

5. *The 1970 Licenses*

The 1966 general license, as amended, had to be assigned to Lucas as a result of Lucas' acquisition of English Electric's CSD business. See *supra* note 24. Petitioner took this opportunity to renegotiate its agreement [**100] with Lucas to obtain a higher royalty rate to reflect the advanced technology in CSD's and, hence, the decreased competition from other types of CSD's. As a result of these negotiations, in August 1970, petitioner and Lucas entered into four separate licenses: the 1970 general license, the 1970 MRCA license, the 1970 Concorde license, and the 1970 TU-144 license. These four license agreements were in effect during 1977 and 1978.

a. *The 1970 general license.*

The 1970 general license canceled the 1966 general license and replaced it simultaneously with a new agreement effective August 1, 1970, which basically embodied the provisions of the 1966 general license. Thus, rights granted to Lucas, among other things, include:

(1) The exclusive right to sell CSD's in the United Kingdom for aircraft and guided missiles manufactured in the United Kingdom subject to petitioner's right to sell in the United Kingdom CSD's or spare parts manufactured by

[*287] it in the United States (with payment of a commission of 5 percent of the net selling price); n27

(2) the nonexclusive right to sell throughout the listed countries CSD's made in the United Kingdom for use in aircraft first flown [**101] in the listed countries and for use on guided missiles manufactured in those countries; n28

(3) the nonexclusive right to sell throughout the world, except the United States, CSD's made in the United Kingdom for original installation in aircraft manufactured in those countries under license from a United Kingdom company to manufacture aircraft substantially identical to aircraft designed and manufactured in the United Kingdom by that United Kingdom company;

(4) the nonexclusive right to sell throughout the world CSD's manufactured by Lucas, where those CSD's are to be used on military aircraft or guided missiles procured by or for the Government of the United Kingdom, provided that the military aircraft or guided missiles are to be operated by the Government of the United Kingdom;

(5) the nonexclusive right to sell throughout the world replacement CSD's and spare parts for use as such, for CSD's made and sold by Lucas in accordance with the agreement.

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n27 However, petitioner did not have to pay the 5-percent commission on sales of CSD's or spare or replacement parts for CSD's it sold in the United Kingdom for use on aircraft manufactured in the United Kingdom under license from a U.S. manufacturer making substantially identical aircraft. The 5-percent commission also was not due on sales by petitioner or petitioner's licensees for CSD's they sold in the United Kingdom where those CSD's were to be used on military aircraft or guided missiles procured by or for the Government of the United States or the licensee's Government. [**102]

n28 This provision was amended on Apr. 25, 1979, to define as the listed countries all countries which then or thereafter became members of the European Economic Community, Spain, and Portugal.

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The 1970 general license fixes the royalty rate at 6.5 percent of the total net selling price on all transmissions and CSD's and spare parts for them (with one exception, whether or not of petitioner's design) for contracts received after August 1, 1970, except for certain military applications for which the royalty rate remained at 3.5 percent, and at the 1966 general license rates, as amended, for contracts received before August 1, 1970. Under the 1970 general license, if Lucas proposes to sell its VSCF system, petitioner may convert Lucas' exclusive rights under the 1970 general license to nonexclusive rights and terminate petitioner's obligation to furnish data and services. The

[*288] 1970 general license also includes the 2-percent sunset royalty provision.

b. *The 1970 MRCA license*.

On August 3, 1970, petitioner and Lucas entered into a license agreement involving specifically the MRCA (multi-role [**103] combat aircraft) program (hereinafter referred to as the 1970 MRCA license). See *infra* regarding the agreement between petitioner and Siemens Aktiengesellschaft also relating to the MRCA program.

The 1970 MRCA license encompasses the basic provisions of the 1970 general license. Under the 1970 MRCA license, among other things, petitioner gives Lucas:

(1) The exclusive right to manufacture and sell MRCA CSD's in the United Kingdom subject to petitioner's right to sell in the United Kingdom MRCA CSD's and spare parts manufactured by petitioner in the United States (with payment to Lucas of a commission of 5 percent of the net selling price of those CSD's and spare parts not sold through Lucas);

(2) the nonexclusive right to sell throughout the world MRCA CSD's manufactured by Lucas where those MRCA CSD's are to be used on MRCA aircraft procured by or for the Governments of the United Kingdom, the Federal Republic of Germany, and/or Italy, provided the MRCA aircraft are to be operated by those Governments; n29 and

(3) the nonexclusive right to sell throughout the world, except the United States, MRCA CSD's made in the United Kingdom for original installation in aircraft manufactured [**104] in those countries under license from a United Kingdom, German, and/or Italian company to manufacture aircraft substantially identical to MRCA's designed and manufactured by such company.

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n29 Petitioner or its licensees, however, had the right to sell MRCA CSD's in the United Kingdom without payment of the 5-percent commission where those MRCA CSD's were sold for MRCA's procured by or for the Government of the United States or the licensee's Government.

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The 1970 MRCA license provides for a royalty of 6.5 percent of the net selling price of all MRCA CSD's, and parts for them, sold by Lucas. The 1970 MRCA license also incorporates the 2-percent sunset royalty provision.

[*289] c. *The 1970 Concorde license.*

Petitioner and Lucas also entered into a new license for the Concorde program in August 1970 (hereinafter referred to as the 1970 Concorde license). The 1970 Concorde license incorporates for the most part the terms and provisions of the 1966 general license as they applied to the Concorde aircraft program. [**105] Thus, under the 1970 Concorde license petitioner gives Lucas, among other things:

(1) The exclusive right to manufacture in the United Kingdom Concorde CSD's;

(2) the right to sublicense Auxilec to manufacture parts for Concorde CSD's in France subject to the terms and provisions of the Tripartite agreement;

(3) the exclusive right to sell in the United Kingdom, and the nonexclusive right to sell in France, Concorde CSD's manufactured wholly in the United Kingdom or partly in the United Kingdom and partly in France and the nonexclusive right to use and sell throughout the world Concorde CSD's as a part of a complete Concorde aircraft;

(4) the right to sublicense Auxilec to use and sell Concorde CSD's and parts of them, subject to the terms and provisions of the Tripartite agreement;

(5) the nonexclusive right to sell throughout the world spare and replacement Concorde CSD's and spare parts for them for use as such for Concorde CSD's made and sold in accordance with the 1970 Concorde license.

Under the 1970 Concorde license, Lucas agreed to pay petitioner royalties in accordance with the royalty payment terms and provisions in the Tripartite agreement. Furthermore, petitioner agreed [**106] to pay Lucas a commission of 10 percent of the selling price of any Concorde CSD's and/or spare parts for them petitioner sells anywhere in the world, unless at the time of the sale Lucas could not supply the CSD and/or spare parts.

d. *The 1970 TU-144 license.*

On August 3, 1970, petitioner and Lucas entered into a separate CSD license for the Soviet commercial supersonic aircraft, the TU-144 (hereinafter referred to as the 1970 TU-144 license). The 1970 TU-144 license gives Lucas the

[*290] exclusive right to manufacture and sell in the United Kingdom TU-144 CSD's manufactured in the United Kingdom to Aviaexport or any agency of the Soviet Union. In addition, the 1970 TU-144 license gives Lucas the nonexclusive right to sell worldwide replacement TU-144 CSD's and spare parts for TU-144 CSD's made and sold by Lucas.

The 1970 TU-144 license requires the same royalty as specified in the TU-144 amendments to the 1966 general license. Under the 1970 TU-144 license petitioner must pay Lucas a commission equal to 6.5 percent of the CSD units or spare parts selling price if petitioner sells anywhere in the world TU-144 CSD's unless, at the time of the sale, Lucas could not supply [**107] the TU-144 CSD or spare parts.

6. *Other Lucas Licenses*

a. *The 1977 traction drive license*.

In the early 1960s, Lucas developed its Perbury traction CSD (hereinafter referred to as the Lucas traction drive) and successfully placed it on the British Government's Harrier aircraft program. Petitioner was interested in obtaining a license from Lucas relating to the Lucas traction drive. On March 4, 1977, Lucas gave petitioner a license for this CSD (hereinafter referred to as the 1977 traction drive license). The 1977 traction drive license gives petitioner the exclusive right to manufacture in the United States and its possessions Lucas traction drives and spare parts for those drives; the exclusive right to sell Lucas traction drives for installation in aircraft first flown in North America; and the nonexclusive right to sell throughout the world replacement Lucas traction drives and spare parts for use as such for Lucas traction drives sold by petitioner.

In the 1977 traction drive license, the parties also agreed to undertake further research and development in the field of traction drives. According to the 1977 traction drive license:

[Petitioner] has represented to [**108] Lucas that it expects to expend each year a sum of approximately Two Hundred Thousand Dollars ($ 200,000.00 U.S.) on such development work, in addition to any expenditure or work it may undertake on applications engineering. Lucas has relied on this representation in agreeing to grant the rights and licenses to [petitioner]

[*291] contained in this Agreement, and in establishing the level of royalties and other payments by [petitioner] provided * * * below.

In consideration for the 1977 traction drive license, petitioner agreed to pay Lucas the following:

(1) $ 100,000, in two equal installments, the first one due within 30 days of the coming into effect of the agreement and the second installment due within 12 months after payment of the first installment;

(2) in general, a royalty fee of 6.5 percent of the total net selling price of all traction drives and Lucas traction drives, and spare parts for those CSD's, sold by petitioner. However, petitioner could deduct from the net selling price two times the purchase price of any supplies purchased by petitioner from Lucas in furtherance of petitioner's traction drive sales activity; n30

(3) a commission fee of 6.5 percent of the [**109] total net selling price of all CSD's, and spare parts for those CSD's, not falling within the scope of (2) above but made and sold by petitioner for installation in the U.S. Marine Corps military aircraft AV8B, or in any aircraft which is basically a modification of the AV8B aircraft.

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n30 A formula also was set forth for determining the royalty fee if petitioner sold Lucas traction drives or traction drives as part of a drive system, but where no separate price for that drive was established.

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b. *The 1977 PRC license*.

On March 4, 1977, petitioner and Lucas entered into an agreement (hereinafter referred to as the 1977 PRC license) wherein petitioner gave Lucas the exclusive right to manufacture petitioner's CSD's in the United Kingdom for use on aircraft first flown in the People's Republic of China other than aircraft of a design originating in the United States; the nonexclusive right to sell those CSD's in the People's Republic of China; and the nonexclusive right to sell replacement CSD's and spare parts for [**110] those CSD's throughout the world. In return, Lucas agreed to pay petitioner a royalty of 10 percent of all transmissions and CSD's, and spare parts, sold pursuant to the 1977 PRC license together with 10 percent of all payments received by Lucas for engineering, qualification testing, prototype testing, prototypes,

[*292] and other matters relating to such CSD's and transmissions.

B. *Sales Agreements*

1. *The 1962 Sales Agreement*

In an agreement entered into on June 30, 1962 (hereinafter referred to as the 1962 sales agreement), petitioner and Lucas agreed to promote actively the sale of CSD-alternator assemblies in the listed countries and particularly CSD-alternator assemblies embodying CSD's of a design Lucas had not manufactured before. Under the 1962 sales agreement, each party agreed to pay the other party a commission of 5 percent of the net selling price of CSD's sold by it for use in aircraft first flown in the listed countries or guided missiles manufactured in those countries, and on all spare CSD's and parts sales resulting from the sale of the units originally installed on the specific aircraft or guided missile. The 1962 sales agreement did not modify or [**111] alter the 1953 general license.

2. *The 1968 Sales Agreement*

Petitioner and Lucas canceled the 1962 sales agreement on January 1, 1968, and entered into another agreement on that same day (hereinafter referred to as the 1968 sales agreement). In the 1968 sales agreement the parties agreed to pay each other a commission on sales of CSD's in the listed countries for use in aircraft first flown in those countries or for use in guided missiles manufactured in those countries. The commission rate was (1) the greater of (i) 5 percent of the net selling price of CSD's sold by it or (ii) 3.5 percent of the total contract price charged to the customer for the CSD and alternator (if any), and (2) 5 percent on all spare CSD's and parts sold as a result of the sales of CSD's originally installed on aircraft or guided missiles. n31 Petitioner further agreed to pay Lucas 10 percent of the selling price of any CSD and/or spare parts for use on the Concorde (unless Lucas could not supply that CSD or

[*293] spare part at the time of sale) and 6.5 percent of the selling price of CSD's and/or spare parts for use on the TU-144 (unless Lucas could not supply that CSD or spare part at the time [**112] of sale).

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n31 However, the royalty payments Lucas owed to petitioner under the 1966 general license were to be reduced so that the combined commission and royalty payments would not exceed (1) 10 percent of the net selling price as computed under method (i) or (2) 7 percent of the total contract price as computed under method (ii).

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Lucas and petitioner agreed, however, that the 1968 sales agreement became of no force and effect as of April 1, 1969, when Rotax Ltd. purchased the business of English Electric relating to the manufacture and sale of CSD's. See *supra* note 24.

C. *Lucas Operations Under the Licenses*

After entering into the 1953 general license, Lucas spent about $ 4 million to establish manufacturing, development, and test facilities for CSD's and generators in England. Lucas required approximately 4 years to become proficient in the manufacture of CSD's. Both during and after the startup period, Lucas required technical assistance from petitioner. Lucas transferred a number of its engineers [**113] for various periods to petitioner's Rockford facility. Lucas also installed a liaison engineer at petitioner's Rockford facility until 1960 and during that time a continuous stream of know-how passed from petitioner to Lucas and from Lucas to petitioner. Petitioner further sent a number of its engineers to England to assist Lucas. There was also telephone and telex communication between the parties. Petitioner did not charge Lucas for this technical assistance.

At one time Lucas considered terminating the 1970 licenses and using petitioner's technology under the sunset royalty provisions. Lucas, however, chose to continue the 1970 general license rather than terminate it and sell CSD units and parts worldwide under the 2-percent sunset royalty provision because Lucas believed that the 1970 general license, with its continuing design and development rights for a 6.5-percent royalty, was more valuable than the right to use for a 2-percent royalty existing CSD technology to manufacture and sell CSD parts and units worldwide.

From time to time when Lucas was having production or capacity problems, Lucas purchased parts from petitioner. Lucas used the parts purchased from petitioner [**114] in its CSD OEM unit production. Lucas paid the catalog price or a

[*294] catalog-equivalent price for all parts purchased from petitioner. During 1974 through 1978, Lucas purchased the following parts from petitioner at the catalog or catalog-equivalent price for use in CSD unit production:

Year	Amount
1974	$ 53,786
1975	104,286
1976	248,938
1977	258,556
1978	497,204

X. OTHER LICENSE TRANSACTIONS

A. *The Teijin License*

In the mid-1960s the Japanese Defense Agency (hereinafter referred to as JDA) asked petitioner's Japanese trading agent, Nissho Iwai (hereinafter referred to as Nissho), to ask petitioner to establish a Japanese source for CSD units and spare parts being supplied for the JDA's military programs. Nissho suggested three Japanese companies as possible license candidates. In 1965, petitioner selected Teijin Seiki Co. Ltd. (hereinafter referred to as Teijin) as the best candidate. At all relevant times, Teijin was a public corporation unrelated to petitioner. During 1977 and 1978, Teijin employed 2,000 individuals and generated sales of $ 83 million.

On January 26, 1967, Teijin and petitioner entered into a license agreement (hereinafter referred [**115] to as the Teijin license). In the Teijin license petitioner gave Teijin, among other things, the exclusive right to manufacture in Japan and the nonexclusive right to sell in Japan those CSD's and replacement CSD's for use only on (a) aircraft built in Japan, including aircraft built there under license from its U.S. manufacturer; (b) military type aircraft owned, built, or modified by or for the Government of Japan; and (c) aircraft built outside Japan which do not use CSD's manufactured by petitioner. In addition, petitioner gave Teijin the nonexclusive right to sell worldwide, except in the United Kingdom, replacement CSD's to purchasers of aircraft manufactured in Japan but only for use as replacements for CSD's made by Teijin and used as such.

[*295] In consideration for the rights, technology, and technical assistance given to Teijin under the Teijin license, Teijin agreed to pay petitioner a royalty of 6.5 percent of the net selling price of all CSD's sold by Teijin in Japan and 10 percent of net sales outside of Japan. In addition, Teijin agreed to pay petitioner a $ 100,000 initial lump-sum payment for the transfer of technology and proprietary information, know-how, [**116] and data. However, Teijin could credit one-half of that sum against one-half of future royalties if at the end of the first 4 years following the effective date of the agreement petitioner was unable to establish Japanese patents covering the licensed products (until $ 50,000 was entirely credited or a patent was issued in Japan, whichever occurred first).

Petitioner provided technical assistance to Teijin during the 2 years following the date the parties entered into the Teijin license. Although the Teijin license gave petitioner the right to charge petitioner's technical assistance costs to Teijin, petitioner did not charge Teijin for this assistance.

The Teijin license initially was for a 12-year term with automatic 5-year extensions absent a 1-year notice of termination. The term of the Teijin license was amended on June 9, 1967, to 10 years from the date of receipt by petitioner of the $ 100,000 lump-sum payment and on September 17, 1975, to extend from June 27, 1967, through June 26, 1987.

By letter memorandum dated June 13, 1967, the parties expressed their understanding that, upon termination of the Teijin license for reasons other than default or breach by Teijin, Teijin [**117] had the right to use any of petitioner's unpatented technology pertaining to CSD's transferred under the Teijin license in exchange for payment for 10 years of a royalty of 3 percent of the net selling price. Teijin's gross sales of CSD units and parts during 1977 and 1978 were $ 3,111,304 and $ 4,938,031, respectively. Royalties on these sales for 1977 and 1978 were $ 202,235 and $ 320,972, respectively. After withholding income taxes, Teijin paid to petitioner for 1977 and 1978 $ 182,012 and $ 288,875, respectively.

When Teijin entered into the Teijin license with petitioner, Teijin's employees could perform the basic manufacturing

[*296] skills necessary to manufacture CSD units and spare parts, except for the manufacture of gears. Teijin's employees did not have the basic skills necessary to test CSD's and spare parts.

Before commencing production under the Teijin license, Teijin made a capital investment of $ 3 million to upgrade and obtain the necessary machinery, tooling, and gaging to manufacture and test CSD units and spare parts.

Teijin did not perform any independent CSD research and development under the Teijin license. Teijin used the manufacturing processes and [**118] procedures provided by petitioner under the Teijin license but did make some changes which did not affect the quality of the CSD's. Between 1967 and 1978, Teijin did not suggest any engineering changes to petitioner's CSD technology, nor did it provide petitioner with any inventions, improvements, or modifications to the CSD technology.

Teijin made revisions to its quality control manual to encompass the manufacture of CSD's. Petitioner provided Teijin with a copy of petitioner's quality manual to assist Teijin in making these revisions. Additionally, petitioner provided technical assistance to Teijin in the form of training Teijin personnel at petitioner's U.S. facilities and providing ongoing manufacturing engineering assistance. Petitioner did not charge Teijin for this technical assistance or for providing its quality manual.

For the first 2 to 3 years of production of CSD's by Teijin, it experienced a scrap rate of about 10 percent. Teijin reduced this rate gradually to about the 2-percent range.

Teijin purchased a number of finished CSD parts from petitioner for its CSD unit production. During 1977 and 1978, Teijin's purchases amounted to about $ 281,000 and $ 711,000, [**119] respectively. CSD parts purchased from petitioner made up approximately 20 percent of the content of Teijin's CSD units. Teijin paid petitioner the full catalog price, or equivalent thereof, for the CSD parts purchased from petitioner in 1977 and 1978.

B. *The Siemens License*

On September 28, 1970, petitioner and Siemens, a West German corporation, entered into a license agreement (hereinafter

[*297] referred to as the Siemens license). Under the Siemens license petitioner gave Siemens, among other things, the exclusive right to manufacture CSD's in Germany; the nonexclusive right to sell CSD's manufactured by Siemens for original installation on aircraft manufactured in certain countries; n32 and the nonexclusive right to sell throughout the world replacement CSD's and spare parts for CSD's manufactured and sold by Siemens, and to sell parts to other CSD licensees of petitioner.

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n32 Andorra, Austria, Belgium, Denmark, Finland, France, the Federal Republic of Germany (including West Berlin), Greece, Iceland, Ireland, Italy, Liechtenstein, Luxembourg, Monaco, The Netherlands, Norway, Portugal, San Marino, Spain, Sweden, Switzerland, and the Vatican City. The Siemens license was amended on Dec. 8, 1978, among other things, to delete from this list Finland, Norway, Austria, Greece, Switzerland, Andorra, Iceland, Liechtenstein, Monaco, San Marino, and the Vatican City.

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[**120]

Siemens agreed to pay to petitioner for the Siemens license and services to be rendered, in addition to royalties, a lump-sum payment of $ 75,000 for each aircraft program (not to exceed in the aggregate $ 300,000) for which Siemens received the contract to furnish CSD's, perform development, technical studies or tests for CSD's, or perform repair and/or overhaul of CSD's; or if earlier, after the lapse of a specified number of months. Failure by Siemens to make the lump-sum payment within the specified period converted the exclusive rights to nonexclusive rights and limited petitioner's duty to furnish information, data, and services.

Siemens also agreed to pay to petitioner a royalty of 6.5 percent of the net selling price of all CSD's, replacement CSD's, and spare parts sold by Siemens; charges for technical studies, tests, mockup systems, and tooling relating to CSD's; and charges for repair and/or overhaul of the CSD's (including parts and labor).

The Siemens license was for a term of 15 years from receipt of the first lump-sum payment. It could be extended for one or more periods of 5 years each.

C. *The IAI License*

On November 20, 1970, petitioner gave Israel Aircraft [**121] Industries Ltd. (hereinafter referred to as IAI) the following options pertaining to CSD model number 15HD06:

(1) Upon payment of 90 percent of $ 10,000, the exclusive and perpetual right to use the technical information supplied

[*298] by petitioner to assemble and test, use, sell, and/or transfer in Israel for or to the Government of Israel and/or its designee the CSD units and/or for the use in aircraft manufactured and/or modified in Israel; and the perpetual nonexclusive right to use, sell, and/or transfer throughout the world all such CSD units so assembled and tested by IAI for that aircraft and for aircraft manufactured and/or modified under the contract or license from Israel (the assembly license).

(2) Upon payment of 90 percent of $ 64,000, the exclusive and perpetual right to use the technical information and data supplied by petitioner to manufacture, and have manufactured, use, sell, and/or transfer in Israel to the Government of Israel and/or its designee parts for CSD units for use as spares and/or for use in aircraft manufactured and/or modified in Israel; and the perpetual, nonexclusive right to use, sell, and/or transfer throughout the world all such spare parts [**122] for that aircraft and for aircraft manufactured and/or modified under contract or license from Israel (the spare parts license).

(3) With the exercise of both options (1) and (2) and the payment of $ 74,000 (for the partial CSD manufacturing license) n33 or $ 99,000 (for the complete CSD manufacturing license), n34 less credits for all sums paid for the exercise of the other options, the exclusive and perpetual right to use the technical information and data supplied by petitioner to manufacture, and have manufactured, assemble, test, use, sell, and/or transfer in Israel to the Government of Israel and/or its designee CSD units and parts for them and/or for use in aircraft manufactured and/or modified in Israel; and the perpetual, nonexclusive right to use, sell, and/or transfer throughout the world all such CSD units and parts so manufactured by IAI for that aircraft and for aircraft manufactured and/or modified under contract or license from Israel.

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n33 IAI to manufacture CSD units with more than 25 percent content by weight of parts to be procured from petitioner.

n34 IAI to manufacture CSD units with 25 percent or less content by weight of parts to be procured from petitioner.

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[**123]

The IAI license provides for a royalty of 6.5 percent of the net selling price to be paid to petitioner for a period of 10 years for the rights, services, and assistance provided under

[*299] the IAI license. IAI also agreed to pay petitioner $ 1,000 to bring the IAI license into effect.

In addition, IAI agreed to pay petitioner $ 175 per day for each technical representative petitioner furnished to assist IAI in the implementation and use of the technical information and data supplied under each option. It further agreed to pay an additional sum to be agreed upon for assistance given to IAI in arranging favorable terms with suppliers and/or subcontractors who supply materials and/or parts to petitioner for use for or in the CSD units or any part for them.

D. *The Licensintorg License*

Petitioner entered into a license agreement with a Soviet organization, Vsesojuznoje Exportno-Importnoje Objedinenije (hereinafter referred to as Licensintorg), on August 31, 1976 (hereinafter referred to as the Licensintorg license). The Licensintorg license gave Licensintorg the exclusive and perpetual right to use, without limitation, in the U.S.S.R. the technical documentation and information [**124] supplied by petitioner to manufacture and have manufactured in the U.S.S.R. the CSD's, and the required replacements and spare parts for them, and to use and sell in the U.S.S.R. the CSD's, and the required replacements and spare parts for them, for use in commercial transport aircraft manufactured in the U.S.S.R.; the nonexclusive and perpetual right to use and sell in the People's Republic of Bulgaria, the Hungarian People's Republic, the Czechoslovak Socialist Republic, the Socialist Republic of Rumania, the Polish People's Republic, the Socialist Federal Republic of Yugoslavia, and the German Democratic Republic CSD's manufactured by Licensintorg in the U.S.S.R. for original installation in commercial transport aircraft manufactured in those countries; and the nonexclusive and perpetual right to use and sell in any country of the world replacement CSD's and spare parts for the CSD's sold by Licensintorg pursuant to the Licensintorg license. In lieu of a continuing royalty payment, Licensintorg paid petitioner in a lump sum $ 2,720,000 for the exclusive rights granted and the transfer of technical documentation and information and $ 480,000 for the nonexclusive rights granted, [**125] the technical

[*300] assistance to be provided, the improvements and related technical documentation and information to be provided, and the liabilities and services to be provided.

The Licensintorg license was for 8 years (except for the perpetual licenses and provisions for improvements and related technical documentation and information and technical assistance which generally was for 5 years) but could be extended by mutual consent.

XI. THE CONSIGNMENT AGREEMENT

Petitioner originally planned to have SunPac distribute SunPac parts directly to its airline customers. Consequently, by letter dated June 16, 1977, petitioner announced to its commercial airline customers that it had established a facility in Singapore for the manufacture of spare parts and that effective November 1, 1977, it was instituting a method for shipping SunPac parts directly from Singapore while its Rockford facility would continue to handle all the paperwork.

The airline customers for the most part reacted negatively to petitioner's direct distribution proposal. By letter dated December 7, 1977, the Association of European Airlines (hereinafter referred to as AEA) advised petitioner that, because of their [**126] lack of faith in the distribution system and the lack of proof of any real advantage to the airlines, the AEA rejected both petitioner's proposal to supply material directly from Singapore and its alternative proposal for delivery of material f.o.b. Amsterdam for collection and distribution to the European airlines.

A. *SABENA*

Monsieur Michel DeSmedt (hereinafter referred to as Mr. DeSmedt) was general manager of SABENA's purchasing department between 1970 and 1978. SABENA is an unrelated Belgian corporation with its principal place of business in Brussels, Belgium.

Mr. DeSmedt wanted to enter into consignment arrangements with aerospace manufacturers so that SABENA would have a wide range of aerospace spare parts to offer to airlines. In 1974, Mr. DeSmedt negotiated with Boeing to

[*301] allow him to function as a distributor of Boeing spare parts in Europe.

During the 1970s, petitioner had poor product support in Europe. As a result, Mr. DeSmedt viewed petitioner as a prime candidate for his distribution concept. Mr. DeSmedt offered to have SABENA act as petitioner's distributor of spare parts in Europe. Petitioner, however, on May 6, 1976, initially rejected Mr. DeSmedt's [**127] offer.

In March 1978, SABENA once again approached petitioner and offered to store and distribute petitioner's parts to the European airlines. Mr. DeSmedt entered into negotiations with petitioner and SunPac in June and July of 1978. He proposed to petitioner and SunPac a contract similar to SABENA's contract with Boeing.

B. *The Agreement*

On August 15, 1978, but as of August 1, 1978, petitioner, SunPac, and SABENA entered into an agreement (hereinafter referred to as the consignment agreement) regarding the consignment and sale of spare parts to airlines in Europe, the Middle East, and Africa. SABENA agreed to act as consignee for certain parts for both SunPac and petitioner. The consignment agreement was to be in force for 3 years, subject to a 1-year extension.

The consignment agreement recites as follows:

At SABENA's request, [SunPac] and [petitioner] have given consideration to consigning an inventory of certain spare parts most relevant to [SunPac's] and [petitioner's] customers operating in Europe, the Middle East and Africa. These parts are applicable to all models of [CSD's] and other products manufactured by [petitioner] * * *.

In consideration of the consignment [**128] of spare parts by SunPac and petitioner, SABENA agreed to provide storage at its facilities in Brussels, Belgium, at no charge to SunPac or petitioner, and to perform from time to time, on a job order basis, certain modifications and rework of the spare parts as requested by petitioner and/or SunPac. The price for each job was not to exceed the sum of (1) a charge for labor at the direct labor hourly rate to be negotiated between the parties; and (2) the invoice cost to SABENA of any direct materials incorporated in the rework or modification

[*302] (other than parts, kits, and materials supplied by SunPac and/or petitioner and parts withdrawn from the consignment inventory) plus a handling charge equivalent to the rate of commission in effect at the time of the work. The price for the work, however, was not to exceed the customary charges made by SABENA to third parties for similar work.

Under the consignment agreement, SunPac and petitioner agreed to provide to SABENA an initial inventory of certain parts within 60 to 90 days of the execution of the consignment agreement. Additions, deletions, and replenishments of that inventory would be at petitioner's and/or SunPac's discretion [**129] based on sales activities and SABENA's recommendation. The only requirement imposed by SABENA was a request that all parts turn over no more than three times per year. No semifinished parts were included in the SABENA consignment inventory.

SunPac and/or petitioner retained title to the spare parts until SABENA needed the part itself or received an order from one of SunPac's or petitioner's customers, at which time SABENA took ownership of the part and then used it or resold it to the customer. Consequently, SABENA bore no inventory carrying costs and avoided Belgian taxes and duties. SABENA undertook guardianship of the parts and took responsibility for insuring them. SABENA agreed to purchase SunPac parts f.o.b. Singapore and petitioner's parts f.o.b. Rockford with SABENA to assume all shipping costs including transit insurance. Only FAA PMA parts could be sold to SABENA.

Under the consignment agreement, SunPac and petitioner agreed to pay quarterly to SABENA a commission fee for costs incurred in connection with the administration of the consignment inventory as follows:

Annual purchases (in U.S. dollars)	Fee
Under $ 1.5 million	10.0%
1.5 million to 2.999 million	8.0
3.0 million to 3.999 million	6.5
4.0 million to 4.999 million	5.0
5.0 million to 5.999 million	4.5
6.0 million and over	4.0

[**130]

[*303] SABENA agreed to purchase spare parts from SunPac and/or petitioner at the prices in petitioner's spare parts price list in effect at the time SABENA withdrew the part from the consignment inventory. SABENA's suggested resale prices also were the prices in petitioner's current spare parts price list. The sale of parts by SunPac and petitioner to SABENA at the catalog price was mandated by the World Airlines Suppliers' Guide, which prohibits price discrimination.

The consignment agreement requires SABENA to make payment to SunPac and petitioner within 30 days of its purchase of the part. The parties delayed the effective date of the consignment agreement until January 1, 1979.

In conjunction with executing the consignment agreement for SABENA, Mr. DeSmedt inspected the SunPac facilities and concluded that the SunPac facilities were considerably better than petitioner's facilities in Rockford.

C. *SABENA'S Expenses and Operations Under the Consignment Agreement*

1. *Expenses*

When SABENA entered into the consignment agreement, SABENA anticipated that it would not engage in any marketing or promotion activity with respect to the sale of the CSD parts since, when an [**131] airline company purchases an airplane, the CSD is supplier-furnished equipment (equipment over which the airline has no choice of selection). An airline would have to modify the entire engine to change the selection of the CSD, which is a costly undertaking. Thus, the airline is virtually "stuck with" the supplier-furnished CSD and there is no need to promote that part.

SABENA's labor costs in performing under the consignment agreement are minimal because the clerical work is computerized.

2. *Operations*

SunPac made the first shipment of its parts to SABENA in October 1978 on board a SABENA airplane. During 1978, SunPac shipped to SABENA SunPac parts with a 1978 catalog value of $ 247,786.

[*304] SABENA performs order processing and order administration functions under the consignment agreement. Eighty percent of SABENA's purchase orders are received by telex. The remaining 20 percent of the orders are received via open purchase orders. SABENA's principal customers are overhaul and repair centers, which typically are operated by the airlines themselves.

D. *Petitioner's World Market after Entering into the Consignment Agreement*

After entering into the consignment [**132] agreement, petitioner's world market for CSD's was divided into three regions, with warehouses in each region, as follows:

(1) Singapore -- the Far East region: Japan to Australia.

(2) Brussels -- the European Region: Europe, Africa, the Middle East, including Pakistan and India. (Customers in the European region, however, could also buy from Singapore.)

(3) Rockford -- the Americas region: North, South, and Central America, including Hawaii.

XII. OTHER SALES/DISTRIBUTION AGREEMENTS

In addition to the consignment agreement, petitioner entered into other sales or distributor agreements relating to products manufactured by petitioner's aviation division.

A. *NISSHO*

Petitioner and Nissho entered into a sales agreement in September 1964 which was canceled and replaced by an agreement entered into in September 1967 (hereinafter referred to as the 1967 agreement). The 1967 agreement appointed Nissho as petitioner's exclusive sales representative (except for sales made by petitioner's employees) for the sale in Japan of CSD's and standard equipment provided with them, aircraft hydraulic motors and pumps and their accessory equipment, and aircraft starters, manufactured by petitioner's [**133] aviation division (hereinafter collectively referred to as the products) generally for aircraft built in Japan; military type aircraft owned, built, or modified by or

[*305] for the Government of Japan; and aircraft built in countries other than Japan which do not use the products manufactured by petitioner. Petitioner agreed to pay Nissho a commission on its sales of the products as follows:

(a) Five percent (5%) of the commission net selling price on the first One Million Dollars ($ 1,000,000.00) of such sales made by [Nissho] since September 22, 1964;

(b) For such sales in excess of One Million Dollars ($ 1,000,000.00), three percent (3%) of the commission net selling price.

The 1967 agreement was amended on July 25, 1968, to extend the 5-percent commission to all sales unless petitioner advised Nissho that the 3-percent commission must be used. The 1967 agreement was further amended to include the sale of aircraft actuating systems (June 28, 1972), Pesco Products (June 18, 1973), see *infra*, Vap-Air Products (March 8, 1976), see *infra*, and Task Products (June 1, 1977), manufactured by petitioner's aviation division. The term of the 1967 agreement was 3 years but it [**134] was to continue thereafter for additional 3-year periods unless canceled by written notice given at least 3 months before the end of the applicable 3-year period.

B. *Mikuni*

Petitioner entered into a purchase agreement with the Borg-Warner Corp. (hereinafter referred to as Borg-Warner) dated December 10, 1971, but not to be consummated before June 1, 1972, providing for the acquisition by petitioner of all the products of Borg-Warner's Pesco Products Division (hereinafter referred to as Pesco Products). On June 1, 1972, petitioner entered into an agreement (hereinafter referred to as the Mikuni agreement) with Mikuni Shoko Co., Ltd. (hereinafter referred to as Mikuni) to continue a marketing services agreement Mikuni had entered into with Borg-Warner pertaining to Pesco Products. In the Mikuni agreement, petitioner and Mikuni agreed that Mikuni would provide sales representation services in Japan for Pesco Products for Japanese military and space vehicle applications and Pesco Product applications originating in Japan for a commission of 5 percent of the invoice price, f.o.b. factory, exclusive of all taxes, duties,

[*306] insurance, tariffs, handling, shipping, and delivery [**135] charges. The initial term of the Mikuni agreement was 1 year but it was to continue indefinitely thereafter unless either party gave a 90-day written notice of termination.

C. *Other Pesco Products Agreements*

1. *Avio-Diepen*

On October 4, 1972, petitioner entered into an agreement with Handelmaatschappij Avio-Diepen N.V. (hereinafter referred to as Avio-Diepen), a company organized under the laws of Holland, wherein petitioner gave Avio-Diepen the nonexclusive right to sell in certain listed countries in Europe, all countries of Africa, and all countries of the Middle East except Israel, certain Pesco Products replacement units and spare parts manufactured by petitioner in the United States for support of original installation Pesco Products (hereinafter referred to as the Avio-Diepen agreement). In article III of the Avio-Diepen agreement, petitioner agreed to give Avio-Diepen the following discounts: (1) 20 percent of the net selling price of spare parts for Pesco Products; and (2) 10 percent of the net selling price of replacement Pesco Products. The Avio-Diepen agreement defines "net selling price" as "the price quoted by [petitioner] for Spare [Pesco] Products ordered [**136] by [Avio-Diepen] from [petitioner] free on board [petitioner's] factory, less any quoted quantity discount, taxes, duties, insurance, tariffs and handling, shipping and delivery charges, but not less any quote discounts pursuant to article III hereof." The term of the Avio-Diepen agreement was 1 year but it was to continue indefinitely thereafter unless either party gave a 90-day written notice of termination. Petitioner terminated the Avio-Diepen agreement effective September 1, 1974.

2. *Standard Aircraft*

Sometime in 1972, petitioner entered into an agreement with Standard Aircraft Equipment, Inc. n35 (hereinafter referred

[*307] to as Standard Aircraft) wherein petitioner gave Standard Aircraft the nonexclusive right to sell in the United States, Mexico, South America, and Central America certain Pesco Products replacement units and spare parts manufactured by petitioner in the United States for support of original installation Pesco Products (hereinafter referred to as the Standard Aircraft agreement). In article III of the Standard Aircraft agreement, petitioner agreed to give Standard Aircraft the following discounts: (1) 20 percent of the net selling price of spare [**137] parts for Pesco Products; and (2) 10 percent of the net selling price of replacement Pesco Products. Net selling price is defined in the same manner as in the Avio-Diepen agreement. The Standard Aircraft agreement also was for a 1-year term, continuing indefinitely thereafter unless terminated by written notice. Petitioner terminated the Standard Aircraft agreement effective September 1, 1974.

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n35 The record contains a copy of an unexecuted contract between petitioner and Standard Aircraft Equipment Inc. showing the year 1972, pertaining to Pesco Products, and with terms substantially the same as the Avio-Diepen Agreement. Information submitted to the U.S. Customs Service in 1976 indicates that at some point petitioner had direct experience with Standard Aircraft (presumably the above contract) relating to the distribution of aircraft/aircraft engine components parts.

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3. *Hawker De Havilland*

On April 20, 1973, petitioner entered into an agreement with Hawker De Havilland Australia Pty. Ltd. (hereinafter referred [**138] to as Hawker De Havilland) wherein petitioner gave Hawker De Havilland the nonexclusive right to sell in Australia, New Zealand, Singapore, Malaysia, Indonesia, Thailand, Burma, Laos, Cambodia, Vietnam, and the Philippines certain Pesco Products replacement units and spare parts manufactured by petitioner in the United States for support of original installation Pesco Products (hereinafter referred to as the Hawker De Havilland agreement). In article III of the Hawker De Havilland agreement, petitioner agreed to give Hawker De Havilland the following discount: (1) 20 percent of the net selling price of spare parts for Pesco Products; and (2) 10 percent of the net selling price of replacement Pesco Products. Net selling price is defined in the same manner as in the Avio-Diepen agreement. The Hawker De Havilland agreement also was for a 1-year term, continuing indefinitely thereafter unless terminated by written notice.

[*308] 4. *Secondo Mona*

On July 3, 1974, petitioner proposed giving to Secondo Mona, located in Italy, a commission of 7.5 percent of the selling price of "'Pesco' type support part orders placed directly with [petitioner], except those orders for licensed product [**139] parts," payable quarterly within 60 days after the end of each applicable calendar quarter. Payments from Secondo Mona were due 90 days after date of invoice. This arrangement was terminable at any time upon written notice. Secondo Mona accepted petitioner's proposal on July 30, 1974.

5. *Pierburg*

Similarly, on September 23, 1974, petitioner offered to give Pierburg Luftfahrtgerate Union GMBH (hereinafter referred to as Pierburg), located in West Germany, a fee of 7.5 percent of the net selling price of Pesco-type fluid pumping repair parts Pierburg ordered directly from petitioner, payable quarterly within 60 days after the end of each applicable calendar quarter. This arrangement also was terminable at any time upon written notice. Pierburg accepted petitioner's offer on September 30, 1974.

D. *Mitsubishi Shoji*

Petitioner acquired the products of the Vap-Air division of the Vapor Corp. (hereinafter referred to as Vapor) on September 2, 1975. On October 1, 1968, Mitsubishi Shoji Kaisha Ltd. (hereinafter referred to as Mitsubishi Shoji) had entered into a distribution agreement with Vapor International, a division of Vapor, wherein Vapor appointed Mitsubishi Shoji the [**140] exclusive sales distributor in Japan for Vap-Air division air valves, temperature controls, static inverters, battery chargers (collectively Vap-Air Products) for application in aircraft manufactured and/or repaired in Japan and replacements for them (hereinafter referred to as the Vap-Air Products agreement). Mitsubishi Shoji agreed to service the Vap-Air Products it or Vapor sold in Japan. Vapor agreed to pay Mitsubishi Shoji a commission of 10 percent of the f.o.b. invoice price (exclusive of freight,

[*309] insurance, packing, duty, and sales taxes) on sales of Vap-Air Products except for sales of spares sold to Japan Air Lines for which the commission would be 5 percent of the net f.o.b. invoice price. The Vap-Air Products agreement initial term was 2 years, but it was to continue year to year thereafter unless terminated by either party by a written notice of termination.

Although the record is not clear as to this point, apparently petitioner continued for an indeterminable time the contractual relationship with Mitsubishi Shoji pertaining to Vap-Air Products. We note, however, that the parties have stipulated that petitioner incurred commission expenses under its agreement [**141] with Mitsubishi Shoji during 1975, 1976, and 1977. We note, further, that petitioner and Nissho amended the Nissho 1967 agreement on March 8, 1976, to include the sale of Vap-Air Products, see *supra*.

XIII. RESPONDENT'S ADJUSTMENTS

A. *The Pricing Issue*

1. *The International Examiner's Report*

Respondent examined petitioner's corporate Federal income tax returns for 1976, 1977, and 1978 (hereinafter referred to as the examination). Agent Edmund Pierson (hereinafter referred to as Agent Pierson) was respondent's international examiner assigned to the examination. In connection with his examination of the intercompany pricing arrangement between petitioner and SunPac, Agent Pierson made a functional analysis of CSD operations performed by petitioner and SunPac. Agent Pierson determined that petitioner's and SunPac's duties (ranked in order of profit contribution) were as follows:

1. Owner of the CSD market (monopoly/sole source supplier)	petitioner
2. Inventor of the CSD	petitioner
3. Original equipment manufacturer of CSD's	petitioner
4. Corporate owner and manager of business	petitioner
5. Owner and supplier of technical know-how	petitioner
6. Supplier of key materials	petitioner
7. Provider of prime service and parts to users	petitioner
8. Job shop producer of certain petitioner-proprietary CSD parts	petitioner and SunPac

[**142]

[*310] As a result of the examination, Agent Pierson concluded that the pricing arrangement between petitioner and SunPac was not at arm's length. In the portion of the revenue agent's report prepared by Agent Pierson (hereinafter referred to as the international examiner's report), Agent Pierson states the following:

Highly skilled precision machine shops in the aircraft field will endeavor to earn a gross margin of cost plus 22% to cost plus 38%. The size of the profits vary with ability, equipment, know-how, size of production runs, consignment practices, and tooling requirements. On the other hand, [petitioner] pays [SunPac] the spare parts list price less 15% for each part, f.o.b. Singapore. [SunPac] thereby earned gross margins of cost plus 157% in 1977 and cost plus 280% in 1978.

Respondent, therefore, proposed decreasing petitioner's cost of sales for 1977 and 1978, and correspondingly increasing petitioner's income, by $ 3,273,000 and $ 12,438,000, respectively, to reflect the amount he determined petitioner should have paid SunPac for the SunPac parts petitioner purchased in those years. The international examiner's report, in part, explains the basis for this [**143] adjustment as follows:

[It] is crystal clear that [SunPac's] profits should be limited to the value of its contribution as a supplier of [petitioner]-proprietary CSD parts -- and no more. The remainder should be reported as the income of [petitioner].

Since [petitioner] uses a unique pricing system for the purchase of CSD parts from [SunPac], a pricing adjustment is being proposed. [SunPac's] equipment and manufacturing abilities are not qualitatively different than those of subcontractors of precision machined parts in the aviation industry. It follows that the price of [SunPac's] output should be similar to those that would be charged by the subcontractors dealing at arm's length with [petitioner]. [Petitioner] does not give the rights to its market, ownership of its proprietary technical information, or unusually high markups to unrelated subcontractors. Therefore, [petitioner] should not be allowed to do so with [SunPac].

Since neither the comparable uncontrolled price method nor the resale price method were applicable, the cost plus method was used to determine the arm's length price of [SunPac's] output. * * * The economist's report [see *infra*] recommended that [petitioner's] [**144] sales of raw materials and semi-finished parts to [SunPac] not be included in [SunPac's] cost structure, but that recommendation could not be followed.

[*311] The reason is simple. Our set of comparable firms reported materials and semi-finished parts in their cost of goods sold and, for the sake of retaining comparability, we have allowed [SunPac] to keep its merchandise purchases in its cost of goods sold. This action benefits the taxpayer inasmuch as it inflates [SunPac's] reported costs and the profits which are a function of those reported costs. With respect to the gross profits percentage, we have allowed [SunPac] a gross profit margin of 28% which is equal to the highest margin found in our set of generally comparable firms. This profit margin translates to a markup of cost plus 38%. Again, our choice of markup figure is generous. The net effect of our pricing adjustment is to allow [SunPac] an operating profit of 17% for 1977 and 21% for 1978.

In summary, we have established that the proper pricing method between [petitioner] and [SunPac] is cost plus, because [SunPac] is making [petitioner] parts, for [petitioner], to [petitioner] specifications. This would generate [**145] a bid quote to [petitioner] of either a flat rate per unit or a cost plus with a cap. Competition would not allow an excessive quote by [SunPac] if they were an unrelated party as [petitioner] knows what it takes and costs to produce the parts. There are many [SunPac] type shops available to [petitioner] and more than fair price contracts are not let by [petitioner].

Respondent also proposed to decrease petitioner's income for 1977 and 1978 by $ 135,000 and $ 396,000, respectively, to reflect the elimination of royalty payments in those years. The international examiner's report explains this adjustment in part as follows:

[Petitioner] had no licensing agreements with the parties which fabricate [petitioner]-proprietary parts. The firms that have this parts supplier role are subcontractors. They do not pay a royalty to [petitioner] for the use of [petitioner's] designs, engineering drawings, specifications, and patents; nor do they have the right to ship their output to anyone but [petitioner]. Thus, [petitioner's] arm's length dealings with subcontractors do not reveal an appropriate royalty rate for [petitioner]-[SunPac].

Given the absence of comparable royalty rates for [**146] the use of [petitioner's] manufacturing and marketing intangibles, it has been decided that [SunPac] need not compensate [petitioner] with royalty payments. Instead, [petitioner] will be compensated through the intercompany pricing of [SunPac's] output. The decrease in [petitioner's] income as a result of the disallowance of [SunPac's] royalty payments will be more than offset by the increase in [petitioner's] income as a result of the reduction in the purchase prices for [SunPac's] output.

In the cost-plus price method proposed by Agent Pierson, SunPac's cost base is not increased for any amount to reflect location savings attributable to SunPac's manufacturing its products in Singapore rather than in the United

[*312] States. At the trial, Agent Pierson explained his reasons for not including an element for location savings as follows:

I tried to get some information on labor savings, and I weighed it with excess costs. I came to the conclusion that in this period of time, there were no significant labor -- there were no significant location savings.

I had a high construction for the building because everything had to be imported. I had a lot of landfill. I had employees [**147] who were learning and had a lot of rework and a big learning curve. So I didn't have Class A producers right off the bat. So that was a hindrance.

I had a lot of expensive units that were well along the way in production that were shipped over there, and they told me those went air freight. That's about $ 6 a pound. So I had a lot of freight, excess freight, going over and coming back.

So just without getting into severe details, I made a judgment there were no significant labor or location savings. I would have gladly gone into it in great depth had I been given the information.

At some point during the examination of the years in issue, petitioner refused to respond to any further requests for information made by respondent's agents. Respondent did not issue any administrative summons to obtain this additional information.

2. *The Economist's Report*

During the examination, Agent Pierson used the services of Robert S. Marek (hereinafter referred to as Mr. Marek), one of respondent's staff economists. Mr. Marek prepared an economic analysis of petitioner for 1977 and 1978 (hereinafter referred to as the Marek report), upon which Agent Pierson relied in part for his conclusion [**148] that the pricing arrangement between petitioner and SunPac was not at arm's length.

According to the Marek report:

The intercompany pricing system [between petitioner and SunPac] does not recognize that [SunPac] is functionally equivalent to a subcontractor. Nor does the intercompany pricing system require that [petitioner] deal with [SunPac] in the same manner it [sic] deals with unrelated subcontractors. Consequently, it is recommended that the following pricing adjustments be made:

1) [SunPac] should not be required to pay royalty fees to [petitioner] for the use of the latter's blueprints and other proprietary technical assistance;

2) [Petitioner's] sales of raw materials to [SunPac] should be treated as consignment transfers;

[*313] 3) [Petitioner's] sales of semi-finished parts to [SunPac] should be treated as consignment transfers;

4) Depreciation for job-specific tooling should be an expense for [petitioner], not [SunPac]; and

5) [Petitioner] should purchase [SunPac's] output at prices which allow [SunPac] to earn a profit margin similar to the margins reported by subcontractors dealing at arm's length with original equipment manufacturers. Comparable firms include [**149] four publicly-held subcontractors that fabricate precision machined parts for jet engine manufacturers.

In the Marek report, Mr. Marek identified four companies which he concluded were comparable to SunPac. As to these four companies, the Marek report states as follows:

There is not much data available regarding the profitability of subcontractors that supply precision machined parts to original equipment manufacturers in the aerospace industry. This statement applies not only to Singapore subcontractors but also American subcontractors. While the Singapore * * * [EDB] publishes a list of metal-working companies that accept subcontract work, it does not gather information on the key business ratios of these firms. In the United States, the National Tooling & Machined [sic] Association conducts an annual survey of its 4,000-member machine shops to develop comparative financial information. The results of its surveys -- which include the operating incomes of machine shops serving the aerospace and defense industries -- can only be sent to the Association's members.

To date, information has been found on four subcontractors -- A.B.A. Industries, Langley Corporation, Macrodyne Industries, [**150] and Walbar. These four subcontractors, admittedly limited in number, are nevertheless good comparables for [SunPac]. Like [SunPac], all four companies operate in the aerospace industry. And, like [SunPac], all four companies fabricate precision machined parts following specifications provided by original equipment manufacturers.

Net profit margins (operating income as a percentage of sales) for these four companies as reported in the Marek report are as follows:

Company	1977	1978
A.B.A. Industries, Inc.	4.3%	8.1%
Langley Corp.	2.0	14.3
Macrodyne Industries, Inc.	16.4	13.0
Walbar, Inc.	22.4	24.0
Average	11.3	14.9
2-Year average	13.1%	

None of these four companies made CSD parts in 1977 or 1978. None of these companies had facilities in Singapore.

[*314] B. *The Foreign Tax Credit Issue*

Petitioner claimed foreign tax credits under section 901 for 1977 and 1978 in the amounts of $ 62,916 and $ 150,999, respectively, with respect to Singapore income taxes. These amounts were withheld by SunPac on royalties paid to petitioner under the SunPac license agreement.

As a correlative adjustment to the royalty income allocations under [**151] section **482,** respondent disallowed the foreign tax credits attributable to the 1977 and 1978 Singapore income taxes. Petitioner alleges, and respondent does not dispute the fact, that petitioner has not filed claims for refund of the 1977 and 1978 Singapore income taxes with the Singapore Comptroller of Income Tax based on respondent's royalty adjustments under section **482.**

C. *The Notice of Deficiency*

1. *The* ***Transfer Pricing*** *Issue*

Respondent issued the notice of deficiency for 1977 and 1978 (hereinafter referred to as the statutory notice) on June 21, 1983. The statutory notice pertaining to the section **482** adjustment states the following:
Internal Operations

Adjustments to income:	1977	1978
(1) Royalties - SunPac	$ (135,000)	$ (396,000)
(2) Pricing - SunPac	3,273,000	12,438,000

* * * *

(1) You engaged in transactions with your subsidiary, SunPack [sic] (Singapore CFC), relating to claimed royalties. Under *Section **482** of the Internal Revenue Code*, your gross income is reduced by the amount of claimed royalties paid by SunPac (Singapore CRC [sic] to the Sundstrand corporation [sic] as follows. [sic]

1977 - $ (135,000)
1978 - $ (396,000)

This allocation [**152] is to clearly reflect your income and that of SunPac (Singapore CFC).

(2) You enaged [sic] in transactions with your subsidiary, SunPac (Singapore CFC), relating to manufactured parts which were not at arm's-length terms. Under *Section **482** of the Internal Revenue Code*, additional income is allocated to you as follows:

[*315] 1977 - $ 3,273,000
1978 - $ 12,438,000

This allocation is necessary to clearly reflect your income and that of SunPac (Singapore CFC).

2. *The Foreign Tax Credit Issue*

The statutory notice pertaining to the foreign tax credit states as follows:

Due to the decrease in income explained in Sundstrand Corporation and Subsidiaries, International Operations, Adjustment (1), your Foreign Tax Credit is reduced as follows:

1977 - $ 62,916
1978 - $ 150,999

Accordingly, your 1977 and 1978 tax is increased by the above amounts.

XIV. THE PLEADINGS

Petitioner timely filed a petition with this Court on September 13, 1983. On October 20, 1983, respondent timely filed his answer to the petition.

On October 29, 1986, this Court granted respondent's motion for leave to amend answer to assert as an affirmative issue the imposition of interest on a substantial [**153] underpayment attributable to a tax-motivated transaction pursuant to section 6621(c).

XV. PETITIONER'S EXPERT TESTIMONY

Petitioner presented expert testimony on three distinct issues: (1) Accounting; (2) location savings; and (3) economics.

A. *Petitioner's Accounting Expert Evidence*

Robert G. Kutsenda (hereinafter referred to as Mr. Kutsenda) is a certified public accountant and a partner with Arthur Andersen & Co. (hereinafter referred to as Arthur Andersen). Mr. Kutsenda qualifies as an expert witness for purposes of rendering expert opinions regarding accounting issues.

Mr. Kutsenda presented testimony regarding a report prepared under his supervision and direction (hereinafter referred to as the Kutsenda report) by professional employees

[*316] of Arthur Andersen. The Kutsenda report sets forth Arthur Andersen's procedures and findings on six different projects petitioner's counsel asked Arthur Andersen to perform in preparation for the trial of this case. Specifically, Arthur Andersen was asked to review appropriate books and records of petitioner and/or SunPac and from these:

(1) Quantify the scrap and rework costs incurred by petitioner with respect to parts purchased [**154] from SunPac during 1977 and 1978;

(2) quantify the costs incurred by petitioner to finish 30 unfinished parts petitioner purchased from SunPac in 1977 and 1978;

(3) quantify the amount, if any, by which the invoice prices petitioner charged customers for commercial spare parts in 1977 and 1978 differed from the prices for those parts listed in petitioner's 1977 and 1978 spare parts price lists;

(4) quantify the aging of SunPac's raw materials and finished parts inventory as of November 30, 1977, and 1978;

(5) quantify the rate at which SunPac parts turned over in petitioner's inventory in 1977 and 1978; and

(6) verify that SunPac recorded inventory purchased in 1977 and 1978 from petitioner at the amount shown on the related invoice from petitioner to SunPac.

1. *Scrap and Rework Costs*

Using reject tags for rejected SunPac parts, petitioner's In Process Order Reports (IPOR) n36 corresponding to each reject tag, petitioner's cost history records n37 for 1977 and 1978, and petitioner's spare parts price lists for 1976, 1977, and 1978, Arthur Andersen prepared a data base of cost data for SunPac parts that petitioner purchased in 1977 and/or 1978 but had to rework or scrap. From [**155] this Arthur Andersen concluded that petitioner's rework and scrap costs for 1977 and 1978 were as follows:

[*317]

	1977	1978	Total
Rework	$ 106,606	$ 56,987	$ 163,593
Scrap	240,767	83,494	324,261
Total	347,373	140,481	487,854

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n36 An In Process Order Report accumulates costs incurred on each work order.

n37 The cost history is a summary of the unit costs shown on the IPOR's.

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2. *Finished Process Costs on Semifinished Parts*

Utilizing SunPac's Raw Materials and Finished Parts Records (RAWPERS) and shipment summaries for 1977 and 1978, Arthur Andersen prepared a list of the parts SunPac sold to petitioner in a semifinished state for those years. Arthur Andersen then computed the total costs incurred by petitioner in 1977 and 1978 to finish these parts using bills of materials and work folders (where available) and relevant 1977 and 1978 production and cost data (i.e., labor rates, efficiency rates, scrap percentages, inspection and unplanned production rates, average lot sizes, [**156] and overhead rates) for each part. Arthur Andersen concluded that petitioner's costs to finish the unfinished parts for 1977 and 1978 were $ 29,600 and $ 113,604, respectively.

3. *Spare Parts Sales History*

Using a list of commercial spare part sales of SunPac parts and "dual-sourced" items petitioner sold to third parties in 1977 and 1978, petitioner's spare parts price lists effective December 1, 1976, 1977, and 1978, or, if appropriate, supplemental price lists, and sales invoices, Arthur Andersen concluded that petitioner sold commercial CSD parts at 100 percent of the catalog price except for a de minimis volume of sales aggregating $ 15,547. n38

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n38 This amount is the net result of sales for 1977 and 1978 in which for 65 sales (totaling $ 140,784) the invoice price per a list provided by petitioner (the list price) was close to, but not exactly the same as, the price in that year's spare parts price list (the catalog price) or another year's catalog price (net variance -- catalog v. list price -- $ 170.87); for 17 sales (totaling $ 2,978.45) the invoice price, but not the list price, agreed with the catalog price (net variance $ 0); for 64 sales (totaling $ 60,407.85) the invoice price did not agree with the catalog price (net variance ($ 14,585.32)); and for six sales (totaling $ 1,984.13 -- using an assumed invoice price) no invoice number was provided on the list and hence no invoice could be reviewed (net variance -- list price v. catalog price -- ($ 1,132.68)).

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[**157]

4. *Aging of SunPac's Inventory*

Authur Andersen used SunPac's summary aging analyses as of November 30, 1977, and 1978, SunPac's audited

[*318] financial statements as of November 30, 1977, and 1978, SunPac's general ledger inventory accounts as of November 30, 1977, and 1978, and SunPac's RAWPERS to quantify the aging of SunPac's inventory as of November 30, 1977, and 1978. Arthur Andersen concluded that as of those dates, the ages of SunPac's raw materials and finished parts inventories, were as follows:

Number of months of inventory on hand

	Under 3	3-6	6-12	12-24	Over 24	Total
Raw materials						
1977	34.8%	34.4%	13.1%	15.6%	2.1%	100%
1978	33.0	26.1	9.6	23.4	7.9	100
Finished parts						
1977	90.0%	4.0%	4.7%	1.3%		100%
1978	71.2	14.7	11.1	2.1	.9	100

5. *Inventory Turnover*

Arthur Andersen used petitioner's schedules of SunPac work-in-process -- raw materials and finished parts inventory at each month end in 1977 and 1978 and its cost of inventory purchased from SunPac which petitioner sold in 1977 and 1978 (i.e., cost of goods sold) to determine the turnover n39 in 1977 and 1978 of SunPac inventory located at petitioner's [**158] Rockford facility. n40 Arthur Andersen concluded that SunPac parts inventory turnover for 1977 and 1978 was 2.2 and 4.3, respectively.

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n39 The cost of goods sold divided by the average balance of inventories maintained throughout the year. The inventory turnover "indicates the number of times that inventories 'turn over' and are replaced each year." W.B. Meigs, C.E. Johnson, and R.F. Meigs, Accounting: The Basis for Business Decisions 795 (4th ed. 1977).

n40 The record does not show whether Arthur Andersen took into account any SunPac inventory for 1978 being stored on consignment at SABENA's Brussels facility.

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6. *Recording of Inventory Purchases*

By computer Arthur Andersen compared quantities of raw material purchases shown on SunPac's RAWPERS to the quantities shown on invoices issued by petitioner to SunPac in 1977 and 1978 for raw material purchases. Arthur Andersen noted discrepancies in the records from (1) items reflected on the invoices listing but not on the RAWPERS (22 items) and (2) items on the [**159] RAWPERS but not on the

[*319] invoices listing (605 items). n41 Arthur Andersen then compared the data on 20 invoices (out of 23 total invoices) to SunPac's general ledger and found the entries agreed with the invoices except for one purchase of $ 8,500 which could not be found in the general ledger. Based on these procedures, Arthur Andersen concluded that SunPac purchased raw materials used in its manufacturing processes in 1977 and 1978 from petitioner and recorded the appropriate purchase price shown on the invoice from petitioner in its general ledger.

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n41 Composed as follows:

(a) quantity received did not equal the quantity invoiced (22 items);

(b) excess production returned to raw materials and purchases from third-party vendors (495 items);

(c) quantity received but not invoiced until the following year (86 items); and

(d) other (two items).

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B. *Petitioner's Location Savings Expert Testimony*

Petitioner asked Arthur Andersen to perform a location savings n42 analysis comparing the actual cost of SunPac [**160] building and operating a plant that was producing CSD parts in Singapore compared to a hypothetical comparable plant located in the Denver, Colorado, metropolitan area (hereinafter referred to as the hypothetical Denver plant). n43 Gary Holdren, a certified public accountant and partner with Arthur Andersen, testified regarding the report, prepared under his direction and supervision, which quantified the location savings attributable to SunPac (hereinafter referred to as the Holdren report). The Holdren report relies to some extent on the opinions of four experts: Dr. F.T. Haner, Mr. Arnold Ray (hereinafter referred to as Mr. Ray), Mr. Robert Schaller, and Dr. Sanford J. Grossman, see *infra*.

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n42 "Location savings" as used in the Holdren report is defined as "the cost differential due to the manufacture of the parts in Singapore rather than in the United States at a similar, but hypothetical, manufacturing site in Denver, Colorado."

n43 Respondent concedes that, if there are any location savings attributable to SunPac, SunPac should enjoy a larger margin of profit due to lower costs. Respondent contends, however, that any location savings should not result in higher costs to petitioner; rather, the location savings would be passed in part to petitioner in order for SunPac to be competitive with other vendors and to meet petitioner's internal costing structure.

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[**161]

[*320] 1. *Methodology*

The basic methodology of the location savings analysis Arthur Andersen used was to: (1) Choose a relevant cost comparison base to use as a benchmark against which to compare SunPac's costs; (2) identify all costs which might be expected to have differed materially between SunPac and the relevant cost comparison base; (3) quantify the actual costs SunPac experienced and the estimated costs which would have been experienced by the relevant cost comparison base; and (4) aggregate the identified cost differences between SunPac and the relevant cost comparison base to arrive at the location savings amount.

A basic assumption underlying petitioner's location savings analysis is that in the mid-1970s petitioner was operating at full capacity at its other facilities and, thus, petitioner would have built a new plant site if the Singapore facility had not been built. Next, the assumption was made that the alternate plant would have been built within 50 miles of petitioner's Denver, Colorado, facility since in the mid-1970s the vast majority of petitioner's high technology was located at its existing Denver, Colorado, plant. Thus, the Denver metropolitan area [**162] was selected as the site for the hypothetical Denver plant. The hypothetical Denver plant became the relevant cost comparison base.

Next, Arthur Andersen, with petitioner's management, examined petitioner's and SunPac's expense items to discern those items which could be expected to differ materially. As a result of this review, Arthur Andersen identified nine items reflecting potentially material location savings or dissavings: (1) Labor, (2) freight, (3) duty, (4) utilities, (5) State income taxes, (6) property taxes, (7) cost of capital, (8) training, and (9) technical assistance.

In the location savings analysis, Arthur Andersen assumes that petitioner would have incurred capital and startup cost to manufacture domestically the SunPac parts. Petitioner's location savings analysis does not take into account petitioner's historical cost experience at its existing, mature Denver CSD facility. Rather, Arthur Anderson compared SunPac's actual cost incurred with respect to each of the nine cost items to the cost that it estimated the hypothetical Denver plant would have incurred.

[*321] Arthur Andersen calculated the net location savings of building and operating SunPac instead [**163] of the hypothetical Denver plant as follows:

Item	Savings or (dissavings) 1977	1978	Total
Labor	$ 3,797,413	$ 4,499,020	$ 8,296,433
Duty	(237,758)	(880,585)	(1,118,343)
Freight	(150,577)	(248,006)	(398,583)
Utilities	(57,017)	(40,884)	(97,901)
State income taxes	(12,000)	(49,000)	(61,000)
Property taxes	117,235	102,301	219,536
Cost of capital	580,431	709,439	1,289,870
Training	97,910	(16,115)	81,795
Technical assistance	(832,964)	(866,167)	(1,699,131)
Total savings or (dissavings)	3,302,673	3,210,003	6,512,676

2. *Savings*

a. *Labor*.

CSD parts manufacture is extremely capital intensive. The location savings analysis assumes that the hypothetical Denver plant would utilize nearly identical processes, equipment, and tooling as petitioner's domestic CSD facilities; both SunPac and the hypothetical Denver plant would utilize the same departmental structure and nearly identical processes, equipment, and tooling at the same level of productivity; and thus, SunPac's workforce and the hypothetical plant workforce would have been virtually identical in size. The location analysis assumes further that the hypothetical Denver [**164] plant would achieve virtually the same output as that produced by SunPac.

Arthur Andersen calculated that the labor savings to petitioner of operating the plant in Singapore instead of the United States was $ 8,296,433, computed in five steps. First, Arthur Andersen calculated an average labor rate for SunPac employees by direct, indirect, and office labor for 1977 and 1978 using actual labor costs at SunPac for those years. Second, it calculated a U.S. hourly labor rate utilizing payroll records at petitioner's existing Denver CSD plant for these same years. n44 Third, Arthur Andersen computed a

[*322] ratio of U.S. labor rates to Singapore labor rates. Fourth, it multiplied SunPac's actual labor costs by that ratio to arrive at the derived U.S. labor costs. Finally, Arthur Andersen calculated the labor savings by subtracting SunPac's actual labor costs from the derived U.S. labor costs.

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n44 Arthur Andersen assumed that the actual hourly rates of petitioner's existing Denver plant for the relevant time period were the best estimate of hourly labor rates of a hypothetical plant in the same general geographic location. Arthur Andersen calculated the existing Denver plant's actual average wage rates and fringe benefit costs from monthly labor distribution and payroll records. Labor costs attributable to management positions comparable to SunPac's expatriate managers were excluded from the average wage rate calculation because SunPac's expatriate managers were paid from U.S. payroll and, thus, were excluded by Arthur Andersen from the SunPac labor costs.

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[**165]

A key assumption to Arthur Andersen's calculation of the labor savings is that the productivity of the hypothetical Denver plant workforce would have been at least equal to the productivity of the SunPac workforce. Arthur Andersen concluded that its equal productivity assumption was reasonable in light of the following: (1) SunPac workers at the same entry level skills progressed at the same rate as employees at petitioner's domestic facilities and employees at Lucas; (2) the in-house training program at SunPac was similar to petitioner's; and (3) petitioner's experience with the startup of additional CSD facilities built in the United States and the productivity of their workforce was comparable to SunPac's experience. Nonetheless, petitioner engaged Dr. F.T. Haner (hereinafter referred to as Dr. Haner) to review and assess independently this equal productivity assumption.

Dr. Haner holds a Ph.D in econometrics from the University of Pittsburgh. He is the founder (in 1967) and chief executive officer of Business Environment Risk Information S.A. (hereinafter referred to as BERI). BERI provides three types of global consulting services to major multinational corporations located [**166] throughout the world as follows: (1) In-depth analyses and forecasts on 58 countries to over 600 clients through three subscription services; n45 (2) annual seminars for its clients on a wide range of topics; and (3) client-specific consulting services relating to a wide range of

[*323] issues, including assessment of plans for location or expansion of manufacturing activities in specific locales throughout the world.

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n45 These subscription services include Business Risk Service, which provides clients with an analysis and a 5-year forecast of the total business environment in 48 countries, including Singapore; Country Risk Forecast for International Lenders, which forecasts the capacity and willingness of 50 countries, including Singapore, to service their international financial obligations; and Forecasts of Country Environments for Strategic Planning (FORCE), which provides in-depth analyses and forecasts for 24 countries, including Singapore. (Each FORCE report focuses on a single country and analyzes and forecasts sociopolitical, economic, monetary, and financial and operating conditions, including productivity issues.)

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[**167]

Dr. Haner, qualified as an expert in productivity, presented testimony regarding the relative productivity of Singapore and the United States and, specifically, regarding the relative productivity in 1977 and 1978 of a new work force in Singapore and a new work force in a similar, new hypothetical plant in metropolitan Denver. Dr. Haner's assignment was to judge whether or not, as was assumed in the Holdren report, productivity levels in Singapore were equal to or better than the productivity levels of the Denver metropolitan area. He concluded that on a general basis, "productivity levels are just somewhat better in Singapore than they would have been in the Denver metropolitan area."

Dr. Haner specifically concluded that the Singapore Economic Development Board's assistance in providing to SunPac top vocational school graduates resulted in a substantial improvement on SunPac's productivity over the metropolitan Denver area. Dr. Haner concluded further that SunPac's productivity would have equaled or exceeded the productivity of a comparable new manufacturing facility located in metropolitan Denver.

b. *Property taxes*.

Arthur Andersen estimated a savings to SunPac in property [**168] taxes of $ 219,536 resulting from locating the plant in Singapore. Arthur Andersen used SunPac's actual property taxes as obtained from SunPac's departmental expense summaries. To estimate the hypothetical Denver plant's property tax rates, the Adams County, Colorado, tax assessor provided the assumed assessment rate and mill levies for that county (wherein it was assumed the hypothetical Denver plant would be located) for 1977 and 1978. Arthur Andersen then multiplied the hypothetical Denver plant costs (leasehold costs, land improvements, building, and building improvements as calculated by Mr. Ray and Mr. Schaller, see *infra*) by the estimated property tax rates.

The property tax savings were calculated as follows:

[*324]

	1977	1978	Total
SunPac	$ 13,213	$ 28,025	$ 41,238
Denver	130,448	130,326	260,774
Savings	117,235	102,301	219,536

c. *Training costs*.

Arthur Andersen estimated that petitioner saved $ 81,795 of training costs by locating the CSD facility in Singapore. Arthur Andersen concluded that the training grants SunPac received from the Government of Singapore for 1977 and 1978 more than offset the incremental costs SunPac incurred [**169] to train the SunPac work force in the United States. Arthur Andersen did not consider payroll-rated costs for trainees and instructors in Singapore in its location savings analysis because it assumed that similar payroll costs would have been incurred for the hypothetical Denver plant labor force.

d. *Cost of capital*.

The cost of capital computation represents the estimated opportunity cost n46 petitioner saved by its decreased capital investment in the SunPac facility compared to the investment which would have been required for the hypothetical Denver plant.

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n46 "Opportunity cost" is the economist's term for the "amount that the decisionmaker foregoes by choosing to do A rather than B. It is the potential return available but not taken advantage of which would have been earned if the decisionmaker had chosen to do B instead."

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The incremental investment required to construct the hypothetical Denver plant was calculated by subtracting SunPac's historical land and buildings costs from the hypothetical Denver plant's [**170] land and construction costs. Arthur Andersen computed SunPac's historical land and construction costs from SunPac's general ledger.

Mr. Ray, qualified as an appraiser of commercial real estate in the Denver metropolitan area, testified regarding the probable purchase price of a 29-acre industrial site located within metropolitan Denver in 1975 upon which a plant similar to SunPac's could be built. Mr. Ray received an undergraduate degree in sociology from Augustana College, Sioux Falls, South Dakota, in 1969. Since then he has taken and taught various courses in real estate at the

[*325] graduate level at Loyola University in Chicago and Denver University. Mr. Ray has been employed since 1969 in commercial real estate, directing several real estate consulting groups, in Chicago, Illinois, Oregon, and Colorado. He has worked in the Denver area since 1978.

At the time of trial, Mr. Ray was the director of the Ross Consulting Group, the real estate research and counseling arm of the Frederick Ross Co., the largest commercial real estate brokerage and management firm in metropolitan Denver and the Rocky Mountain region and a founding member of the National Office Network, Inc., [**171] an affiliation of commercial real estate brokerage firms in major markets throughout the United States. Mr. Ray has completed several hundred real estate market and financial analyses as a professional real estate consultant.

Based on his discussions with Mr. Schaller, Mr. Ray determined that the hypothetical Denver plant would require 29 acres of land in a suitable industrial park in the metropolitan Denver area. Mr. Ray then (1) reviewed the documentation and records of the Frederick Ross Co. for 1974 and 1975 concerning industrial parks and industrial land transactions; (2) personally interviewed a number of individuals involved either in industrial land brokerage or industrial land development during 1974 and 1975 in metropolitan Denver; and (3) had completed a computer search of all recorded industrial real estate sales in 1973, 1974, and 1975, for metropolitan Denver with a size range of 15 to 40 acres of industrially zoned land.

Based on this research, Mr. Ray located certain land transactions which he determined to be comparable to the hypothetical land acquisition for the hypothetical Denver plant. Land cost for these comparable sales ranged in price from $ 0.55 to $ 0.85 [**172] per square foot. Mr. Ray opined that a site the size, quality, and character of the hypothetical Denver plant would require, at a minimum, a price of $ 0.75 per square foot in 1974 to 1975, which would result in a minimum cash price of $ 950,000 for a 29 acre parcel.

Mr. Schaller, a mechanical engineer and qualified as an expert in plant construction costs, testified regarding the cost in 1986 to construct a plant in metropolitan Denver that would be the same as, or very close to, the SunPac

[*326] design. In the course of his career, Mr. Schaller personally supervised the design or construction of 24 manufacturing facilities located in Arizona, California, Colorado, Illinois, Nebraska, New Jersey, New York, Burma, Cuba, Greece, India, Singapore, and Thailand. At the time of the trial, Mr. Schaller was director of consulting services for petitioner's advanced technology group. Mr. Schaller designed SunPac's facility and the 1978 expansion. He also designed and built SunPac's 1979 expansion.

Mr. Schaller's evaluation of the 1986 cost to build the hypothetical Denver plant was organized into three phases: first, a facility of about 60,000 square feet; second, an addition onto [**173] that facility of about 20,000 to 26,000 more square feet; and third, something over 100,000 square feet. In order to estimate the cost of the hypothetical Denver plant, Mr. Schaller designed and built the plant on paper. To design and build the plant on paper, he created more than 50 different scale drawings of different facets of the proposed facility. Once he determined the requirements, the majority of the material and construction cost quotes were taken from industry standard construction cost estimates for the Denver metropolitan area published by the Robert Snow Means Co., Inc. (Means). In addition, where cost data was not available for specific items from Means or his personal experience suggested that the Means cost data for a particular item was suspect, Mr. Schaller solicited bids from unrelated vendors and contractors.

Mr. Schaller opined that it would cost approximately $ 24,265,429 to construct in 1986 in the Denver metropolitan area a facility as nearly identical to the SunPac facility as would be commercially reasonable, computed as follows:

Phase IA	Phase IIA	Phase IIB	Total
$ 11,687,031	$ 5,980,749	$ 6,597,649	$ 24,265,429

Arthur Andersen allocated [**174] Mr. Schaller's 1986 cost to build the hypothetical Denver plant back to the actual years of SunPac's construction based on the timing of the actual SunPac construction costs. Then, Arthur Andersen deflated the 1986 construction costs to restate the 1986 cost estimate to the equivalent historical costs in the years of the hypothetical investment. To determine the incremental

[*327] investment of the hypothetical Denver plant for 1977 and 1978, Arthur Andersen subtracted the cumulative actual SunPac investment for 1977 and 1978 from the hypothetical Denver plant's estimated cumulative costs for 1977 and 1978. To determine the cost to finance n47 the incremental investment of the hypothetical Denver plant during 1977 and 1978, Arthur Andersen multiplied the incremental investment by petitioner's percentage cost of capital n48 for 1977 and 1978, as supplied by Dr. Sanford J. Grossman (hereinafter referred to as Dr. Grossman).

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n47 Dr. Sanford J. Grossman (hereinafter referred to as Dr. Grossman) defined the annual cost of financing a capital investment as "the required annual return demanded by the firm's claimants (i.e., its shareholders and debt holders)." [**175]

n48 Dr. Grossman defined the annual cost of capital as "the before tax earnings level which the firm must earn in order to provide its claimants with their required rate of return. The claimants' required rate of return is based upon both the current market return on a risk-free investment and a premium to compensate for the risk of the particular firm."

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Dr. Grossman, an economist and the John L. Weinberg Professor of Economics at Princeton University, testified regarding what petitioner's cost of capital would have been to finance the incremental investment necessary to build the hypothetical Denver plant rather than building the Singapore plant.

Dr. Grossman received a Ph.D. in economics from the University of Chicago. He has taught financial economics at Stanford University, the Wharton School of the University of Pennsylvania, the University of Chicago, and Princeton University. Dr. Grossman is a fellow of the Econometric Society, the author of over 40 professional articles in economics, and the recipient of a Guggenheim Fellowship, a Sloan Foundation Fellowship, the Irving Fisher Graduate [**176] Monograph Award, and the John Bates Clark Medal.

In formulating his opinion, Dr. Grossman relied on (1) the schedule of actual costs incurred in building the SunPac facility in Singapore as prepared by Arthur Andersen and shown on SunPac's books and records; (2) the schedule of estimated costs that would have been incurred had petitioner built a similar manufacturing facility in the Denver metropolitan area during the same time frame as estimated by Mr. Schaller for 1986 and then allocated by Arthur Andersen to the years 1975 through 1985 according to the actual level of construction expenditures incurred by SunPac in each of those years; and (3) the schedule of

[*328] incremental capital investment which would have been required to build the SunPac facility in Denver. Arthur Andersen calculated that, had petitioner built the hypothetical Denver plant instead of the SunPac facility, petitioner would have had to finance an additional incremental capital investment as follows:

Year	Cumulative SunPac investment	Cumulative hypothetical Denver investment	Incremental investment
1977	$ 2,870,299	$ 5,624,902	$ 2,754,603
1978	2,887,373	5,697,234	2,809,861

[**177]

According to Dr. Grossman, a firm's cost of capital is equal to the weighted average cost of both its equity and debt which together form the firm's capital structure. The weighing used is the relative percentages of equity and debt chosen by the firm to finance its business. Dr. Grossman calculated petitioner's cost of capital for 1977 and 1978 using the weighted average cost of capital method (WACC). (According to Dr. Grossman, the WACC method is the standard method used by the finance profession to determine costs of capital.)

Dr. Grossman opined that petitioner's cost of capital for 1977 and 1978 was 21.0713 percent and 25.2482 percent, respectively.

Based on an incremental capital investment that would have been needed to finance the hypothetical Denver plant of $ 2,754,603 and $ 2,809,861 for 1977 and 1978, respectively, Dr. Grossman concluded that petitioner's additional financing costs would have been $ 580,431 for 1977 and $ 709,439 for 1978, for total financing costs for those years of $ 1,289,870.

3. *Dissavings*

a. *Duty and freight*.

Duty and freight expenses are dissavings of petitioner operating in Singapore. The parties have stipulated that SunPac incurred [**178] duty and freight costs (including insurance and broker costs) due to the operation of its CSD facility in Singapore as follows:

[*329]

	1977	1978	Total
Duties	$ 237,758	$ 880,585	$ 1,118,343
Freight, insurance, and broker cost	39,372	110,762	150,134

Arthur Andersen calculated the dissavings from freight n49 as follows:

	1977	1978	Total
Freight to Rockford	$ 39,372	$ 110,762	$ 150,134
Freight to SunPac n50	111,205	137,244	248,449
Total freight n51	150,577	248,006	398,583

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n49 Freight includes insurance and other shipping costs.

n50 Arthur Andersen accumulated the freight to SunPac from SunPac's general ledger.

n51 Respondent does not concede the accuracy of these amounts. Rather, respondent argues that freight as compiled by Arthur Andersen does not take into consideration the cost of shipping machinery, equipment, tools, gages, and perishable tools to SunPac during 1977 and 1978 and the record does not contain any evidence as to the amount of the freight incurred by petitioner to ship these items. Therefore, respondent contends, the Court should reject the freight propounded by petitioner or, in the alternative, find that freight dissavings exceeded $ 398,583.

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[**179]

b. *Utilities*.

Arthur Andersen calculated utilities dissavings to SunPac of $ 97,901. Actual SunPac utility costs were accumulated from SunPac's departmental expense summaries. The utility costs for the hypothetical Denver plant were estimated based upon anticipated load, processing, and heating and cooling requirements. Water consumption for the hypothetical Denver plant was assumed to be equal to SunPac's consumption; natural gas consumption was based on SunPac's actual liquid propane gas consumption, converted to its equivalent in natural gas, and adjusted for the Denver climate; electricity consumption was based on actual SunPac consumption, adjusted for the Denver climate. Thus, Arthur Andersen calculated the utilities dissavings as follows: n52

Water, gas, and electricity

	1977	1978	Total
SunPac	$ 214,849	$ 233,480	$ 448,329
Denver	157,832	192,596	350,428
Dissavings n52	57,017	40,884	97,901

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n52 Respondent does not concede the accuracy of the utilities dissavings calculated by Arthur Andersen. Respondent argues that Arthur Andersen did not take into consideration the extra utilities cost incurred by petitioner in inspecting SunPac parts during 1977 and 1978 and that there is insufficient

evidence in the record to arrive at a conclusion as to these added costs incurred by petitioner. Respondent asks that the Court reject the amounts propounded by petitioner or, in the alternative, find that utilities dissavings exceeded $ 97,901.

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[**180]

[*330] c. *State income taxes*.

Arthur Andersen estimated State income tax dissavings of $ 61,000 based on the State income taxes it calculated the hypothetical Denver plant would have owed for each year as derived from other elements of the location savings analysis and compared to SunPac's actual tax liabilities.

	1977	1978	Total difference
SunPac	$ 90,000	$ 503,000	
Denver	78,000	454,000	
Difference	12,000	49,000	$ 61,000

d. *Technical assistance costs*.

Technical assistance costs of $ 1,699,131, as calculated by Arthur Andersen, were dissavings to SunPac. These costs included additional out-of-pocket expenses incurred by having U.S. expatriates overseas, such as travel costs, communication costs, and additional remuneration to cover overseas living costs. Arthur Andersen accumulated these costs from petitioner's technical assistance cost records.

C. *Petitioner's Economic Expert Testimony*

1. *In General*

Petitioner retained Dr. William J. Baumol (hereinafter referred to as Dr. Baumol) to give his professional opinion regarding the arm's-length nature of the reported prices in transactions between petitioner and SunPac in 1977 and 1978. Dr. Baumol [**181] holds a Ph.D. degree in economics from the University of London. Throughout his professional career, Dr. Baumol has been awarded numerous honors and teaching fellowships and has been involved in professional economics associations. He is the author of 19 books and several hundred professional articles in economics, a past president of the American Economic Association, and a member of the National Academy of Sciences, and has honorary degrees from six universities. At the time of trial, Dr. Baumol was the Joseph Douglas Green, 1895, Professor of Economics at Princeton University and Professor of Economics at New York University.

In his report, Dr. Baumol specifically addressed two issues: (1) The arm's-length price to be paid SunPac by

[*331] petitioner for SunPac parts; and (2) the arm's-length royalty to be paid petitioner by SunPac for SunPac's use of proprietary industrial property and trademarks belonging to petitioner.

In formulating his opinion, Dr. Baumol reviewed a variety of materials relating to petitioner and SunPac including, but not limited to, the SunPac license agreement and its amendments; the distributor agreement; the consignment agreement; the SABENA operating [**182] agreement; the Holdren report; the Kutsenda report; Security and Exchange Commission (SEC) Forms 10-K filed by petitioner for 1977 and 1978; SunPac financial information for 1977 and 1978; Forms 2952 Information Returns with respect to Controlled Foreign Corporations pertaining to SunPac filed by petitioner for 1977 and 1978; licenses and other agreements between petitioner and Lucas, including the 1953 general license as amended, the 1970 general license, the 1970 MRCA license, the 1970 Concorde license, and the 1970 TU-144 license; the Teijin license and its amendments; the Siemens license; the IAI license; the Licensintorg license; the Marek report; and the international examiner's report.

Dr. Baumol concluded that "Both the parts that SunPac manufactured, and the rights that SunPac enjoyed, were, during [1977 and 1978], exchanged at arm's length for considerations that are known and are readily adjusted for whatever minor differences in the particular terms that were applicable in each case." Specifically, Dr. Baumol found the consignment agreement and the 1970 Concorde license to be independent unrelated transactions against which to evaluate the arm's-length dealings between [**183] SunPac and petitioner relating to the **transfer pricing** and royalty fee arrangement.

2. *Distributor Agreement/Consignment Agreement Comparison*

Dr. Baumol compared the terms of the distributor agreement to the consignment agreement. He concluded that under the terms of the consignment agreement, a volume of CSD parts transactions comparable to the volume of sales between petitioner and SunPac would have resulted in a net price of list price less a 4-percent discount (hereinafter

[*332] sometimes referred to as the consignment agreement price). Dr. Baumol, however, cited two material differences between the distributor agreement transactions and the consignment agreement transactions which he believed could affect the arm's-length price. First, SABENA, unlike petitioner, did not take title to the goods until it resold them from its consignment inventory in Brussels. This difference resulted in SunPac bearing SABENA's inventory carrying cost, whereas on similar parts shipped by SunPac to petitioner, petitioner apparently bears the inventory carrying cost. Dr. Baumol concluded, however, that because petitioner did not have to pay SunPac until 180 days after invoice, SunPac [**184] actually financed petitioner's investment in its SunPac parts inventory. Based on Arthur Andersen's estimate that petitioner held SunPac parts in its inventory on an average of less than 4 months, Dr. Baumol concluded that petitioner's 180-day delayed payment term more than offset petitioner's cost of financing SunPac's inventory; thus, he made no adjustment for inventory carrying costs.

Second, by virtue of its status as a Belgian airline, SABENA paid no duty upon its import of CSD products into Belgium. Petitioner, on the other hand, incurred duty costs on the import of SunPac parts. Petitioner's customers historically purchased these parts at the worldwide catalog price; therefore, petitioner could not pass these duty costs on to its customers. Thus, Dr. Baumol concluded that to arrive at an arm's-length price it would be necessary to add the duty cost to the consignment agreement price. Based on the Kutsenda report's analysis, which indicates a duty cost of 3.7 percent of the retail price, Dr. Baumol adjusted the discount by 4 percent to reach an adjusted arm's-length price for the SunPac parts of petitioner's catalog price less an 8-percent discount.

3. *The 1970 Concorde* [**185] *License*

Dr. Baumol reviewed and evaluated all of petitioner's unrelated CSD licenses and concluded that the 1970 Concorde license related to circumstances most closely resembling those associated with the market served by SunPac and, thus, was the most appropriate license against

[*333] which to evaluate the royalty fee SunPac agreed to pay to petitioner. According to Dr. Baumol:

The terms of the Concorde agreement relate to rights that are broader than those rights extended to SunPac. n53 Nevertheless, the terms indicate that the royalty of 8.5 percent of all sales represents an arm's length payment for the use of technology and related intangible property under circumstances very closely analogous -- in terms of property, rights, market and timing -- to the licensing of SunPac. Moreover, the validity of the 8.5 percent royalty rate is also confirmed by [petitioner's] other licensing transactions with independent third parties which generally establish an industry royalty rate of 6.5 percent. [Fn. ref. omitted.]

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n53 Fn. 16 to Dr. Baumol's report inserted here reads as follows: "The SunPac license granted SunPac the technology to manufacture only a limited number of specific parts. The Concorde agreement, in contrast, granted Lucas the complete technology to manufacture parts and units."

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[**186]

Based on the Concorde 8.5-percent royalty rate, Dr. Baumol concluded that an arm's-length royalty between SunPac and petitioner would have been set at or about that level. Dr. Baumol believes this to be a conservative conclusion because (1) unlike SunPac, Lucas received the right to both manufacture and sell those CSD units and spare parts under the 1970 Concorde license; (2) other licensing arrangements between Lucas and petitioner contained a royalty of 6.5 percent; and (3) the 2-percent sunset royalty provision granted Lucas broader worldwide rights than SunPac received under the SunPac license agreement.

Dr. Baumol gave the Court a range of figures for the **transfer pricing** and royalty issues, conceding that he was not in a position to arrive at an "uniquely correct figure for the tax liability." This range is as follows:

Discount from list price	Royalty rate	Chargeback for defective parts and finishing costs	Adjustment to petitioner's net income
8%	2%	.631 M dollars	(1.430 M dollars)
8	8.5	.631 M dollars	.343 M dollars
15	2	.631 M dollars	.631 M dollars
	18.5	.631 M dollars	1.138 M dollars
15	8.5	.631 M dollars	2.242 M dollars

[**187]

4. *Costs for Defective and Unfinished Parts and Technical Assistance*

Dr. Baumol concluded in addition that SunPac should be charged back petitioner's costs incurred with respect to

[*334] certain defective and unfinished parts. As calculated by Arthur Andersen, the cumulative costs for these purposes total $ 631,058 for 1977 and 1978.

Dr. Baumol also concluded that no additional adjustment was necessary for technical assistance rendered to SunPac by petitioner because SunPac separately reimbursed petitioner through a 3-percent technical assistance fee.

5. *Net Result*

In the final analysis, Dr. Baumol concluded that his adjustments to the distribution discount and the royalty based upon the arm's-length SABENA and Lucas transactions offset each other. Therefore, Dr. Baumol concluded that, in the aggregate, petitioner and SunPac actually had dealt at arm's-length; thus, no adjustment under section **482** would be necessary or appropriate other than the chargeback for defective and semifinished parts costs.

6. *Analysis of Marek Report*

Dr. Baumol also reviewed the Marek report, which served as the economic basis for the section **482** allocations made by respondent. Although [**188] Dr. Baumol did not agree with the economic approach of Mr. Marek, he concluded that, after adjusting for location savings and an appropriate gross profit markup, Mr. Marek's results did not materially differ from his own conclusions.

D. *Petitioner's Expert Testimony on the Foreign Tax Credit Issue*

Petitioner presented the testimony of Arthur Loke (hereinafter referred to as Mr. Loke), senior partner in Arthur Loke & Partners, one of the largest law firms in Singapore. Mr. Loke qualifies as an expert for purposes of rendering opinions regarding Singapore tax law.

Petitioner retained Mr. Loke to render an opinion as to whether there is an effective and practical remedy under Singapore law available to petitioner to obtain a refund of the 1977 and 1978 Singapore income taxes based on respondent's allocations under section **482** pertaining to the royalty income. Mr. Loke opined that there is no practical and effective remedy under Singapore law that would allow

[*335] petitioner to obtain a refund of the 1977 and 1978 Singapore income taxes.

XVI. RESPONDENT'S EXPERT TESTIMONY

Respondent called as an expert witness in economics Dr. William J. Lynk (hereinafter referred to as Dr. [**189] Lynk). Dr. Lynk received a B.S. in industrial engineering and an M.B.A. from the University of Illinois, an M.A. in economics from Stanford University, and a Ph.D. degree in business economics from the University of Chicago. During his career he has written 10 articles, mostly relating to the health field. At the time of the trial, Dr. Lynk was a vice president and senior economist with Lexecon, Inc. (hereinafter referred to as Lexecon), a consulting firm which specializes in the application of economics to legal and regulatory issues. In the course of his work with Lexecon, Dr. Lynk has conducted and supervised numerous economic studies, including studies of pricing behavior in a variety of industries and has testified on the results of his analyses before Federal and State courts and before State and local regulatory agencies.

A. *Pricing Issue*

Respondent asked Dr. Lynk to analyze the economic relationship between petitioner and SunPac and, in particular, to determine whether the financial transactions between them were conducted in a manner consistent with an arm's-length relationship. For the basic background facts, Dr. Lynk relied on the international examiner's report, [**190] the Marek report, and a draft stipulation of facts. In the course of his analysis, Dr. Lynk reviewed various documents produced through discovery in the case; met with respondent's counsel; examined the parties' pretrial briefs; consulted with his colleagues at Lexecon; and performed a number of economic studies of the pricing of goods transferred between SunPac and petitioner. Dr. Lynk concluded as a result of his analysis that SunPac receives an extraordinarily high rate of return on investment and that this rate of return is the direct result of the transfer price for parts between petitioner and SunPac.

[*336] Dr. Lynk used four different tests to determine whether the transfer price for SunPac parts was an arm's-length price.

1. *Differences in Petitioner's Margins for Parts Obtained from SunPac v. Parts Obtained from Non-SunPac Sources*

In this method, Dr. Lynk compared the margins that petitioner earned in 1977 and 1978 on the sale of CSD spare parts both obtained from SunPac and from non-SunPac sources (including third-party manufacturers and self-manufacture) to determine whether petitioner earned as much on the parts that it obtained from SunPac as it did on parts [**191] it obtained from non-SunPac sources. Dr. Lynk defines the margin as price minus all manufacturing costs, expressed as a percentage of price, or M = (P - C)/P. Cost elements for petitioner's self-manufactured parts include materials, handling, labor, overhead, and applied production cost. Dr. Lynk also added an imputed manufacturing return to petitioner (defined as a return to petitioner's manufacturing capital (both tangible and intangible), which is a cost to petitioner that should be recovered whenever petitioner either manufactures the product itself or performs finishing work on parts purchased from SunPac or from third-party manufacturers.) Dr. Lynk estimated this imputed manufacturing return at approximately 38 percent of all petitioner's manufacturing cost (exclusive of material cost) for each part.

According to Dr. Lynk, petitioner's spare parts margin on parts bought from SunPac can be expressed as M = (P - TP - C)/P, where P is the price at which petitioner sells the part, TP is the transfer price it pays SunPac, and C is the cost that petitioner incurs in processing or handling the part after it is received from SunPac.

According to Dr. Lynk, the basic economics behind [**192] this analysis is that,

[If] [petitioner] dealt with SunPac on arm's length terms, one would expect [petitioner's] profits to be roughly the same on both SunPac and non-SunPac parts. * * * In principle, [petitioner] will seek out the lowest-cost source of these parts: since [petitioner] sells the parts at the same price regardless of their source, [petitioner's] profits are maximized by acquiring parts from the cheapest source.

[*337] Dr. Lynk noted that specific exceptions to this general rule could exist, resulting in different prices for the same part, for example, where a firm "dual sources" critical parts to reduce risk or seeks a second source if the primary source is at capacity.

In this first method, Dr. Lynk restricted his analysis to parts which were (1) manufactured by SunPac and sold to petitioner in 1977 and 1978; (2) either manufactured by independent third-party firms and sold to petitioner or manufactured by petitioner in both years; and (3) actually sold by petitioner as spare parts. Dr. Lynk identified 151 parts for 1977 and 154 parts for 1978 which met these criteria.

Dr. Lynk determined that petitioner's average margins on parts for 1977 and 1978 were as [**193] follows:

	Average margin	
Parts source	1977	1978
SunPac	4.02%	8.03%
	n1 (6.19)	n1 (1.22)
Non-SunPac	70.41	65.42
	n1 (3.04)	n1 (3.83)
Difference	66.40	57.40
	n1 (6.92)	n1 (4.11)

n1 Averages are weighted by total revenue in each year. Standard error of mean (unweighted).

Dr. Lynk concluded that petitioner earned a significantly lower profit margin on parts obtained from SunPac than on the same parts obtained from a non-SunPac source. Dr. Lynk opined that the actual transfer price would have to be reduced by 73 percent in 1977 and 64.3 percent in 1978 to provide petitioner with the same gross margin petitioner earned on parts obtained from SunPac as it earned on parts obtained from non-SunPac sources.

2. *Differences in Petitioner's Margins for Parts Purchased from SunPac v. Parts Purchased from Comparable Third-Party Manufacturers*

In the second method, Dr. Lynk analyzed the margins on eight parts which petitioner purchased in 1978 in essentially finished form from both SunPac and unrelated manufacturers. n54

[*338] Dr. Lynk determined that petitioner's average margins on these eight parts for 1978 were as follows:

Parts source	Average margin
SunPac	7.52%
	n1 (22.67)
Third Party	52.10
	n1 (16.72)
Difference	44.58
	n1 (26.95)

[**194]

n1 Averages are weighted by total revenue in each year. Standard error of mean (unweighted).

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n54 According to Dr. Lynk, petitioner performed a certain amount of finishing work on these parts also. His analysis measured petitioner's full costs, which include not only the purchase price but also any post-purchase finishing or rework cost petitioner incurred. Thus, the mechanics of Lynk's method two are identical to the mechanics of method one; the base, however, is smaller as it excludes parts manufactured by petitioner.

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Dr. Lynk concluded that petitioner earned a far lower margin on parts it bought from SunPac than on parts it bought from third-party manufacturers. Dr. Lynk opined that his method two implies a reduction in the transfer price of 50.2 percent. The record contains no information regarding the identity of the third-party manufacturers. Furthermore, the record does not reveal any information about the circumstances relating to petitioner's purchase of these eight parts from the third-party manufacturers. [**195]

3. *Margin Differences: SunPac Profit v. Comparable Manufacturers*

In this method, Dr. Lynk compared the manufacturing profit margins that SunPac earned in 1977 and 1978 to the margins earned during the same period by certain unrelated firms which he found were (or had a division which was) comparable to SunPac. Here, Dr. Lynk estimated the revenue that SunPac would have earned if its pre-tax margin had been similar to those of the comparable firms and then compared these estimated revenues to the revenues that SunPac actually received under its transfer-price arrangement with petitioner.

To locate the comparable firms, Dr. Lynk first developed a "SunPac profile" from the Marek report and documentation obtained by respondent. The profile was "a contract

[*339] manufacturer of precision parts for aeronautical applications (especially jet engines) that used buyer specifications and instructions." Dr. Lynk then used Standard & Poor's computerized listings of publicly traded firms in the United States that are required to file Forms 10K with the Securities and Exchange Commission, the Marek report, and petitioner's vendor lists to identify firms potentially comparable to SunPac. [**196] Next, Dr. Lynk used available financial data on the potential comparable firms and the SunPac profile to choose 10 firms which he determined were comparable (or had a division which was comparable) to SunPac.

According to Dr. Lynk, at the time all 10 firms were independent manufacturers of parts and components used by the aircraft and aerospace industries, and their prices (and derivatively their profit margins) were determined through transactions with unrelated independent customers. Some firms were entirely within the line of business relevant to SunPac; Dr. Lynk used gross margin for these firms for comparison purposes. Other firms had only a segment or division within the line of business relevant to SunPac; Dr. Lynk used the margin reported in the segment data required by the SEC in the Form 10K for the relevant segment or division for comparison purposes. In some cases the reported margin was the operating margin (revenues less costs of goods sold and operating expenses) and in other cases it was the pre-tax net margin (operating margin less general corporate expenses and interest).

Dr. Lynk projected SunPac's revenues by calculating either the gross, operating, or net [**197] margin (depending on the financial information reported) for each of the comparable firms and applying that margin to the corresponding measure of SunPac's costs (cost of goods sold, operating expenses, or total costs, respectively). Based on these calculations, Dr. Lynk concluded that "SunPac's revenues and, correspondingly, its prices would have been only about 59 percent and 35 percent, respectively, of what it realized under the **transfer-pricing** agreement with [petitioner]." Dr. Lynk opined that if SunPac had earned margins similar to those of the comparable firms its revenues would have been

[*340] lower by 41 percent in 1977 and 64.9 percent in 1978, implying a like reduction in the transfer price.

4. *Return on Capital Assets: SunPac's Rate of Return v. the Competitive Rate of Return*

This method, rooted on Dr. Lynk's observation that SunPac's rate of return on assets for 1977 and 1978 appeared to be extraordinarily high, compares the rate of return on assets earned by SunPac as calculated by Dr. Lynk to a "competitive" rate of return as determined by Dr. Lynk.

In this method, Dr. Lynk examined SunPac's financial performance to estimate the percentage reduction in the [**198] transfer price that would have given SunPac a normal rate of return on capital. n55 According to Dr. Lynk, the price that results approximates the arm's-length price, i.e., the price that would have prevailed in a transaction between two independent entities.

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n55 There is no evidence in the record that Dr. Lynk made any independent study of SunPac's rate of return in relation to other firms in Singapore.

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Dr. Lynk described his general approach as follows:

In determining the price level required to give SunPac a normal rate of return, I used a discounted cash flow n56 approach, which requires a determination of the amount and timing of the various costs and benefits to investors arising from SunPac's operations. These costs and benefits are then discounted * * * to determine the net present value of SunPac's operations. In this case, because the purpose of the analysis is to adjust the transfer price, I have determined the price reduction at which the benefits from SunPac's operations will equal the costs, given a [**199] competitive or "normal" rate of return to SunPac's capital.

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n56 According to Dr. Lynk, generally there are three steps in determining cash-flows: (1) Measuring the initial cash flow, (2) measuring the continuing cash-flows over the applicable period, and (3) measuring the final cash-flow. Dr. Lynk defines the initial cash-flow as "the value of the business at the beginning of the period (or, in the case of a new business, the initial investment in assets -- both tangible and intangible)"; the continuing cash-flow as "the benefits or losses from operations as well as further investments"; and the final cash-flow as "the value of the business at the end of the period." According to Dr. Lynk, for his analysis here, the initial cash-flow is the initial investment (as of November 1975) by SunPac's investors (both its lenders and petitioner -- its sole stockholder). Dr. Lynk uses SunPac's previous year's net asset value, plus interest, plus earnings (or less losses), all less the ending investment in assets to determine the annual cash-flow attributable to stockholder equity and interest-bearing debt. The final cash-flow is the value (at the end of 1978) of SunPac as a going concern. In valuing assets, Dr. Lynk uses total book assets less noninterest-bearing liabilities such as trade debt.

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[**200]

I have used as the normal rate of return the three-month treasury bill rate plus eight percent. Eight percent is the approximate historical premium that investors with stock in publicly traded U.S. firms have

[*341] earned. * * * In 1977, the average treasury bill rate * * * was 5.265 percent and thus the implied normal rate of return on capital was about 13.265 percent. This is a high (i.e., conservative) rate of return in this context because I have applied it to the cash flows to and from both debt holders (for whom the risk is low relative to the estimated normal return) and equity investors (for whom the risk is approximately reflected in the estimated normal rate of return on capital).

* * * *

In determining the cash flows, I did not attempt to recharacterize the arrangements between SunPac and [petitioner], other than to apply the three percent "assistance payment" (from SunPac to [petitioner]) on an ex post basis and to reflect the IRS adjustments to which I understand [petitioner] has already agreed. * * *

The cash-flow analysis also requires that I place a value on SunPac as a going concern as of * * * (November 30, 1978, the end of SunPac's 1978 fiscal year). I [**201] have done this in two ways, * * *. The first simply uses the net book value of SunPac's assets. This approach unfortunately not only (probably) understates SunPac's tangible capital, but also fails to value any of its intangible capital. The second (and preferred) method is to estimate SunPac's going-concern value by determining the capitalized value of its 1978 operating results. n57 While this is superior to the first (book-value) method, it, too, is conservative because it assumes that SunPac's business does not grow after 1978.

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n57 Dr. Lynk capitalized the 1978 operating results using an 11-percent discount rate. "That is, earnings plus interest were multiplied by 9.091 (one divided by 11 percent) to determine the going-concern value." According to Dr. Lynk, "the 11 percent is a real, inflation-adjusted rate reflecting an estimated *real* rate of three percent for riskless treasury bills plus an eight percent risk premium. Three percent is [Dr. Lynk's] estimate of the expected real risk-free rate." Dr. Lynk also assumed that the Government of Singapore would impose a tax (income or dividend) on SunPac's future earnings at a 25-percent rate and that the royalty and assistance payments would continue indefinitely into the future.

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[**202]

Dr. Lynk explained his method of determining the transfer price reduction as follows:

To calculate the percentage reduction in the transfer price required to give SunPac a normal rate of return (i.e., to equate the net present values of the costs and benefits of SunPac's operations at the competitive rate of return), I first determined the effect on the net present value of reducing price (and therefore revenue) by a fixed percentage. There is a linear relationship between percentage reductions in price and their effect on the net present value of the cash flows. In other words, any given price reduction (e.g., 10 percentage points) will have one-third the effect on net present value of a price reduction that is three times as large (e.g., 30 percentage points). I use this relationship to calculate the percentage reduction in price that would eliminate the excess return that SunPac received from its operations.

In the book value case, the effect of a dollar reduction in revenue is a dollar reduction in earnings. Thus discounting the dollars received for

[*342] CSD sales * * * and the ending value of accounts receivable, I have determined the effect on present value. * * * [**203] In calculating the going-concern value on the basis of projected 1978 revenues, I had to take into account future Singapore taxes. In this case, a dollar reduction in revenue in the future results in only a 75 cent reduction in future earnings and, consequently, in the future after-tax cash flows. * * *

Dr. Lynk concluded that a 58.1-percent reduction in the transfer price would give SunPac a competitive return on its capital investment.

Dr. Lynk's implied adjustments to the transfer price can be summarized as follows:

	Percentage reduction in transfer price		SunPac gross revenue reduction 1977-78
Method	1977	1978	(in thousands)
1	-73.0%	-64.3%	$ 16,263
2	N/A	-50.2	12,279
3	-41.0	-64.9	14,407
n1 4	-58.1	-58.1	14,212

n1 Net revenue as defined in the rate of return analysis declined by $ 13,532, which reflects a reduction in the absolute amount of royalty and assistance payments.

B. *Location Savings*

To investigate the existence and magnitude of any location savings attributable to SunPac's manufacturing operation in Singapore, Dr. Lynk also analyzed the costs of the consolidated petitioner/SunPac entity. [**204] For this analysis, Dr. Lynk used petitioner's IPOR's (which describe petitioner's and third-party manufacturers' costs of producing the parts) and SunPac's RAWPERs (which describe SunPac's corresponding costs) which petitioner provided to respondent.

Dr. Lynk compared, on a part-by-part basis, the unit manufacturing costs incurred for SunPac parts with the unit costs incurred for identical non-SunPac parts for the dual-sourced parts analyzed in method one. For the SunPac parts Dr. Lynk eliminated petitioner's charges for inflation, general and administrative expenses, and profit from the materials cost to reflect only SunPac's manufacturing costs. Petitioner also adjusted SunPac's manufacturing costs to

[*343] reflect any post-purchase processing costs incurred by petitioner.

Next, Dr. Lynk computed a weighted average by location and year of the unit part costs of manufacturing incurred by SunPac and non-SunPac sources. The weights were total revenue by part number. The weighted average costs are expressed as a percentage of revenue for each source and each year. Dr. Lynk concluded that for 1977 SunPac's costs were 187.7 percent of the costs incurred by non-SunPac producers [**205] and, hence, SunPac incurred a cost dissavings of 46.7 percent of its manufacturing costs. He concluded further that for 1978 SunPac earned cost savings of 5.6 percent of its costs.

Dr. Lynk compared the IPOR costs for non-SunPac parts with the adjusted RAWPER costs to determine the total annual cost savings or dissavings. First, he projected the manufacturing cost for SunPac in the absence of location savings (the "hypothetical cost of goods") by multiplying the ratio of the non-SunPac costs to SunPac's costs by SunPac's cost of goods. Then he subtracted SunPac's actual cost of goods from the hypothetical cost of goods to determine any location savings or dissavings. Dr. Lynk's calculations are as follows:

SunPac costs	Costs (in thousands)		Total savings (dissavings)
	1977	1978	
Hypothetical cost of goods	$ 1,380	$ 5,149	
Actual cost of goods	2,591	4,874	
Savings (dissavings)	(1,211)	275	($ 936)

Dr. Lynk opined that, on average over this period, SunPac had relatively higher manufacturing costs than did non-SunPac sources, which suggested to him that there were no significant cost savings.

OPINION

Before turning to the substantive issues involved [**206] in this case, we need to address some preliminary issues related to certain evidentiary and procedural matters. The most important of these relate to respondent's introduction of certain data summaries and both parties' introduction of new theories for the first time on brief.

[*344] PRELIMINARY EVIDENTIARY AND OTHER MATTERS

I. OBJECTIONS TO CERTAIN DOCUMENTS

During the trial the parties objected on various grounds to certain exhibits n58 which we admitted subject to those objections and further argument on brief. Neither party addressed on brief the admissibility of these exhibits. We will treat the failure to argue further on brief the admissibility of the disputed evidence as, in effect, a concession as to its admissibility. See subparagraphs (4) and (5) of Rule 151(e); *Petzoldt v. Commissioner, 92 T.C. 661, 683 (1989); Money v. Commissioner, 89 T.C. 46, 48 (1987).*

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n58 These exhibits were Exs. 348, 357, 362, 365, 370 (audio portion only of videotapes showing the SunPac facility and the manufacture of certain selected SunPac parts); Ex. 372 (manufacturing process dimension tolerances); Ex. 437 (publication entitled "Sundstrand Traction CSD Parts"); Ex. 471 (chart entitled "Post-War Rationalization of the Aircraft Industry"); and page five, item two of Ex. 532 ("Analysis of Lynk Method IV Compustat All Firms Sample (1590) 1975").

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[**207]

II. OBJECTIONS TO CERTAIN OF RESPONDENT'S PROPOSED FINDINGS OF FACT CONTAINING DATA SUMMARIES

In its reply brief petitioner takes exception to certain of respondent's proposed findings of fact n59 propounded in respondent's opening brief. These particular proposed findings for the most part suggest conclusions regarding petitioner's or SunPac's operations based on tables set forth for the first time in those findings. Petitioner objects to the proposed findings principally as new evidence for which (a) documents were not exchanged prior to the trial as required by the Court's pretrial order; (b) no foundation was laid at trial as required by Rule 1006 of the Federal Rules of Evidence (hereinafter referred to as F.R.E.); (c) the findings are properly the subject of an expert's report under Rule 143(f); and (d) respondent's failure to comply with Rule 143(f) unduly prejudiced petitioner by depriving it of its rights both to cross-examination and presentation of rebuttal evidence. Petitioner further contends variously that the data summaries are irrelevant, incorrect, misleading, unsupported by the evidence, and/or contrary to sound economic

[*345] theories or logic and demonstrate [**208] respondent's misconceptions about petitioner's and/or SunPac's books and records.

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n59 Specifically proposed findings of fact 725, 729-733, 774-775, 787-788, 820, 823, 855-856, 867-868, 878-882, 889-897, 1219-1230. Petitioner also objects to Appendices A, B, C, and D which are attached to and/or incorporated in respondent's proposed findings of fact by proposed findings 820, 867, and 889.

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The tables, and the conclusions which respondent draws from them, for the most part are the foundation for respondent's contentions that, at least for 1977 and 1978, SunPac produced spare parts less efficiently than petitioner and, hence, petitioner (1) realized no location savings in those years from operating in Singapore, or (2) should have constructed the facility in the United States or increased production at its existing facilities in the United States. We agree with petitioner that, when petitioner made the decision in 1974 for SunPac to produce the spare parts, petitioner would not have increased further its production at [**209] its then existing facilities in Rockford and Denver. Therefore, had SunPac not begun production of the applicable spare parts, petitioner would have constructed another plant to produce them, probably in the Denver metropolitan area. See *supra* note 9. The decision of where to construct that facility was petitioner's to make, however, not respondent's. Respondent may not substitute his business judgment for petitioner's under the guise of a section **482** allocation. Cf. *Bausch & Lomb, Inc. v. Commissioner, 92 T.C. 525, 593 (1989); Seminole Flavor Co. v. Commissioner, 4 T.C. 1215, 1235 (1945).*

Because of the highly technical nature of the CSD's and the specialized manufacturing know-how needed for their production, we believe that the work force at any new CSD facility would require 2 to 4 years, or more, to acquire the expertise needed to master CSD manufacture, see *supra*. Consequently, we believe that the appropriate comparison for location savings purposes should be between SunPac and a comparable facility with similar operational experience. Under the circumstances established in the record here, therefore, [**210] we find respondent's comparison between SunPac and petitioner's then-existing CSD facilities irrelevant. Moreover, we must look to the time in which the parties entered into the license and distributorship agreements to judge the arm's-length nature of the transactions. *Bausch & Lomb, Inc. v. Commissioner, 92 T.C. at 601.* Respondent's summaries compare costs incurred during the years in issue. These years follow the years in which the

[*346] agreements were executed. Thus, without determining the accuracy of respondent's methodology in making his cost comparisons, or the propriety of waiting until the briefing stage to present the data summaries used for that purpose, we find irrelevant respondent's proposed findings directed at comparing petitioner's and SunPac's costs in 1977 and 1978 relating to the CSD parts.

As a result, in making our findings of fact, we did not rely on any of respondent's proposed findings of fact enumerated in note 59, *supra*. Consequently, we need not address petitioner's arguments regarding the exclusion from the record of the data summaries set forth in those proposed findings of fact.

III. OBJECTIONS TO NEW [**211] LEGAL THEORIES RAISED ON BRIEF

A. *Respondent's New "Services" Theory*

In his opening brief respondent for the first time argues in the alternative that petitioner rendered valuable services to SunPac for which, in an arm's-length transaction, it would have received compensation but for which petitioner did not receive an arm's-length consideration (hereinafter sometimes referred to as the new services theory). Respondent claims that before the submission of the case to the Court, he "had asserted that an adjustment under section **482** was required pursuant to the tangible property pricing regulations of *Treas. Reg. Sec. 1.482-2(e)* or, alternatively, the service's [sic] provisions of *Treas. Reg. Sec. 1.482-2(b)*." Up through the trial of this case, however, respondent focused his arguments under *section 1.482-2(b), Income Tax Regs.*, solely on services SunPac purportedly rendered to petitioner as a subcontractor or contract manufacturer. n60 At

[*347] no time before his opening brief did respondent suggest that valuing services petitioner provided to SunPac would sustain his allocations under section **482.** Moreover, at the trial, respondent did not present any expert or other [**212] evidence specifically directed to his new services theory.

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n60 In his trial memorandum, respondent set forth his principal position regarding the **482** allocation as follows:

Having determined that a non arm's-length shifting of income occurred [between petitioner and SunPac], respondent made an adjustment to the petitioner's inter-company pricing. To reflect what a willing buyer would pay to a willing seller for the type of work performed by SunPac, the respondent used a cost-plus model. SunPac was allowed a percentage of profits based upon its costs. In view of the fact that a majority of the parts (based upon sales) involved instances in which SunPac completed parts from a semi-finished state, the respondent asserts that SunPac should be compensated in the nature of a subcontractor performing services under Treas. Reg. Sec. **482**-2(b) [sic]. If, however, it is determined that SunPac was a manufacturer of tangible property, then SunPac would be compensated on a cost-plus basis under Treas. Reg. Sec. **482**-2(e) [sic].

Later at the trial, in his opening statement, respondent's counsel framed the issues with respect to sec. **482** as follows:

Your Honor, the theories on which the Respondent relies in this case have been previously espoused in the trial memorandum and in hearings previously in this Court. As has been stated, the Respondent believes that this case should be valued under Section 1.482-2(b) * * *, services, or alternatively, tangible property under Section 1.482-2(e) * * *.

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[**213]

Petitioner understandably protests against respondent's tardy introduction of the new services theory. Petitioner contends that it was surprised by respondent's reliance on this new legal theory and would be substantially prejudiced should the Court permit respondent to raise the new services theory at this late date. We agree with petitioner.

In *Pagel, Inc. v. Commissioner, 91 T.C. 200, 211-212 (1988),* affd. *905 F.2d 1190 (8th Cir. 1990),* we said that:

It is well established that a party may rely upon a theory if the opposing party has been provided with fair warning of the intention to base an argument upon that theory. Citations omitted. "Fair warning" means that respondent's failure to give notice, in the notice of deficiency or in the pleadings, of his intention to rely on a particular theory did not prejudice the taxpayer's ability to prepare its case. Citation omitted. Of key importance in evaluating the existence of prejudice is the amount of surprise and the need for additional evidence on behalf of the party opposed to the new position. Citation omitted.

Even where respondent's new theories arise under the [**214] same Code section as did the theories upon which the case was tried, this Court has refused to consider new theories raised by respondent for the first time in his brief where our consideration of such theories would prejudice the taxpayer. See *Aero Rental v. Commissioner, 64 T.C. 331, 338 (1975); Nash v. Commissioner,*

31 T.C. 569, 574 (1958). See also *Seligman v. Commissioner, 84 T.C. 191, 197-199 (1985)*, affd. *796 F.2d 116 (5th Cir. 1986)*.

Respondent had numerous opportunities here to raise the new services theory. Throughout these proceedings respondent has skipped from one theory to another in a seemingly futile attempt to find a sturdy branch upon which to hang

[*348] his section **482** allocation. At no time before the brief did he light upon the new services theory.

Petitioner, therefore, did not have fair warning that respondent intended to argue that certain enumerated services petitioner purportedly rendered to SunPac entirely, or even partially, support the section **482** allocation. Petitioner alleges that had it been aware before the trial that respondent [**215] planned to raise the new services theory, petitioner at the least would have attempted to address, through stipulated facts as well as testimonial and documentary evidence, each of the complex and inherently factual issues raised on brief by respondent. We believe that petitioner undoubtedly would have introduced additional evidence had it been forewarned of respondent's new services theory; therefore, we agree that our consideration of the new services theory would prejudice petitioner. Accordingly, we decline to consider this theory.

The Court is disturbed by respondent's claim that before submitting the case to the Court he had asserted that an adjustment under section **482** was required pursuant to the "services" provisions of *section 1.482-2(b), Income Tax Regs.* Clearly, by the time of the trial, respondent had narrowed his theory under section 1.482-2(b) to purported services provided by SunPac to petitioner. The flip-flop argument made on brief, that respondent's adjustments under section **482** can be sustained by allocating to petitioner income attributable to services rendered to SunPac, is a totally different theory, requiring different evidence, to prove or disprove. We [**216] find it hard to believe that respondent's statements were not an attempt to disguise the late introduction of his new services theory. (We also find it hard to believe that the value of these purported services equals exactly the amount of respondent's section **482** adjustments, especially since respondent failed to present any evidence specifically valuing the services.) We do not accept any party's submitting distortions of facts or law.

Respondent did not argue on brief that his section **482** allocation can be sustained by valuing services SunPac performed for petitioner as a subcontractor. n61 Consequently, we determine respondent has abandoned this argument for

[*349] support for his allocation under section **482** and we will not consider it further. Cf. *UFE, Inc. v. Commissioner, 92 T.C. 1314, 1320-1321 (1989); Hockaden & Associates, Inc. v. Commissioner, 84 T.C. 13, 16 n.3 (1985),* affd. *800 F.2d 70 (6th Cir. 1986).*

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n61 In his reply brief, in fact, respondent states as follows:

The petitioner's argument at pages 314-318 of its opening brief assumes that the respondent will assert a reallocation of income to [petitioner] by examining the services performed by SunPac on behalf of [petitioner]. It is, however, respondent's position that the evidence in this case requires this issue be examined from the perspective of valuable services performed by [petitioner] on behalf of SunPac.

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[**217]

B. *Petitioner's Estoppel Argument*

Not to be outdone, however, for the first time on brief petitioner argues that respondent should be estopped from asserting a different valuation for the spare parts produced by SunPac than the value agreed upon by petitioner and the U.S. Customs Service for these same parts. Respondent correctly points out that Rule 39 requires estoppel be affirmatively set forth in the party's pleading. Respondent additionally contends that petitioner has not proved that it is legally and factually entitled to its estoppel claim. We agree with respondent that estoppel is an affirmative defense which must be specifically pleaded and proved by the party wishing to rely upon it. Petitioner did not raise this issue in its pleadings; therefore, we will not consider petitioner's estoppel argument. Consequently, we need not address respondent's alternative argument on this matter. See Rule 39; *Riss v. Commissioner, 56 T.C. 388, 433 n.35 (1971),* supplemented by *57 T.C. 469 (1971),* affd. on other issues sub nom. *Commissioner v. Transport Mfg. & Equip. Co., 478 F.2d 731 (8th Cir. 1973),* [**218] affd. in part and remanded in part on another issue *478 F.2d 1160 (8th Cir. 1973).*

C. *Other New Arguments*

Petitioner also argues that respondent's brief raises two entirely new theories for disallowing the foreign tax credits claimed for 1977 and 1978. We will discuss these arguments separately in the portion of the opinion pertaining to the foreign tax credit issue.

Now we turn to the substantive issues involved in this case.

[*350] SUBSTANTIVE ISSUES

INTRODUCTION

Petitioner is engaged in the manufacture and sale of various products including an avionic product called the CSD. Certain improvements petitioner made to its CSD in the late fifties and the sixties resulted in petitioner's becoming the leading manufacturer and supplier of CSD's from the earlier sixties and continuing at least through the years in issue.

Once an airframe manufacturer selects one of petitioner's CSD's for an aircraft application, petitioner is virtually assured of supplying CSD's, including spare units and spare parts, for that aircraft for the life of the program. In 1974, petitioner decided to expand the operations of SunPac, its wholly owned subsidiary located in [**219] the Republic of Singapore, to include the manufacture of parts for some of petitioner's CSD's used on commercial aircraft. Petitioner anticipated selling the parts manufactured by SunPac as spare parts as well as using them itself in the manufacture of its OEM units and spare units. Petitioner intended to purchase and distribute all initial SunPac parts until SunPac developed the capability to distribute the parts directly to its airline customers. Petitioner also intended to maintain dual sourcing capabilities for parts licensed to SunPac.

SunPac constructed a new factory in Singapore to manufacture the SunPac parts. Production of SunPac parts commenced sometime in 1976. Petitioner purchased all of SunPac's output through 1978 at the catalog price less a 15-percent discount. SunPac paid petitioner a royalty of 2 percent of the net selling price of each product manufactured and sold by SunPac in consideration of the industrial property rights licensed to SunPac by petitioner. Under the SunPac license agreement as originally executed, SunPac was to pay the 2-percent royalty until the cumulative royalties paid by SunPac equaled the original costs of petitioner's development design [**220] and engineering for those industrial property rights plus the cost of all assistance rendered to SunPac by petitioner. According to the SunPac license agreement, the parties intended this "cost reimbursement" to be accomplished within an 8-year period.

Petitioner and SunPac amended the SunPac license agreement in 1979, but retroactive for all sales on or after July 1,

[*351] 1977. As amended, SunPac agreed to pay petitioner, in addition to the 2-percent royalty, 1.1 percent of the net selling price of each product sold by SunPac for any assistance rendered to SunPac outside of Singapore (offshore assistance) and 1.9 percent for the cost of assistance rendered to SunPac in Singapore (onshore assistance) until the total of each such assistance cost had been paid to petitioner.

In determining the section **482** adjustment, the international examiner, Agent Pierson, treated SunPac as a subcontractor and used the cost-plus method. Using information obtained by the industry economist, Mr. Marek, and developed during the examination, Agent Pierson determined that a firm comparable to SunPac would expect to earn gross margins between cost plus 22 percent and cost plus 38 percent. SunPac [**221] had a gross margin of cost plus 157 percent during calendar year 1977 and cost plus 280 percent during calendar year 1978. Agent Pierson then allowed SunPac a gross profit margin of 28 percent, which is equal to a mark-up of cost plus 38 percent, in making his determination regarding the transfer price for the SunPac parts. In arriving at his determination, Agent Pierson made no allowance for location savings attributable to SunPac's operating in Singapore.

Consequently, in the notice of deficiency, respondent determined that, to reflect the correct arm's-length consideration for the SunPac parts, income should be reallocated from SunPac to petitioner in the amounts of $ 3,273,000 for 1977 and $ 12,438,000 for 1978. Since respondent also reduced petitioner's taxable income by $ 135,000 for 1977 and $ 396,000 for 1978 to reflect the elimination from income of the royalty payments SunPac made to petitioner during those years, the net section **482** adjustments for the years in issue were $ 3,138,000 for 1977 and $ 12,042,000 for 1978.

Respondent also did not allow petitioner foreign tax credits for taxes petitioner paid to the Republic of Singapore for the years in issue pertaining [**222] to the royalty income SunPac paid to petitioner. By amendment to answer, respondent further proposes imposing on the deficiency additional interest as provided by section 6621(c).

First we must determine whether respondent's section **482** adjustments were arbitrary, capricious, or unreasonable, and if so, what was petitioner's true taxable income for

[*352] 1977 and 1978 pertaining to SunPac's operations. Next, we must determine what, if any, foreign tax credits petitioner may claim for those years pertaining to SunPac's CSD operations. Finally, we must determine whether, as a result of the section **482** adjustments, petitioner is subject to the increased interest of section 6621(c) applicable to tax-motivated transactions.

As a further preliminary matter, we would like to note that the parties have propounded a multiplicity of arguments and counterarguments in the more than 1,800 pages in the opening and reply briefs they filed, some of which were merely a reiteration of the arguments made countless times and pages before. Some of the arguments were directed toward theories or summaries which we have refused to consider because of lack of timeliness or relevancy, as before stated [**223] in our findings, and some of the arguments simply were devoid of merit under the facts or the law applicable to the instant case. Rather than unduly elongate an already extensive opinion by addressing each such argument, we have set forth in the opinion only those arguments which we find pertinent and necessary for a full understanding of the rationale for our holdings on the issues. We want it understood by the parties, however, that, in arriving at our decision, we have weighed each argument they raised, no matter how meritorious or unmeritorious.

We now proceed to discuss our determinations regarding the issues raised in this case.

I. THE SECTION **482** ADJUSTMENTS ISSUE

A. *In General*

Section **482** n62 gives respondent broad authority to allocate income, deductions, credits, or allowances between commonly

[*353] controlled organizations, trades, or businesses if he determines that the allocation is necessary to prevent the evasion of taxes or clearly to reflect the income of the controlled entities. The purpose of section **482** is to prevent the artificial shifting of the net incomes of controlled taxpayers by placing controlled taxpayers on a parity with uncontrolled, unrelated [**224] taxpayers. *Sec. 1.482-1(b)(1), Income Tax Regs.* See also *Bausch & Lomb, Inc. v. Commissioner, 92 T.C. at 581; Edwards v. Commissioner, 67 T.C. 224, 230 (1976).* Respondent may make allocations under section **482** even in the absence of tax avoidance motives in order to clearly reflect the respective incomes of members of the controlled group. *G.D. Searle & Co. v. Commissioner, 88 T.C. 252, 359 (1987).* Thus, establishment of a business purpose for a transaction does not necessarily insulate the taxpayer from a section **482** allocation. *Bausch & Lomb, Inc. v. Commissioner, 92 T.C. at 582.*

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n62 Sec. **482,** as in effect for the years in issue, provided as follows:

In any case of two or more organizations, trades, or businesses (whether or not incorporated, whether or not organized in the United States, and whether or not affiliated) owned or controlled directly or indirectly by the same interests, the Secretary may distribute, apportion, or allocate gross income, deductions, credits, or allowances between or among such organizations, trades, or businesses, if he determines that such distribution, apportionment, or allocation is necessary in order to prevent evasion of taxes or clearly reflect the income of any such organizations, trades, businesses.

[The subsequent amendment to this provision by sec. 1231(e)(1) of the Tax Reform Act of 1986 (Pub. L. 99-514, 100 Stat. 2085, 2562) does not affect the instant case.]

- - - - - - - - - - - - - - - - - -End Footnotes- - - - - - - - - - - - - - - - - -
[**225]

The income tax regulations set forth an arm's-length standard to determine whether reallocations between controlled entities are needed. Thus, the regulations attempt to identify the "true taxable income" of each entity based on the taxable income which would have resulted had the entities been uncontrolled parties dealing at arm's length. See *sec. 1.482-1(b)(1), Income Tax Regs.;* Staff of the J. Comm. on Taxation, Present Law and Certain Issues Relating to **Transfer Pricing** (Code sec. **482)**, at 5 (J. Comm. Print 1990) (hereinafter referred to as JCT Present Law (Code sec. **482)**).

Respondent's determination as set forth in the notice of deficiency is presumptively correct. Petitioner has the burden of disproving that determination. Rule 142(a)*; Welch v. Helvering, 290 U.S. 111 (1933).* Moreover, respondent's section **482** determination must be sustained absent a showing that he has abused his discretion. *Paccar, Inc. v. Commissioner, 85 T.C. 754, 787 (1985),* affd. *849 F.2d 393 (9th Cir. 1988).* To succeed, therefore, petitioner first must show that respondent's section **482** allocations are arbitrary, [**226] capricious, or unreasonable. *G.D. Searle & Co. v. Commissioner, supra; Eli Lilly & Co. v. Commissioner, 84 T.C. 996, 1131 (1985)* affd. in part, revd. in part, and remanded *856 F.2d 855 (7th Cir. 1988)* (Lilly II). Whether respondent has exceeded his discretion is a question of fact. *American*

[*354] *Terrazzo Strip Co. v. Commissioner, 56 T.C. 961, 971 (1971).* In reviewing the reasonableness of respondent's determination, the Court focuses on the reasonableness of the result, not on the details of the methodology used. *Bausch & Lomb, Inc. v. Commissioner, 92 T.C. at 582; Eli Lilly & Co. v. United States, 178 Ct. Cl. 666, 676, 372 F.2d 990, 997 (1967)* (Lilly I).

Should petitioner overcome respondent's presumption of correctness and prove that the deficiencies set forth in the notice of deficiency are arbitrary, capricious, or unreasonable, but fail to prove that alternative allocations it proposes satisfy the arm's-length standard, the Court must determine from the record the proper allocation [**227] of income between petitioner and SunPac. See *Eli Lilly & Co. v. Commissioner, 856 F.2d 855, 860 (7th Cir. 1988)* (Lilly II), and the cases cited thereat.

If respondent proposes a reallocation under section **482** with respect to an item or transaction, the taxpayer may claim a setoff with respect to another item or transaction between the same parties in the same year if it can show that the reallocation with respect to that item or transaction is appropriate. *Sec. 1.482-1(d)(3), Income Tax Regs.; Rev. Proc. 70-8, 1970-1 C.B. 434;* JCT Present Law (Code sec. **482)**, *supra* at 6.

Respondent does not challenge here SunPac's existence as a valid taxable entity. Respondent argues rather that his determination was necessary to clearly reflect an arm's-length price between petitioner and SunPac. According to respondent, the record supports his determination under either the "tangible property pricing provisions" of *section 1.482-2(e), Income Tax Regs.*, or, alternatively, the "services provisions" of section 1.482-2(b).

Up through the trial, respondent argued that SunPac should be viewed as a machine shop which provided [**228] a manufacturing service to petitioner. See respondent's trial memorandum at 13. Respondent contended that SunPac's remuneration for that manufacturing service should be computed under a cost-plus mode pursuant to *section 1.482-2(b), Income Tax Regs.* See *supra* note 60. In his reply brief, however, respondent virtually admits that the evidence

[*355] does not sustain his section **482** allocation under this particular theory. See *supra* note 61.

Nonetheless, respondent has not abandoned totally his subcontractor argument. We read respondent's primary position now to be premised on the argument that petitioner has failed to overcome the presumption of correctness of the notice of deficiency or to prove that respondent's determination was arbitrary, capricious, or unreasonable; therefore, respondent argues, his determination must be sustained.

At the trial, respondent did not present any evidence to sustain independently the cost-plus methodology which respondent concedes he relied upon in the notice of deficiency as the basis for the section **482** allocations. Dr. Lynk (respondent's expert witness), furthermore, made no attempt to support respondent's determination on the [**229] basis of the cost-plus method used by Agent Pierson. Rather, on brief, respondent asserts that "in the alternative to the determinations contained in the statutory notice of deficiency, the evidence supports the reallocation of income between [petitioner] and SunPac consistent with the expert testimony of economist [Dr. Lynk]." Dr. Lynk's report sets forth four methods which attempt to show that petitioner's transfer prices for SunPac parts were not an arm's-length consideration for those parts. Respondent further explains that:

In conducting his analysis, Dr. Lynk focused primarily upon the price [petitioner] paid for parts produced by SunPac. Dr. Lynk concluded that this was the appropriate direction because there was no evidence to suggest that petitioner transferred the [petitioner] design intangibles, including the right to sell spare parts to customers already using [petitioner] CSD's, to SunPac. During 1977 and 1978, SunPac only sold to [petitioner]. However, even if the focus was shifted to a royalty, it would not alter the conclusions of his report. Instead of adjusting the parts transfer price downward, the royalty rate would have to be increased to reflect the proper [**230] arms length [sic] compensation.

We interpret respondent's alternate argument as a restatement of his contention that SunPac was merely a contract manufacturer for whom the sale of its total production was assured and who, thus, was not entitled to the return normally associated with an enterprise which bears the risk as to the volume of the product it can sell and the price it can charge. Respondent made, and we

[*356] rejected, this same argument in *Bausch & Lomb, Inc. v. Commissioner, supra.*

Bausch & Lomb, Inc. (hereinafter referred to as Bausch & Lomb), a leading manufacturer and seller of soft contact lenses, established Bausch & Lomb Ireland, Ltd. (hereinafter referred to as B&L Ireland), a third-tier, wholly owned subsidiary, to manufacture and sell soft contact lenses in the Republic of Ireland. The Commissioner argued that it was inappropriate to analyze separately the transfer price and royalty rate used by B&L Ireland, on the theory that Bausch & Lomb and B&L Ireland would not have conducted their relationship as they did had they been conducting their affairs at arm's length. *Bausch & Lomb, Inc. v. Commissioner, supra at 583.* [**231] We concluded that the transfer price and the royalty rate each had independent significance and, therefore, had to be examined separately, stating as follows:

Respondent's argument would have some merit had we found that [Bausch & Lomb] was required to purchase B&L Ireland's production of soft contact lenses. In such a case, B&L Ireland would indeed have been a contract manufacturer in substance despite the fact that ostensibly the license agreement and product purchases were not interdependent. However, we have found as fact that no such purchase requirement existed. All of the documents generated by [Bausch & Lomb] in evaluating the feasibility of the Irish lens facility indicate that it was intended to serve the foreign markets with limited possible importation of Irish lenses into the United States in the event of production problems at the Rochester facility. That [Bausch & Lomb] would import substantial quantities of Irish lenses into the United States should worldwide demand not meet expectations was not guaranteed. Nor did B&L Ireland have a guarantee that the transfer price it received for its lenses would remain at $ 7.50 per lens. In actuality, the transfer price [**232] was reduced to $ 6.50 in 1983 due to market pressures. The most that can be said is that B&L Ireland had certain expectations as to the volume and price of lenses it could anticipate selling to [Bausch & Lomb] or its affiliates. However, such expectations are no different than those which any supplier has with regard to the business of a major customer and do not constitute a guarantee which effectively insulate B&L Ireland from market risks. In a case where the license of intangibles and sale of the product manufactured to the licensor were interdependent, then the separate royalty rate and transfer price would be unimportant as long as the net result is satisfactory. The same cannot be said in this instance where both the volume and price of sales to the licensor are subject to variation. * * * [*Bausch & Lomb, Inc. v. Commissioner, 92 T.C. at 584.]*

[*357] Similarly, here, SunPac had no guarantee that petitioner would purchase all of SunPac's production. The distributor agreement places no obligation on petitioner to purchase any or all of SunPac's output. The record establishes that petitioner planned to purchase all of SunPac's initial production, [**233] but only until SunPac itself developed the capability to distribute SunPac parts directly to its customers. Thus, petitioner and SunPac initially intended to operate under the distributor agreement only until SunPac's direct distribution system could be implemented. The airlines' unanticipated reluctance to purchase directly from SunPac forced both SunPac and petitioner to develop alternative plans for the distribution of the SunPac parts which included continuing the distributor agreement through the years in issue. This unexpected change in plans did not convert SunPac to petitioner's subcontractor, however.

The record shows that petitioner consistently paid SunPac petitioner's catalog prices less a 15-percent discount for the SunPac parts. The distributor agreement's prices for SunPac parts, set forth in attachment A to the agreement, however, could be and were revised by amendment from time to time to reflect changes in the prices. Although SunPac may have anticipated that the transfer price always would remain at catalog price less a 15-percent discount, the distributor agreement made no such guarantee.

Thus, here too, SunPac had only certain expectations as to the volume [**234] of sales and the prices at which it could anticipate selling the SunPac parts to petitioner. Hence, the transfer price and the royalty rate in this case also each have independent significance and must be examined separately.

SunPac did not act as a subcontractor in form or substance. As petitioner's licensee, it owned the right to use the intangible property transferred to it under the SunPac license agreement; it had the right to sell SunPac parts throughout the world to unrelated parties; it purchased its own materials (albeit through petitioner) and bore the inventory, production, and market risks with respect to its products; it scheduled its own production runs and was responsible for its own quality control; and it performed a variety of machining operations and processes. Because

[*358] respondent's determination, using the cost-plus method, was premised on SunPac acting as a subcontractor of petitioner, we conclude that this determination was arbitrary, capricious, and unreasonable. Petitioner, therefore, has carried its burden of proof as to this matter. Now we must determine the proper transfer price for the SunPac parts.

B. *Transfer Price Determination*

The [**235] regulations under section **482** provide that when one controlled entity sells tangible property to another controlled entity at other than an arm's-length price, respondent may make appropriate allocations between the seller and the buyer to reflect an arm's-length price for the sale. An arm's-length price is the price an unrelated party would have paid under the same circumstances for the same property involved in the controlled sale. An arm's-length price normally involves a profit to the seller. *Sec. 1.482-2(e)(1)(i), Income Tax Regs.*

The regulations specify three methods, in the order of priority, which respondent must use to determine an arm's-length price for the sale of tangible property: the comparable-uncontrolled-price method, the resale-price method, and the cost-plus method. *Sec. 1.482-2(e)(1)(ii), Income Tax Regs.* Where none of these three methods can reasonably be applied under the facts and circumstances of a particular case, the regulations authorize use of any other appropriate method, or variations of such methods, for determining an arm's-length price. *Sec. 1.482-2(e)(1)(iii), Income Tax Regs.*

Petitioner claims that, at the time petitioner and SunPac agreed [**236] upon the transfer price, as a result of its factual review of unrelated distributors' discounts (showing discounts ranging from 5 to 20 percent of the sales price) and its analysis of petitioner's internal distribution costs, petitioner determined that a 15-percent discount for SunPac parts would reasonably compensate petitioner for its distribution services. Petitioner claims further that, during its consideration and later revaluation of the transfer price, it also considered petitioner's possible internal usage of SunPac's parts but again concluded that the 15-percent discount would be appropriate and reasonable. Now, relying

[*359] primarily on the testimony of Dr. Baumol, its principal economic expert witness on the **transfer pricing** issue, petitioner contends that the 15-percent discount rate was too high, not too low as respondent contends.

We weigh expert testimony in light of the expert's qualifications as well as all the other credible evidence in the record. *Estate of Newhouse v. Commissioner, 94 T.C. 193, 217 (1990).* We are not bound by the opinion of any expert witness, and we will accept or reject that expert testimony when, in our [**237] best judgment, based on the record, it is appropriate to do so. *Estate of Newhouse v. Commissioner, supra; Chiu v. Commissioner, 84 T.C. 722, 734 (1985).* While we may choose to accept the opinion of one expert in its entirety, *Buffalo Tool & Die Mfg. Co. v. Commissioner, 74 T.C. 441, 452 (1980),* we may also be selective in the use of any portion of that opinion. *Parker v. Commissioner, 86 T.C. 547, 562 (1986).*

Dr. Baumol posits that sales to SABENA are comparable to sales to petitioner because SunPac also sold to SABENA the parts it manufactured and sold to petitioner. Different circumstances in the transactions between SunPac and petitioner versus those between SunPac and SABENA, as noted by Dr. Baumol, which might require an adjustment to the consignment agreement price (the basic 4-percent discount Dr. Baumol concluded SunPac would have given to petitioner for SunPac parts, determined by using the actual volume of CSD parts transactions between petitioner and SunPac for 1977 and 1978 compared to the volume of sales upon which the commission rates were [**238] based as specified in the consignment agreement) are: (1) Petitioner took immediate title to the SunPac parts upon shipment while SABENA took title only as the SunPac parts were used or resold from the consignment inventory; consequently, SunPac bore the carrying costs for the SunPac parts inventory maintained by SABENA whereas petitioner apparently bore the carrying costs for the SunPac parts shipped to petitioner (hereinafter referred to as the inventory carrying costs); and (2) petitioner incurred duty costs on the imported SunPac parts shipped to it while SABENA did not.

As for the first potential adjustment, Dr. Baumol concluded that, because SunPac gave petitioner 180 days to

[*360] pay for the SunPac parts it purchased, SunPac in effect extended credit to petitioner for its SunPac parts inventory (hereinafter referred to as the imputed deferred finance charges). Based on information furnished to him by Arthur Andersen, Dr. Baumol assumed that the required adjustment for the inventory carrying costs was more than offset by the imputed deferred finance charges; therefore, Dr. Baumol made no adjustment to the consignment agreement price for the inventory carrying costs. Dr. [**239] Baumol did not examine in detail how Arthur Andersen calculated this setoff.

As for the second potential adjustment, based on further information furnished to him by Arthur Andersen, Dr. Baumol increased the consignment agreement price by 4 percent to account for the duty costs incurred by petitioner but not incurred by SABENA. Thus, Dr. Baumol concluded that for the years in issue the arm's-length price for SunPac parts was the current catalog price less 8 percent (hereinafter referred to as the adjusted distributor agreement price). The adjusted distributor agreement price, therefore, is equal to the basic 4-percent discount plus the 4-percent duty costs adjustment.

In arriving at the adjusted distributor agreement price, Dr. Baumol made no adjustments for differences in warranty provisions, patent indemnity, etc., since he assumed, based on information furnished to him, that these differences tended to be relatively minor, and, if anything, would increase the effective discount to petitioner. Dr. Baumol apparently made no independent examination to determine whether such adjustments, in fact, were needed. Dr. Baumol considered unimportant the use for which petitioner purchased [**240] the part; therefore, he made no adjustment for this factor in determining the adjusted distributor agreement price.

Respondent does not agree that the consignment agreement is a comparable transaction to the distributor agreement. According to respondent, the consignment agreement cannot be comparable because (1) there were no sales made under the consignment agreement until after the years in issue; or, alternatively, (2) other fundamental differences surrounding the two transactions exclude the consignment

[*361] agreement from providing an arm's-length standard. Respondent argues, rather, that the cost-plus method used by Agent Pierson or, alternatively, one of Dr. Lynk's four methods establish the proper transfer price for the SunPac parts.

At first blush Dr. Baumol's conclusion that the distributor agreement and the consignment agreement are uncontrolled comparables under *section 1.482-2(e)(2)(i), Income Tax Regs.*, appears appealing. However, after closer consideration, for the reasons discussed below, we disagree. We do not agree with respondent, however, that either the cost-plus method used by Agent Pierson or any of Dr. Lynk's four methods derive an arm's-length price. [**241]

1. *The Consignment Agreement as a Comparable Uncontrolled Sale*

Under the comparable-uncontrolled-price method, the arm's-length price of a controlled sale is equal to the price paid in comparable uncontrolled sales. *Sec. 1.482-2(e)(2)(i), Income Tax Regs.* Uncontrolled sales for purposes of the comparable-uncontrolled-price method include: (1) Sales made by the taxpayer to an unrelated party; (2) purchases made by the taxpayer from unrelated parties; and (3) sales made between two unrelated parties. *Sec. 1.482-2(e)(2)(ii), Income Tax Regs.* Controlled and uncontrolled sales are deemed comparable if the physical property and circumstances involved in the uncontrolled sales are identical to the physical property and circumstances involved in the controlled sales, or if such properties and circumstances are so nearly identical that any differences either have no effect on price, or can be measured and eliminated by making a reasonable number of adjustments to the price of the uncontrolled sales. Some of the differences which may affect the price of property are differences in quality of the product, terms of sale, intangible property associated with the sale, time of sale, the [**242] level of the market, and the geographic market in which the sale takes place. *Sec. 1.482-2(e)(2)(ii), Income Tax Regs.; Bausch & Lomb, Inc. v. Commissioner, 92 T.C. at 585-586.*

We find that the physical property and circumstances involved in the sales to petitioner are not identical in all

[*362] respects to the physical property and circumstances relating to the parts sold to SABENA. SABENA agreed to handle for petitioner and SunPac those parts most relevant to airline customers operating in Europe, the Middle East, and Africa, and which turned over in inventory within 4 months. Furthermore, only FAA PMA parts could be sold to SABENA. Petitioner, on the other hand, was willing to accept any and all of the parts SunPac manufactured, regardless of how quickly the parts turned over in inventory or whether SunPac had its FAA PMA certification. Thus, SunPac did not sell to SABENA all of the types of parts it produced while it did sell all types to petitioner. Moreover, SunPac sold some unfinished parts and defective parts to petitioner for which petitioner incurred the costs of finishing, reworking, or scrapping. No semifinished parts were included [**243] in the SABENA consignment inventory. SunPac, moreover, bore the costs for reworking or replacing any defective parts assigned to SABENA.

Petitioner concedes that, at arm's length, SunPac should be charged back petitioner's costs incurred with respect to the unfinished and defective parts. SunPac sold the unfinished parts to petitioner at the same discount rate as it sold finished parts. From this record, we are unable to determine a separate transfer price for finished and unfinished parts, PMA and non-PMA parts, or parts sold both to SABENA and petitioner and parts sold only to petitioner.

We must determine, then, whether the SunPac parts and circumstances relating to the distributor agreement and the consignment agreement are so nearly identical that any differences either have no effect on price, or can be measured and eliminated by making a reasonable number of adjustments to the consignment agreement price. We are not convinced from this record, however, that every difference either has no effect on price or can be measured and eliminated by making a reasonable number of adjustments to the consignment agreement price.

First, we are not convinced that the adjustment for petitioner's [**244] inventory carrying costs attributable to the SunPac parts were offset totally by the imputed deferred finance charges. Dr. Baumol agreed on cross-examination that an adjustment to the consignment agreement price was

[*363] required to account for petitioner's inventory carrying costs applicable to SunPac parts. He made no adjustment for this difference, however, because he assumed, based on information furnished to him by Arthur Andersen, that any adjustment for this difference was offset totally by the cost to SunPac of giving petitioner 180 days to pay for the SunPac parts it purchased.

The record does not show how Arthur Andersen determined that the imputed deferred finance charges offset exactly the inventory carrying costs petitioner incurred relating to SunPac parts. Moreover, we cannot determine if Arthur Andersen took into account the fact that SABENA did not pay SunPac within 30 days of shipping but within 30 days of invoicing -- an event which did not occur until SABENA sold or used the part. Nor can we determine whether Arthur Andersen took into account the fact that SunPac did not pay petitioner royalty payments until 180 days after the calendar year in which SunPac [**245] invoiced a customer for the SunPac parts.

In his report Dr. Baumol explained the offsetting adjustments as follows:

In this particular instance, however, no adjustment is necessary to compensate for the inventory carrying cost finance charges because SunPac, through the credit terms it extended to [petitioner], financed [petitioner's] investment in inventory. Specifically, the consignment agreement required SABENA to pay SunPac within 30 days of invoice date. Under the terms of the Distribution Agreement, on the other hand, [petitioner] paid SunPac within 180 days of the invoice date. Thus, [petitioner] was extended five months more time to pay SunPac than was SABENA. Through these far more generous credit terms, SunPac in essence financed [petitioner's] inventory for these five months.

Arthur Andersen estimates that [petitioner] held SunPac parts in its inventory on average for less than four months during 1977 and 1978. The Arthur Andersen calculations demonstrate that the credit terms extended by SunPac more than offset [petitioner's] cost of financing its inventory. Therefore, no adjustment is necessary to compensate for inventory carrying cost finance charges. [Fn. ref. [**246] omitted.]

Based on the above testimony, we infer that Arthur Andersen did not account for these additional factors, thereby undermining Dr. Baumol's assumption of equal offsetting adjustments for the inventory carrying costs and the imputed deferred finance charges. Moreover, we note

[*364] that the distributor agreement contains no provision as to when payment was due from petitioner for the SunPac parts it purchased. Consequently, SunPac could have eliminated the 180-day delayed payment arrangement at any time. We believe that an adjustment to the consignment agreement price should have been made for petitioner's inventory carrying costs attributable to SunPac parts. The record, however, does not establish just what adjustment to the consignment agreement price is appropriate for the inventory carrying costs under the circumstances revealed here. Since we believe that other differences in circumstances between the consignment agreement and the distributor agreement render these agreements incomparable, we do not attempt to approximate an appropriate adjustment at this time.

Second, as we said above, under the consignment agreement, SABENA requested that SunPac and petitioner [**247] select for consignment parts which turned over more than three times per year and which were most relevant to airline customers operating in Europe, the Middle East, and Africa. SABENA would accept only FAA PMA parts. Under the distributor agreement, however, petitioner was given the right to act as a nonexclusive worldwide distributor for any part manufactured for sale by SunPac for use in or in support of air vehicle applications. Petitioner accepted both PMA and non-PMA parts. Dr. Baumol made no adjustments to the consignment agreement price for these different circumstances nor does he attempt to explain why no adjustments are needed. We believe that some or all of these differences would have an effect on price. However, we are not convinced that the differences can be measured or eliminated by making a reasonable number of adjustments to the consignment agreement price nor do we have the necessary information in the record to attempt such an undertaking.

Third, SABENA acquired SunPac parts on consignment only. SABENA, therefore, could return to SunPac any parts which became obsolete or otherwise unsalable or unusable. SABENA, thus, did not bear the same risks in relation [**248] to the SunPac parts as did petitioner which purchased the parts outright upon shipment and, therefore, immediately bore all

[*365] the risks of loss. We do not believe that the difference in risks can be measured, especially on the basis of the record here, but we think it should be noted.

Fourth, the distributor agreement places no obligation on petitioner as to the use, resale, or other disposition of SunPac parts. Petitioner intended both to resell the SunPac parts and to use them internally in its production of OEM units, spare units, and spare parts. SABENA, on the other hand, an airline customer, intended to use SunPac parts only as spare parts or to sell them to other airlines or overhaul centers as spare parts. Dr. Baumol considers the use to which the part is placed immaterial since as he stated: "If there is a market price for the item, it is -- once you have purchased it, you, the purchaser, can do with it as you wish, and it is a matter of your own business, what you do with it." We find Dr. Baumol's response superficial since it assumes a preexisting market price. Dr. Baumol never describes the effect, if any, the use to which the part will be put has on establishing [**249] that market price. We believe that, under the circumstances here present, the use to which the SunPac parts will be put would be material in determining the discount rate an unrelated party would demand.

By the late 1970s, petitioner increased the ratio of the price of spare units to the price of OEM units to 200 to 250 percent of the OEM unit price. Petitioner anticipated using up to 50 percent of the SunPac parts internally in its own production of OEM units, spare units, and spare parts. Considering the large differential in pricing between OEM units and spare units and the anticipated volume of sales between SunPac and petitioner, it seems logical that the use to which the part would be placed would have some effect on profitability. Astute businessmen would consider this factor in negotiating an arm's-length price for the parts. We conclude, therefore, that this circumstance would have an effect on price but, on the basis of this record, we cannot measure that effect.

Consequently, considering all the different circumstances involved here, we conclude that sales under the consignment agreement cannot be considered uncontrolled comparables to sales under the distributor agreement [**250] for purposes of

[*366] determining an arm's-length consideration for the SunPac parts.

The record establishes that Lucas purchased finished parts from petitioner to use in its own CSD OEM unit production from time to time when it was having production or capacity problems. Lucas paid the catalog price or a catalog-equivalent price for all parts purchased from petitioner. The record further shows that Teijin also purchased a number of finished CSD parts from petitioner for its own CSD production. CSD parts purchased from petitioner made up approximately 20 percent of the content of Teijin's CSD units. Teijin also paid petitioner the full catalog price, or equivalent thereof, for the CSD parts purchased from petitioner in 1977 and 1978. Dr. Baumol did not propound these sales between petitioner and Lucas or petitioner and Teijin as comparable sales to sales between petitioner and SunPac nor does the record contain more than this sketchy information regarding the Lucas/Teijin purchases. Therefore, we are unable to sufficiently evaluate the similarities and differences between these transactions to determine whether any adjustments to the prices paid by Lucas or Teijin would [**251] be needed to reflect any differing property and circumstances. See *Edwards v. Commissioner, supra.* Consequently, we cannot use the Lucas/Teijin purchases from petitioner as uncontrolled comparables to the sales between petitioner and SunPac. Thus, based on the available record, we conclude that the comparable-uncontrolled-price method of *section 1.482-2(e), Income Tax Regs.*, is not applicable to the transactions involved in this case.

Neither party argues the applicability of the resale-price method in this case nor does the record contain sufficient information upon which we could make a determination under that method. We, therefore, cannot analyze the resale-price method here. We will now analyze the applicability of the cost-plus method.

2. *The Cost-Plus Method*

Under the cost-plus method, an arm's-length price is determined by adding to the seller's cost of producing the property involved in the controlled sale the gross profit percentage (expressed as a percentage of cost) earned on the

[*367] uncontrolled sale or sales of property most similar to the controlled sales in question. Sec. 1.482-2(e)(4)(i) and (iii), Income Tax Regs. The [**252] cost of producing the property involved in the controlled sale, and the costs which enter into the computation of the gross profit percentage, must be computed in a consistent manner in accordance with sound accounting practices for allocating or apportioning costs, which neither favors nor burdens controlled sales in comparison with uncontrolled sales. *Sec. 1.482-2(e)(4)(ii), Income Tax Regs.*

Whenever possible, gross profit percentages should be derived from uncontrolled sales made by the seller involved in the controlled sales, because similar characteristics are more likely to be found among sales by the same seller than among sales made by other sellers. *Sec. 1.482-2(e)(4)(iv), Income Tax Regs.* Where the most similar sale or sales from which the appropriate gross profit percentage is derived differ in any material respect from the controlled sales (i.e., differences which have a definite and reasonably ascertainable effect on price), the arm's-length price must be adjusted to reflect the differences to the extent the differences would warrant an adjustment of price in uncontrolled transactions. *Sec. 1.482-2(e)(4)(v), Income Tax Regs.*

Section 1.482-2(e)(4)(iii), Income Tax [**253] *Regs.*, designates the following characteristics as the most important in determining the similarity of the uncontrolled sale or sales:

(a) The type of property involved in the sales. For example: machine tools, men's furnishings, small household appliances.

(b) The functions performed by the seller with respect to the property sold. For example: contract manufacturing, product assembly, selling activity, processing, servicing, delivering.

(c) The effect of any intangible property used by the seller in connection with the property sold. For example: patents, trademarks, trade names.

(d) The geographic market in which the functions are performed by the seller.

In general, the similarity to be sought relates to the probable effect upon the margin of gross profit of any differences in such characteristics between the uncontrolled sales and the controlled sale. Thus, close physical similarity of the property involved in the sales compared is not required under the cost plus method since a lack of close physical similarity is not necessarily indicative of dissimilar profit margins. * * *

[*368] As a result of his analysis of SunPac and petitioner, Mr. Marek (the IRS industry economist) [**254] concluded that SunPac functioned as a subcontractor in its relationship with petitioner. Mr. Marek then sought comparable companies to determine the appropriate gross profit percentage to apply to SunPac's cost of producing the SunPac parts. He located four publicly held subcontractors that fabricate precision machined parts for jet engine manufacturers which he felt were acceptable comparables (hereinafter sometimes referred to as the comparable firms).

For purposes of computing the section **482** adjustment under the cost-plus method, relying on information provided by Mr. Marek regarding the comparable firms, Agent Pierson allowed SunPac a gross profit margin of 28 percent (equivalent to a markup of cost plus 38 percent). He did not increase SunPac's cost base by any amount to reflect location savings attributable to SunPac's manufacturing its products in Singapore rather than in the United States.

Respondent contends that, in arriving at his determination to use the cost-plus method to reallocate income to petitioner, Agent Pierson and Mr. Marek properly rejected the comparable-uncontrolled-price method because, among other things, the rights transferred, products involved, and [**255] circumstances which were the subject of petitioner's other licenses and agreements were too dissimilar to the petitioner-SunPac transactions. Respondent further contends that Mr. Marek found the resale price method inapplicable because there was no available information regarding comparable sales. Respondent argues that Mr. Marek conducted an exhaustive review of similar business enterprises in making his choice of the comparable companies and respondent's agents reviewed the business practice of operations in the aviation component industry together with petitioner's own procedures in arriving at their conclusion. Moreover, respondent contends, the record contains information revealing the gross margin percentage. Therefore, respondent argues, petitioner has not proved that respondent's determination is arbitrary, capricious, or unreasonable and respondent's section **482** determination must be sustained.

[*369] As discussed above, petitioner advocates use of the comparable-uncontrolled-price method. Petitioner further does not agree with the calculation of respondent's adjustment under the cost-plus method. Petitioner contends that SunPac realized location savings from operating [**256] in Singapore which, since SunPac enjoyed a monopolistic position in relation to CSD spare parts, SunPac would not have passed on to its customers. Thus, petitioner argues, as an economic matter, the location savings must be allocated solely to SunPac. Petitioner argues further that the record clearly demonstrates that both the form and the substance of the relationship between petitioner and SunPac was not contractor/subcontractor, but licensor/licensee. We agree with petitioner.

Agent Pierson did not make an independent analysis of location savings. As he explained it: "So just without getting into severe details, I made a judgment there were no significant labor or location savings. I would have gladly gone into it in great depth had I been given the information." We are unwilling to accept Agent Pierson's "eyeballing" methodology as sufficient proof that SunPac enjoyed no location savings.

Dr. Lynk, respondent's economic expert, also opined that SunPac had relatively higher manufacturing costs than did non-SunPac sources, which suggested to him that there were no significant cost savings from SunPac's operating in Singapore. In arriving at his determination, Dr. Lynk compared [**257] petitioner's operations at long-established CSD facilities to the fledgling SunPac facility. We previously concluded that the appropriate comparison for location savings, at least under the unusual circumstances involved in this case, should be between SunPac and a comparable facility with similar operational experiences (i.e., a similar, new CSD facility). Therefore, Dr. Lynk's comparison of costs for producing CSD parts between SunPac and petitioner's then-existing CSD facilities is not determinative of location savings from operating in Singapore.

Petitioner introduced expert testimony to establish that SunPac enjoyed a substantial savings from locating its CSD facility in Singapore. Respondent questions the accuracy of some of the figures propounded by Arthur Andersen but

[*370] suggests no alternative amounts. We are satisfied from the record here that SunPac enjoyed some location savings from operating in Singapore (we are convinced that the substantially lower labor costs in Singapore would eliminate the total dissavings from locating there). Since we find the cost-plus method also inapplicable, see *infra*, the exact amount of net location savings is immaterial. [**258] Consequently we find it unnecessary and unproductive to quantify here those location savings.

We also discussed earlier why we disagree with respondent's position that SunPac acted as a subcontractor for the production of CSD spare parts. Since the comparable companies all acted as subcontractors to other prime contractors, we cannot conclude that the aerospace product sales of these companies are sufficiently similar to SunPac's sales to petitioner to derive the appropriate gross profit percentage. Moreover, the record does not contain sufficient information for us to determine what differences in the uncontrolled and controlled sales warrant adjustments to the arm's-length price or whether the costs of producing the property involved in the uncontrolled sales or the costs which entered into the computation of the gross profit percentage calculated by respondent were computed in a consistent manner as the costs of producing the SunPac parts. (We note that, on questioning, Mr. Marek was unable to reconcile his computations to the Forms 10-K for the comparable firms nor could we do so.) Consequently, for purposes of applying the cost-plus method we decline to find comparable the [**259] companies identified by Mr. Marek. The record fails to provide other information from which we can determine independently a gross profit percentage to be applied to the costs of producing the SunPac parts. Therefore, we conclude that the cost-plus method is not applicable here.

3. *The Four Methods Proposed by Dr. Lynk*

Respondent argues in the alternative that, should we find his determination contained in the notice of deficiency to be arbitrary or unreasonable, then the evidence supports the reallocation of income between petitioner and SunPac consistent with the expert testimony of Dr. Lynk. Petitioner contends, on the other hand, that not one of Dr. Lynk's

[*371] four methods supports respondent's income allocations. Petitioner argues that Dr. Lynk's methods are based on material factual errors, indefensible and discredited economic theories, unwarranted statistical techniques, and illogical and unsupported factual assumptions, and are without legal support under the relevant regulations. We agree with petitioner.

At the outset we would like to note that we found Dr. Lynk unresponsive, evasive, and equivocal on examination; he was not a credible witness. In addition, [**260] Dr. Lynk's report totally ignores the arm's-length agreements between petitioner and its third-party licensees; it is result-oriented and founded on questionable or erroneous assumptions. Therefore, we give his opinion testimony little weight.

In his first method, Dr. Lynk compares the margins that petitioner earned in 1977 and 1978 on the sale of CSD spare parts obtained from both SunPac and from non-SunPac sources -- primarily parts manufactured by petitioner itself -- to determine whether petitioner earned as much on the parts that it obtained from SunPac as it earned on parts obtained from non-SunPac sources. This method ignores the fact, as we have found, that for all practical purposes petitioner operated at full capacity during the years in issue and dual sourced many CSD parts produced by SunPac. Dr. Lynk himself indicates in his report that these two factors are exceptions to the general rule that a company will seek out the cheapest source. Also, to the extent he compares SunPac operations to unrelated manufacturers, there is no evidence that the unrelated manufacturers are comparable to SunPac. To the extent Dr. Lynk compares SunPac operations to petitioner's operations, [**261] he compares the incomparable -- i.e., a new CSD facility to mature CSD facilities. We previously have found that, because of the complexity of manufacturing CSD parts and the resulting long period needed by the workers to master their production, it was inappropriate to compare the costs to produce CSD parts incurred by a new facility to the costs incurred by an existing facility. Futhermore, Dr. Lynk describes his first method as having certain similarities to the resale price method. See *sec. 1.482-2(e)(3), Income Tax Regs.* Recently, in *Eli Lilly & Co. v. Commissioner, 84 T.C. at 1142-1145,* we

[*372] found that internal transactions of the reseller cannot be used to determine the "appropriate mark-up" for purposes of applying the resale price method. We believe such use is equally inapplicable here. Consequently, we do not agree with respondent that method one is an acceptable alternative method for deriving an arm's-length price for the SunPac parts.

For his second method, a subset of method one, Dr. Lynk identifies eight parts petitioner purchased in 1978 in essentially finished form from both SunPac and certain unrelated manufacturers. [**262] Dr. Lynk compares the margins petitioner earned on the eight parts purchased from the unrelated manufacturers to the margins petitioner earned on parts purchased from SunPac. Dr. Lynk describes method two as essentially a comparable-uncontrolled-sales method. See *sec. 1.482-2(e)(2), Income Tax Regs.* Dr. Lynk's report shows a 44.58-percent difference in petitioner's average margins for these eight parts between the parts purchased from SunPac (7.52 percent) and the parts purchased from the third-party manufacturers (52.10 percent). At face value, this wide disparity strongly suggests to us that the transfer price for the SunPac parts was not an arm's-length consideration. Yet, unbelievably, the record is devoid of any information about these third-party manufacturers and the facts and circumstances surrounding petitioner's purchase of these eight parts from them; therefore, we cannot determine from this record whether the unrelated third-party manufacturers are comparable to SunPac. Consequently, we also reject method two as an acceptable alternative method.

In the third method, Dr. Lynk compares the manufacturing profit margins that SunPac earned in 1977 and 1978 to the margins [**263] earned during the same period by certain purportedly unrelated firms which he found were (or had a division which was) comparable to SunPac. Dr. Lynk describes this method as essentially a cost-plus study. See *sec. 1.482-2(e)(4), Income Tax Regs.* The record does not provide sufficient information for us to determine whether product sales of the companies used by Dr. Lynk as comparables are sufficiently similar to SunPac's sales to petitioner to derive an appropriate gross profit percentage. Nor does the record contain sufficient information for us to

[*373] determine what differences in the SunPac parts sales and the sales of these other companies warrant adjustments to the arm's-length price or whether the costs of producing the property involved in the uncontrolled sales or the costs which entered into the computation of the gross profit percentage calculated by Dr. Lynk were computed in a manner consistent with the manner used to calculate the costs of producing the SunPac parts. Therefore, we reject use of Dr. Lynk's method three for determining an arm's-length price for the SunPac parts.

As for his method four, Dr. Lynk compares the rate of return on assets earned by [**264] SunPac as calculated by Dr. Lynk to a "competitive" rate of return as determined by Dr. Lynk. Dr. Lynk then examines SunPac's financial performance to estimate the percentage reduction in the transfer price that would give SunPac a "normal" rate of return on capital. Dr. Lynk describes this method as an alternative fourth method. See *sec. 1.482-2(e)(1)(iii), Income Tax Regs.* We do not agree, under the circumstances present here, that Dr. Lynk's method four is an acceptable method for determining an arm's-length price for SunPac parts. Method four starts with the premise that SunPac's rate of return is unusually high. The only explanation Dr. Lynk considers for this seemingly "high" rate of return is the transfer price for the SunPac parts. Dr. Lynk's method four does not adjust SunPac's rate of return for the effect of location savings or the tax holidays granted SunPac by the Republic of Singapore. Dr. Lynk also does not adjust for the increased risk of operating in Singapore. We are not satisfied, from this record, that Dr. Lynk's "normal" rate of return approximates in any way the proper rate of return for a company such as SunPac or even that it is an acceptable criterion [**265] upon which to determine an arms's-length price for SunPac parts. Thus, we decline to use it here in determining the transfer price for SunPac parts.

Consequently, we cannot agree with respondent that any of Dr. Lynk's four methods supports his reallocation of income between petitioner and SunPac. Therefore, we must look to another appropriate method, or variations of such methods, for determining an arm's-length consideration for the SunPac parts. *Sec. 1.482-2(e)(1)(iii), Income Tax Regs.*

[*374] 4. *The Court's Determination of the Arm's-Length Consideration for the SunPac Parts*

Before we begin, we must say that our attempt to determine an appropriate arm's-length price for the SunPac parts to a large extent has been stymied by the poor state of the record in this case. We found the record to be one more of obfuscation than of englightenment. The complexity of our task was exacerbated by the contentiousness of the parties. They at times seemed to be antagonists rather than adversaries.

The problems with the record began even in the examination stage when petitioner, for whatever ill-conceived reasons of its own, decided to stop cooperating with respondent's agents, and [**266] thereafter refused to furnish any additional information to the revenue agents. Petitioner, therefore, from the beginning hampered respondent's attempts to determine the true taxable income of the related parties. Considering the complex nature of cases such as this, petitioner thereby put respondent at an extreme disadvantage.

After petitioner filed the petition, there followed a long and protracted period during which both sides repeatedly sought our intervention on matters which we believe the parties could have, and should have, resolved between themselves. Some of the difficulties the parties encountered during the discovery phase of the proceeding could have been avoided had respondent focused upon a viable theory of the case early on in the proceedings. (In fact, respondent waited until the briefing stage to propound his new services theory, a time which we have held was much too late, see *supra*.) Petitioner unnecessarily complicated matters by seemingly complying with our informal discovery directions and formal discovery orders strictly on terms of what it wanted to produce and not what respondent sought.

Consequently, we have labored through over 2,000 pages of testimony, [**267] hundreds of stipulations and exhibits, and nearly 2,000 proposed findings of fact (most of which were objected to by the adversary) to find the facts, many of which we believe could have been stipulated to before the trial with a little more effort by counsel. We regret to say, but feel we must, that we found the record inundated with

[*375] an inordinate amount of useless information while other important information is nowhere to be found. It is obvious to us that we were too tolerant with the parties during the pretrial proceedings.

However, we must determine the appropriate arm's-length consideration for the SunPac parts on the record before us. Our task was not easy but we have shouldered the yoke, and the parties now must reap what they have sowed.

As we discussed above, some of the SunPac parts involved in this case were unfinished parts; some were used internally by petitioner; and some were resold to airline customers or overhaul centers. Petitioner, however, employed only one method to value all of the SunPac parts (i.e., catalog price, less 15 percent).

After scrutinizing the record, we believe that, ideally, different pricing methods should have been used to price [**268] the various categories of parts. Unfinished parts could have been priced possibly using the cost-plus method; finished parts could have been priced separately under possibly the comparable-uncontrolled-price method or the resale price method depending on whether the parts were to be sold to airline customers and overhaul centers or used internally by petitioner. Of course, the appropriate method to use would depend on the availability of information regarding comparable companies and what adjustments, if any, would be needed to determine a reasonable arm's-length price.

The record does not contain sufficient information for us to make a determination in the above manner nor is it likely that the necessary records for this type of determination are even available. Nonetheless, we must make a determination; therefore, we have made our own best estimate as to the appropriate transfer price on the basis of the available record under the principles of *Cohan v. Commissioner, 39 F.2d 540 (2d Cir. 1930).*

We hold that for 1977 and 1978 the arm's-length consideration for SunPac parts is the applicable catalog price, less a discount of 20 percent. In arriving [**269] at this discount rate we have relied heavily on certain sales and/or distribution agreements petitioner had with unrelated third parties and on certain representations petitioner made to the U.S. Customs Service.

[*376] We believe that under the circumstances here, as revealed in this record, petitioner's catalog prices for spare parts are the appropriate starting point for establishing an arm's-length consideration for the SunPac parts. The record shows that generally petitioner sold its CSD spare parts to all unrelated purchasers, including its licensees Lucas and Teijin, at the catalog price, without any discount. However, petitioner did have some history of granting discounts for some of its aerospace products.

For example, on several occasions, petitioner entered into distribution agreements with various firms relating to the distribution by these firms of certain aerospace products manufactured by petitioner. Petitioner paid these firms commissions, or gave them discounts, ranging from 5 percent (Mikuni, Pesco Products) to 20 percent (Avio-Diepen, spare parts for Pesco Products; Standard Aircraft, spare parts for Pesco Products; and Hawker De Havilland, spare parts for [**270] Pesco Products).

Moreover, in 1978, SABENA agreed to distribute CSD spare parts for SunPac and petitioner for a commission ranging from 10 to 4 percent, depending on volume of sales. SABENA agreed to pay SunPac (or petitioner, as appropriate) the current catalog price for the spare parts. SABENA, however, as one of petitioner's ten largest customers, could be expected to use many of these spare parts itself, thereby, in effect, receiving a discount from the catalog price on its own acquisitions.

Furthermore, since petitioner had to resell the SunPac parts at the catalog price to its own customers, the spare parts list prices establish the outermost boundary for the prices petitioner would be willing to pay an unrelated third party. We believe that petitioner would demand a discount rate from the catalog price from an unrelated third party which would allow petitioner to recover its costs and give it a reasonable profit.

In early 1976 petitioner represented to the U.S. Customs Service that petitioner estimated its costs to act as a distributor of the SunPac parts would range between 9.5 percent and 13.5 percent of the catalog prices. This determination does not take into account [**271] internal use of the SunPac parts, the costs of defective or unfinished parts, or

[*377] the cost of inspecting the parts until SunPac received its FAA PMA certification.

Petitioner contends that there would be no effect on profitability whether the parts are used internally or sold as spare parts. This argument may be correct if SunPac and petitioner are treated as one entity; however, we are not convinced that under a separate entity approach, which is appropriate here, the results would be the same.

We believe that, had petitioner purchased the SunPac parts from an unrelated third party, it would have taken into account the use to which the parts would be placed. We also believe that petitioner would have taken into account the extent of any additional work needed on the parts, including inspecting and further processing.

Petitioner also made representations to U.S. Customs regarding direct and indirect experience with other distributors of aircraft/aircraft engine component parts indicating discounts off catalog ranging from 50 percent to 10 percent. The common discount rate for these distributors appears to be 20 percent.

Petitioner's management employees who testified at [**272] the trial regarding the transfer price issue impressed us as astute businessmen. Around the time that these men arrived at the 15-percent discount rate for SunPac parts, they estimated petitioner's costs to distribute the parts to be between 9.5 percent and 13.5 percent. In February 1977, petitioner examined its costs to distribute parts as spare parts only. Petitioner concluded then that there was no need to change its pricing system for SunPac parts. Therefore, we believe that, had SunPac been an unrelated manufacturer, petitioner would not have accepted a discount rate of less than 15 percent for the finished parts it would resell.

At this time, however, petitioner anticipated it would use approximately 50 percent of the SunPac parts internally. It also knew that some of the parts would be unfinished. Other distributors of aerospace parts commonly received a discount off catalog of at least 20 percent. Those aerospace products presumably were finished parts only. In 1976, when petitioner and SunPac entered into the distributor agreement, SunPac did not have its own FCC PMA certification.

[*378] Therefore, it had no prospect of selling the SunPac parts directly to airline [**273] customers or overhaul centers in the near future. Consequently, considering these circumstances, we believe that, had SunPac been unrelated to petitioner, petitioner would have demanded, and SunPac would have agreed to give, a discount at least equal to the 20-percent discount petitioner gave to Standard Aircraft and Avio-Diepen for finished Pesco spare parts. Consequently, we find that a discount rate of 20 percent is appropriate here.

We also believe, and petitioner now concedes, see our findings of fact, *supra*, that in an arm's-length transaction, petitioner would have charged SunPac the cost of completing unfinished and reworked parts and would have charged back the cost of the rejected parts. We find that these costs also must be allocated to petitioner as part of the section **482** transfer price adjustment.

We now turn to the royalty income issue.

C. *Royalty Income Determination*

On July 15, 1975, petitioner and SunPac entered into the SunPac license agreement under which petitioner gave SunPac the exclusive right and license to use petitioner's industrial property rights for the manufacture of products in Singapore; the nonexclusive right and license to sell the products [**274] in any country of the world; the nonexclusive right to use the products, including the right for SunPac's customers to use the products in any country of the world; the right for SunPac to subcontract in Singapore to third parties the partial manufacture of the products; and the authorization for SunPac's use of petitioner's trademarks which petitioner normally used in the sale of similar products. Petitioner also agreed to furnish copies of existing industrial property rights used by petitioner in the manufacture of the products and to give SunPac reasonable technical assistance for the startup of SunPac's manufacture of the products.

In exchange, under the SunPac license agreement as originally enacted, SunPac agreed to pay to petitioner in consideration of petitioner's industrial property rights licensed to SunPac as well as all assistance rendered to SunPac a royalty fee of 2 percent of the net selling price of

[*379] each product manufactured and sold by SunPac. SunPac agreed to pay this 2-percent royalty fee until the cumulative total of royalties paid was equal to the original costs of petitioner's development design and engineering of the industrial property rights plus [**275] the cost of all assistance rendered to SunPac by petitioner.

According to the SunPac license agreement, the parties intended that the original cost of development design, engineering, and petitioner's assistance costs would be liquidated by the 2-percent royalty payments within 8 years. The SunPac license agreement further provided that the parties would amend the SunPac license agreement to increase the royalty fee, or if necessary the term of the SunPac license agreement, if it appeared that the 2-percent royalty fee would not be sufficient within that time to equal the cost of development design, engineering, and assistance costs. Nonetheless, SunPac agreed to pay petitioner at the end of the 8 years the full unliquidated balance of the applicable development design, engineering, and assistance costs not liquidated already by the royalty fee obligations. SunPac also agreed to pay petitioner $ 1,000 within 12 months after the date of the SunPac license agreement in consideration of the right to use petitioner's trademark.

On May 1, 1979, SunPac and petitioner amended the SunPac license agreement whereby, in addition to the 2-percent royalty payment which was to continue for the [**276] life of the SunPac license agreement, SunPac agreed to pay petitioner for each product sold on or after July 1, 1977, a fee of 1.1 percent of the net selling price to reimburse petitioner for any technical assistance rendered to SunPac outside of Singapore, and a fee of 1.9 percent of the net selling price to reimburse petitioner for any technical assistance rendered to SunPac in Singapore. Both the 1.1-percent and the 1.9-percent fees would cease once the applicable assistance costs were paid in full. SunPac further agreed to adjust the applicable percentage rate if it appeared the assistance costs would not be repaid in full within 8 years. Nonetheless, SunPac agreed to pay in full any remaining unreimbursed assistance costs at the end of 8 years.

[*380] On examination, respondent determined that for the years in issue SunPac was functionally equivalent to a subcontractor and, therefore, need not compensate petitioner with royalty payments. Instead, respondent determined that petitioner should be compensated totally through the intercompany pricing of SunPac's output. In the notice of deficiency respondent, therefore, decreased petitioner's income by the amount of the royalty [**277] fees petitioner included in income from SunPac for 1977 and 1978.

We determined earlier that respondent abused his discretion by treating SunPac as a subcontractor of petitioner and that the transfer price and royalty issues must be examined separately. We must now, therefore, determine an arm's-length consideration for the intangible property SunPac acquired from petitioner.

Section 1.482-2(d), Income Tax Regs., provides a framework for determining an arm's-length consideration for the transfer, sale, assignment, loan, or other use of intangible property or an interest therein between related entities. "Arm's-length consideration" is specifically defined as "the amount that would have been paid by an unrelated party for the same intangible property under the same circumstances." *Sec. 1.482-2(d)(2)(ii), Income Tax Regs.* The best indications of such arm's-length consideration is the amount actually paid by unrelated parties for the same or similar intangible property under the same or similar circumstances. *Sec. 1.482-2(d)(2)(ii), Income Tax Regs.*

Intangible property is defined to include patents, inventions, formulas, processes, designs, patterns, trademarks, trade names, licenses, [**278] methods, programs, systems, procedures, customer lists, and technical data. Sec. 1.482-2(d)(3)(ii)(a), (c), (d), (e), Income Tax Regs. We, therefore, will apply *section 1.482-2(d), Income Tax Regs.*, in determining an arm's-length consideration for the intangible property SunPac received under the SunPac license agreement.

At trial, primarily through the expert testimony of Dr. Lynk, respondent focused solely upon establishing a transfer price for the SunPac parts. Respondent states on brief, however, that Dr. Lynk's conclusions would not be altered if his focus were shifted to a royalty. Since we have found none of Dr. Lynk's four methods acceptable, however, they

[*381] do not help us determine an arm's-length consideration for the property involved here.

Petitioner argues that certain of its third-party licensing agreements are comparable transactions to the SunPac license agreement. According to petitioner, at the time it entered into the SunPac license agreement with SunPac, the CSD industry recognized a 6.5-percent royalty as the "standard of the airways," the "going rate," and the market price for rights broader than those transferred to SunPac. Petitioner claims, moreover, [**279] that, in fact, it traded away to Lucas and Teijin in exchange for 2-percent and 3-percent royalties, respectively, the exact rights granted to SunPac (worldwide spare parts licenses) for a 2-percent royalty.

According to petitioner, viewed objectively, these arm's-length transactions strongly suggest that a 2-percent royalty is the standard against which petitioner's transactions with SunPac must be judged. Petitioner contends further that its intercompany transactions withstand the rigors of arm's-length scrutiny even when tested, as suggested by Dr. Baumol, against the 8.5-percent Concorde royalty -- a royalty for rights broader than those granted to SunPac and higher than the established 6.5-percent market price for CSD technology. Thus, petitioner argues, there can be no doubt regarding the arm's-length nature of petitioner's relationship with SunPac.

Respondent argues, on the other hand, that a review of the facts and circumstances surrounding the petitioner's licensees in Great Britain, Japan, Germany, Israel, and the Soviet Union clearly demonstrates that these arrangements did not contain or reflect "physical property and circumstances" identical to the SunPac license agreement. [**280] Differences noted by respondent are as follows:

(1) Under the SunPac license agreement, petitioner conveyed to SunPac the right to manufacture selected CSD parts (limited to the manufacture of spare parts only) for commercial aircraft usage. Under the third-party license arrangements, however, petitioner granted to the third-party licensees technical data respecting engineering design, manufacture, assembly, testing, inspection, and servicing of CSD units for aircraft, guided missiles, and other aviation products.

[*382] (2) Under the SunPac license agreement, petitioner gave SunPac a nonexclusive right to sell and use the SunPac parts worldwide. Petitioner's agreements with Lucas, Teijin, Siemens, IAI, and Licensintorg, however, all contained very specific limitations as to the CSD models licensed and the territory of sales.

(3) The cost of all the technical assistance provided by petitioner to SunPac was to be recovered as a part of the "royalty" payments under the SunPac license agreement. Petitioner's agreements with third-party licensees required the licensee to bear the costs of technical assistance.

(4) Payments under the SunPac license agreement were to cease after [**281] 8 years. Under the third-party license arrangements, petitioner commonly required the licensees to pay a substantial lump-sum payment in addition to royalty payments on the sale of CSD's beyond the initial startup fee.

According to respondent, petitioner and its third-party licensees were dealing with entirely different property rights under the third-party licensing arrangements than were petitioner and SunPac. Thus, respondent argues, the purpose of the royalty payments under the third-party licenses was to obtain a return to petitioner for the use of its technology, not a reimbursement or chargeback for technical assistance or other costs rendered by petitioner as in the arrangement with SunPac.

Respondent argues further that the circumstances surrounding the transfer of petitioner's technology to third-party licensees was totally incomparable to the SunPac license agreement. According to respondent, the negotiations between petitioner and a prospective licensee were initiated generally by the requirement of a licensee to manufacture aircraft components for military purposes while SunPac parts were to be sold only in commercial programs.

Respondent contends further that, in the [**282] third-party license arrangements, petitioner bargained in respect to markets which it otherwise could not or was not willing to supply. SunPac, on the other hand, was to manufacture piece parts for petitioner's customers who, during the early 1970s, were part of petitioner's world market and an established part of petitioner's profit base. Therefore, respondent

[*383] argues, petitioner was virtually giving away a market which it had worked to acquire through nearly 30 years of engineering commitment and effort.

Petitioner contends that the regulations unambiguously provide that the uncontrolled transfers for purposes of *section 1.482-2(d), Income Tax Regs.*, need not involve identical property and circumstances -- they need involve only similar property and similar circumstances. Relying on *United States Steel Corp. v. Commissioner, 617 F.2d 942, 951 (2d Cir. 1980),* revg. a Memorandum Opinion of this Court, petitioner argues that the standard is one of reasonableness: that the regulations require only a "sufficiently similar" uncontrolled transfer. Although the *United States Steel* case involved services (transportation of iron ore) provided [**283] by a foreign subsidiary to United States Steel and, hence, the regulation involved was *section 1.482-2(b), Income Tax Regs.*, we agree with petitioner as to the standard to be applied. In fact, *section 1.482-2(d)(2)(iii), Income Tax Regs.*, specifically provides that the comparable transaction need be only a "sufficiently similar transaction involving an unrelated party." See *Ciba-Geigy Corp. v. Commissioner, 85 T.C. 172 (1985).* Unfortunately, the regulations do not identify criteria upon which to determine whether one transaction is "sufficiently similar" to another.

We, therefore, must determine under the facts and circumstances revealed here whether the record contains a transaction involving an unrelated party sufficiently similar to the SunPac license agreement. Petitioner first proposes the sunset royalty provisions in the Lucas 1970 general license or the Teijin license as such a transaction.

1. *The Sunset Royalty Provisions in the Lucas 1970 General License or the Teijin License*

According to petitioner, at the time that the 2-percent royalty rate was derived, the experienced operations personnel who determined that rate had concluded that [**284] petitioner's licenses which utilized the standard 6.5-percent rate were the most comparable unrelated licenses. They concluded, however, that an intercompany royalty of 2 percent was justified because the standard 6.5-percent rate represented compensation to petitioner for (a) transferring a

[*384] greater bundle of technology and market rights and (b) bearing a greater risk of the licensee's potential competition. Furthermore, the 2-percent sunset royalty provision in the 1970 general license demonstrated that a royalty rate less than 6.5 percent was justified for the transfer of static technology even if the licensee received worldwide market rights to such technology.

Respondent argues that petitioner fails to consider the background of the 2-percent sunset provision in interpreting petitioner's agreements with Lucas. According to respondent, the 2-percent sunset royalty provision, in part, was a realization by petitioner that Lucas must be permitted to supply follow-on products to CSD units it manufactured, which predominantly were modifications of, not exact replicas of, petitioner's CSD models. Respondent contends further that through a "side letter" agreement, petitioner [**285] effectively negated 70 percent of the sales which might otherwise come under the sunset royalty provision of the 1970 general license.

Respondent also argues that the sunset royalty provision was extremely limited since, to invoke the provision, Lucas had to give notice at least 5 years before expiration of the license arrangement; it was inapplicable if Lucas breached the licensing agreement; and there is no evidence that Lucas could have developed a petitioner CSD or the associated parts absent the use of petitioner's patented technical information. Respondent argues further that the SunPac license agreement did not involve static technology and the evidence establishes that CSD units or their associated spare parts are not interchangeable (and, thus, a Lucas-produced part, even one utilizing petitioner technology, could not be placed in a petitioner-produced CSD unit).

Petitioner contends that the sunset royalty provision applies to all CSD technology extended to Lucas and Teijin since petitioner's CSD was not patented. According to petitioner, the sunset royalty provision allowed petitioner's licensees, who had complete access under the in-bed licenses n63 to all of petitioner's [**286] CSD technology, including both units and parts, for all programs past, present and future,

[*385] to compete with petitioner on all programs anywhere in the world for both units and parts, for both new and old programs. SunPac, in contrast, received the right to compete worldwide on a limited number of programs with respect to a limited number of parts.

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n63 Petitioner uses the term "in-bed license" to refer to a license covering the whole hydraulic CSD technique both at the time of licensing and as it evolves in the future.

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Even petitioner's own expert does not advance the 2-percent sunset royalty provision as sufficiently similar to the SunPac license agreement. Nor do we accept either the Lucas sunset royalty provision or the Teijin sunset royalty provision as sufficiently similar in property or circumstances to the SunPac license agreement.

The sunset royalty provision in Lucas' 1970 general license gave Lucas the nonexclusive right to use worldwide all unpatented technical information and data supplied by petitioner [**287] during the term of the licensing agreement for a royalty of 2 percent for 15 years following the termination by notice of the 1970 general license. Upon termination of the Teijin license for reasons other than default or breach by Teijin, Teijin had the right to use any of petitioner's unpatented technology pertaining to CSD's transferred under the Teijin license in exchange for payment for 10 years of a royalty of 3 percent of the net selling price. The SunPac license agreement, however, among other things, gives SunPac the exclusive right to use all manufacturing information, designs, engineering drawings, specifications, and patents owned or controlled by petitioner for the manufacture in Singapore of SunPac parts and the nonexclusive right to sell and use the SunPac parts throughout the world. Under the SunPac license agreement, SunPac has continuous access to any improvements in the manufacturing process. Thus, the sunset royalty provisions apply to unpatented technology already in the licensee's possession at the time the license ends while the SunPac license agreement applies to a broader range of property including patents and future technology and know-how.

Petitioner [**288] argues on brief that its CSD was not patented; the record, however, shows that petitioner held some patents relating to the manufacturing process for CSD's. Petitioner has introduced no evidence to establish that those patents were valueless at the time the parties entered into the applicable licensing agreements. Therefore, we are

[*386] not convinced that petitioner would not have required unrelated third parties to compensate it for use of these patents.

Moreover, petitioner itself acknowledges that "the real value of a license for [petitioner's] CSD technology lay not in static technology, albeit complete, frozen in time, but rather in the continuing design and development rights provided under the In-Bed licenses." Manufacturing know-how, obviously, is an invaluable intangible in the manufacture of CSD parts. The SunPac license agreement gives SunPac continuing access to improvements in the manufacturing process; the sunset royalty provisions do not. We are convinced that petitioner would not sell cheaply to an unrelated third party the right to this intangible property.

Furthermore, we are convinced that the Lucas or Teijin sunset royalty provisions do not include any [**289] compensation for the marketing intangibles which are included in the SunPac license transaction. When an airline company purchases an airplane, the CSD is supplier-furnished equipment; therefore, the airline has no choice in the selection of the CSD. An airline would have to modify the entire engine to change the selection of the CSD, a costly undertaking. Thus, once an airframe manufacturer selects petitioner's CSD unit for an aircraft, petitioner is virtually assured of the spare unit and spare parts market for the life of the airframe program, often for as long as 20 years. Under the sunset royalty provisions, Lucas and Teijin could be expected to sell CSD spare units and spare parts to the customers they developed through their own marketing efforts. Under the SunPac license agreement, petitioner gives SunPac the right to manufacture and sell spare parts for CSD units manufactured and sold by petitioner. Thus, in the SunPac license agreement, in essence, petitioner gave SunPac a portion of the spare parts market which for all intents and purposes already belonged exclusively to petitioner. We are not convinced that Lucas or Teijin would have succeeded in penetrating this [**290] market had they elected to operate under the applicable sunset royalty provision. We are convinced, however, that petitioner would have required an unrelated third party to compensate it dearly for this marketing intangible.

[*387] Therefore, we cannot agree with petitioner that the sunset royalty provision relates to the same or similar intangible property under the same or similar circumstances as the SunPac license agreement. We find that neither the Lucas nor the Teijin sunset royalty provision is sufficiently similar to the SunPac license agreement and, thus, we refuse to rely on either provision as evidence of an arm's-length consideration for the intangibles licensed to SunPac.

Since we find the sunset royalty provisions incomparable to the SunPac license agreement, we need not address respondent's other arguments relating to the differences between the two licensing arrangements.

Petitioner next proposes the 1970 Concorde license as a sufficiently similar transaction to the SunPac license agreement.

2. *The 1970 Concorde License Royalty*

Dr. Baumol found the 1970 Concorde license to be an independent unrelated transaction against which to evaluate the arm's-length dealings [**291] between SunPac and petitioner relating to the royalty fee arrangement. According to Dr. Baumol, the Concorde license relates to broader rights than those extended to SunPac since the SunPac license agreement gave SunPac the technology to manufacture only a limited number of specific parts while the 1970 Concorde license gave Lucas the complete technology to manufacture parts and units. Nevertheless, Dr. Baumol concluded that the terms of the 1970 Concorde license indicate that a royalty of 8.5 percent of all sales represents an arm's-length payment for the use of technology and related intangible property under circumstances, in terms of property, rights, market, and timing, very closely analogous to the SunPac license agreement. Dr. Baumol does not explain further why he considers the property, rights, market, or timing sufficiently similar to the SunPac license agreement.

Respondent naturally does not agree with Dr. Baumol that this Lucas license provides a comparable, uncontrolled transaction against which to measure the SunPac license agreement. According to respondent, Dr. Baumol did not consider the impact created by Government involvement in the Lucas contracting arrangements [**292] and the interrelationship

[*388] of "side letter"/other agreements in evaluating the compensation stated in the Lucas licenses and, further, he overlooked the significantly greater risks Lucas faced in establishing a facility/manufacturing commitment and producing and marketing a CSD unit, which were required before Lucas could sell spare parts under its licenses compared to the risks SunPac assumed. With due deference to Dr. Baumol, whom we found to be highly qualified and impressive, we agree with respondent, but not necessarily for the same reasons, that the 8.5-percent royalty rate provision in the 1970 Concorde license agreement was not granted under circumstances, nor does it involve property, sufficiently similar to the SunPac license agreement.

The 1970 Concorde license generally gives Lucas the right to manufacture in the United Kingdom Concorde CSD OEM units, spare units, and spare parts and to sell those OEM units, spare units, and/or spare parts throughout the world. In addition, it generally gives Auxilec, Lucas' French sublicensee, the right to manufacture Concorde CSD parts in France and to sell them throughout the world.

Petitioner and Lucas entered into the 1970 [**293] Concorde license merely to formalize their existing relationship following Lucas' acquisition of English Electric's CSD line of business. See *supra* note 24. The 1970 Concorde license basically incorporates the provisions of the 1966 general license as they applied to the Concorde aircraft. Those 1966 general license provisions fundamentally incorporated the provisions of the 1964 amendment to the 1953 general license, also as they applied to the Concorde aircraft. The royalty rate for the Concorde CSD stated in the 1964 amendment to the 1953 general license is the same rate as contained in the 1970 Concorde license. Consequently, the circumstances surrounding the 1964 amendment to the 1953 general license also are relevant circumstances to which we must compare the circumstances surrounding the execution of the SunPac license agreement. See *R.T. French Co. v. Commissioner, 60 T.C. 836 (1973).*

When originally adopted in 1964, the Concorde was just being proposed. Since the money for the Concorde program was to come jointly from the Governments of France and Great Britain, those countries insisted on coproduction of

[*389] most of the parts [**294] of the aircraft, including the CSD, by French and British manufacturers. Petitioner, as an American manufacturer, was virtually precluded at the inception from the competition for the Concorde CSD contract. See *supra* note 25. Petitioner and Lucas amended the 1953 general license to provide for the sublicense of petitioner's CSD technology to a French company so that Lucas could get the Concorde contract. Around this same time, petitioner developed its AGD CSD. Petitioner wanted Lucas, its licensee, to get the Concorde contract using petitioner's new AGD CSD. Petitioner, therefore, provided substantial technical and marketing assistance to help Lucas convince the Concorde airframe manufacturer of the viability of the AGD CSD and get the Concorde contract. Thus, when Lucas and petitioner initially entered into the licensing agreement for the Concorde CSD, comparatively new technology for a new type of aircraft was at stake n64 in a potential market where petitioner could not even compete.

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n64 The record does not show when the Concorde was first flown. The 1966 general license, however, continues to describe it as "a supersonic transport being proposed for manufacture."

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[**295]

The SunPac license agreement, on the other hand, involves spare parts for mature, commercial aircraft programs. Under the SunPac license agreement, petitioner gives SunPac the right to sell spare parts for OEM units or spare units previously manufactured by petitioner. Petitioner, thus, is giving SunPac a part of its own market. Furthermore, the risks which SunPac would have been expected to face were substantially lower than the risks which Lucas would have been expected to face at the time each of them entered into the respective licensing agreements.

Petitioner raises the specter of grave risks to its CSD from the VSCF technology. The record, however, does not support this threat, at least as far as the parts which SunPac would produce. We are not convinced that, at the time petitioner and SunPac entered into the SunPac license agreement, the VSCF technology was so far advanced as to be a serious threat to petitioner's CSD market in the immediate future. Nor do we believe that a commercial airline would have retrofitted its existing airplanes to change from the CSD to the VSCF had the VSCF technology become readily available.

[*390] SunPac, therefore, was assured of a [**296] market for its production for a long time to come. Thus, SunPac, unlike Lucas, entered into a virtually risk-free market. Moreover, given the nature of the CSD spare parts market, petitioner and SunPac could expect to exert little effort or expense in marketing SunPac's production, unlike the competition faced by Lucas for the Concorde CSD contract.

In addition, the CSD is a highly technical, complex mechanism. Lucas was an experienced manufacturer of aerospace products, including the CSD, at the time it entered into the 1964 amendment to the 1953 general license. Therefore, although Lucas undoubtedly required some technical assistance from petitioner to master production of the AGD CSD, we do not believe that this assistance came close to the amount of technical assistance petitioner expected SunPac, a totally inexperienced manufacturer of precision aerospace parts, to require at the time it entered into the SunPac license agreement.

For the above reasons, we find that the 1970 Concorde license also is not a "sufficiently similar transaction" to the SunPac license agreement. Therefore, we refuse to rely on it as evidence of an arm's-length consideration for the intangibles involved [**297] here.

3. *The 6.5-Percent Royalty as a Standard*

Petitioner further argues that its in-bed licenses establish the "standard of the airways" and the "going rate" for CSD technology at 6.5 percent. According to petitioner, the in-bed licenses provide Lucas and Teijin with complete access to petitioner's CSD technology, including continuing design and development rights. The in-bed licenses encompass the technology granted to SunPac as well as the complete remainder of petitioner's CSD technology. Therefore, petitioner argues, the in-bed licenses involve the transfer of at least the same intangible property transferred to SunPac. Petitioner contends that, while differences exist between the in-bed licenses and the SunPac license agreement, the in-bed licenses are sufficiently similar to be used reasonably to establish the arm's-length royalty under the SunPac license agreement. Respondent disagrees. Respondent argues instead that an examination of the engineering

[*391] commitment associated with the transfer of technology, the degree and amount of technical assistance, the sales territory, the transfer of piece parts as opposed to CSD units, and the compensation provisions [**298] reveals that the in-bed licenses and the SunPac license agreement involved entirely different property rights. Respondent also contends that the circumstances surrounding the transfer of petitioner's technology to third-party licensees were totally incomparable to the SunPac license agreement. We agree with respondent that the in-bed licenses are not sufficiently similar to the SunPac license agreement, although not necessarily for all of the reasons propounded by respondent.

The SunPac license agreement was unique in that, as far as we could tell, it was the first and only time in which petitioner gave another entity the right to manufacture and sell commercial CSD spare parts only. Given the nature of the spare parts CSD market, see *supra*, SunPac, therefore, unlike the third-party licensees, could expect to encounter virtually no competition for its production. The SunPac license agreement also was the first and only time in which petitioner gave another entity the right to sell spare parts to petitioner's own customers. Petitioner, thus, transferred invaluable marketing intangibles to SunPac which it did not transfer to its third-party licensees. The third-party licensees [**299] had to develop their own markets for the CSD units they produced. Hence, the third-party licensees could be expected to face more risks than SunPac.

In addition, under the in-bed licenses, petitioner received free access to any inventions, improvements, or modifications the third-party licensees made to petitioner's CSD's. A continuous stream of know-how, therefore, could be expected to pass between petitioner and its third-party licensees. Petitioner, on the other hand, could expect to receive little exchange of technical information from SunPac, which was granted the rights to parts for mature programs only. Consequently, we are convinced that the property and circumstances relating to the in-bed licenses are not sufficiently similar to the property and circumstances relating to the SunPac license agreement.

[*392] 4. *The Court's Determination of the Arm's-Length Consideration for the Intangible Property Acquired by SunPac*

Having found neither the sunset royalty provisions, the 1970 Concorde license, nor the in-bed licenses sufficiently similar to the SunPac license agreement, we look now to the relevant factors identified by *section 1.482-2(d)(2)(iii), Income Tax Regs.* [**300]

That section lists the following factors as relevant in determining the amount of an arm's-length consideration:

(*a*) The prevailing rates in the same industry or for similar property,

(*b*) The offers of competing transferors or the bids of competing transferees,

(*c*) The terms of the transfer, including limitations on the geographic area covered and the exclusive or nonexclusive character of any rights granted,

(*d*) The uniqueness of the property and the period for which it is likely to remain unique,

(*e*) The degree and duration of protection afforded to the property under the laws of the relevant countries,

(*f*) Value of services rendered by the transferor to the transferee in connection with the transfer within the meaning of paragraph (b)(8) of this section,

(*g*) Prospective profits to be realized or costs to be saved by the transferee through its use or subsequent transfer of the property,

(*h*) The capital investment and starting up expenses required of the transferee,

(*i*) The next subdivision is (*j*),

(*j*) The availability of substitutes for the property transferred,

(*k*) The arm's length rates and prices paid by unrelated parties where [**301] the property is resold or sublicensed to such parties,

(*l*) The costs incurred by the transferor in developing the property, and

(*m*) Any other fact or circumstance which unrelated parties would have been likely to consider in determining the amount of an arm's length consideration for the property.

[*Sec. 1.482-2(d)(2)(iii), Income Tax Regs.*]

The record confirms that, even before petitioner entered into the SunPac license agreement, petitioner had a history of licensing its CSD technology to third parties for a fee. A number of these licensing agreements provided for a 6.5-percent royalty rate; however, under special circumstances petitioner could, and did, demand a different rate. One obvious example of this situation is the 1970 Concorde license.

[*393] For the reasons discussed above, we are convinced that the 6.5-percent royalty rate does not establish a prevailing rate for the same industry or for similar property as the intangible property involved in the SunPac license agreement. Moreover, many of petitioner's third-party licensees paid petitioner an initial lump-sum payment for the transfer of petitioner's CSD technology and know-how, in addition to the continuing [**302] royalty payments. See the Lucas 1953 general license, the Teijin license, the Siemens license, and the IAI license. The SunPac license agreement does not require an equivalent initial lump-sum payment from SunPac. Therefore, unlike the SunPac license agreement, compensation for the property rights transferred to the third-party licensees encompassed more than royalty payments.

We believe, however, that the 6.5-percent royalty rate can act as a base from which to determine the arm's-length consideration for the intangible property involved in this case.

Unrelated parties would consider the risks which the licensee is likely to encounter. We have already discussed above our conclusion that SunPac, unlike Lucas (or petitioner's other licensee for that matter), entered a virtually risk-free market. Moreover, as we said earlier, we are convinced that petitioner would have required an unrelated third party to compensate it dearly for the marketing intangibles which petitioner had developed in its commercial spare parts market. Neither the 6.5-percent nor the 8.5-percent royalty rate contained in the 1970 general license or the 1970 Concorde license, respectively, includes any compensation [**303] for those marketing intangibles. Therefore, we are convinced that petitioner would have demanded from an unrelated third party a higher royalty rate than 6.5 percent or 8.5 percent. We look to petitioner's existing CSD licensing agreements for enlightenment as to what that higher royalty rate would be.

Although the SunPac license agreement was the sole license in which petitioner gave a licensee the right to sell only CSD spare parts, portions of certain third-party licensing agreements do relate solely to the sale of spare parts or spare parts and spare units. In the tripartite agreement,

[*394] for example, Auxilec agreed to pay Lucas, and Lucas agreed to pay petitioner, a royalty of 10 percent of the net selling price of all Concorde CSD spare parts Auxilec sold to purchasers other than Lucas. The TU-144 amendments to the 1966 general amendment, which rate is incorporated in the 1970 TU-144 license, also provides for a royalty of 10 percent on all spare transmissions and/or spare parts for them.

Moreover, we note that in the Teijin license the 6.5-percent royalty rate applies only to CSD's sold in Japan. A 10-percent rate applies to CSD's sold outside of Japan. One of [**304] petitioner's fact witnesses explained the rationale for the variance in rates as follows:

The 6.5 was for the license grants inside the territory, for the sales inside the territory. Now, particularly when you get into a commercial type of program or in some cases, a military program or if the airplane is exported outside of the country, in which the product is being installed, we always give the licensee the opportunity to follow that product around the world, product support, because the licensee always has to be in a position from a product support standpoint to support the product and also it could very well be that the application might be peculiar and maybe we might not make the part or perhaps if the airplane were sold in England, maybe Lucas might not be making that part, so again, the original licensee must be able to follow that part.

Once he goes outside the territory, however, since that is not his licensed territory, we do put an added premium on that consideration for allowing him to go outside the territory.

From the above, we conclude that sales outside of Japan primarily, if not exclusively, would consist of spare units and/or spare parts.

We are convinced from this [**305] record that petitioner would have required an unrelated third party to pay it a royalty fee of at least 10 percent for the same intangible property licensed to SunPac. There is no evidence to suggest that petitioner could demand a rate higher than 10 percent.

Petitioner's licensing agreements with unrelated third parties generally require petitioner to provide technical assistance to the licensees, at their expense, however. In the SunPac license agreement, petitioner also agreed to furnish technical assistance to SunPac. Unlike the third-party agreements, however, for the years in issue compensation

[*395] for that technical assistance was to come from the 2-percent royalty payment. n65 Since we believe that petitioner would have required an unrelated third party to compensate it separately for the technical assistance petitioner rendered to SunPac during the years in issue, see *infra*, we do not account for this factor in determining the arm's-length consideration for the intangible property SunPac acquired. See *sec. 1.482-2(d)(2)(iii)(f), Income Tax Regs.*

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n65 We recognize that petitioner and SunPac amended the SunPac license agreement in 1979 to provide, retroactive for all sales on or after July 1, 1977, additional compensation to petitioner for the technical assistance it rendered to SunPac. This factor has no effect on our analysis of the accuracy of the royalty rate, however, since here we must determine the arm's-length consideration for the intangible property transferred to, and used by, SunPac. The extensive technical assistance petitioner rendered to SunPac was more than ancillary and subsidiary to the transfer of the intangibles. See *sec. 1.4822(b)(8), Income Tax Regs.* Therefore, the amount SunPac paid to petitioner for technical assistance should have no relevance to the amount needed to compensate petitioner at arm's length for the intangible property.

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[**306]

There is no evidence in the record that petitioner has ever received a royalty payment greater than 10 percent. Consequently, on the basis of the record here, we find that the arm's-length consideration for the intangible property involved in this case is 10 percent of the net selling price of the SunPac parts sold.

D. *Additional Allocation for Assistance Petitioner Rendered to SUNPAC*

Respondent argues in the alternative for the first time on brief that petitioner rendered valuable services to SunPac for which, in an arm's-length transaction, it would have received compensation but for which petitioner did not receive an arm's-length consideration. As discussed above, we found that respondent's new services theory was not timely as it surprised and prejudiced petitioner. Consequently, we refused to consider that theory. We will not address, therefore, the merits of the new services theory propounded by respondent.

Nonetheless, even though we rejected respondent's new services theory as a basis to sustain respondent's section **482** allocation contained in the notice of deficiency, the evidence indicates overwhelmingly that some allocation for services petitioner rendered to [**307] SunPac is necessary and proper in this case to clearly reflect the income of the related parties. We are far from convinced, however, that

[*396] the value of the services rendered approximates the amount of the section **482** allocation determined by respondent in the notice of deficiency.

Section 1.482-2(b), Income Tax Regs., applies to transactions in which one related entity provides marketing, managerial, administrative, technical, or other services for another related entity for less than an arm's-length charge. *Sec. 1.482-2(b)(1), Income Tax Regs.* An arm's-length charge is defined as the "amount which was charged or would have been charged for the same or similar services in independent transactions with or between unrelated parties under similar circumstances considering all relevant facts." *Sec. 1.482-2(b)(3), Income Tax Regs.* Unless the services are an integral part of the business activity of either the entity rendering the services or the entity receiving them, the arm's-length charge is deemed to be equal to the cost or deductions incurred with respect to the services rendered. The taxpayer, however, may establish a more appropriate charge. *Sec. 1.482-2(b)(3), Income* [**308] *Tax Regs.* For services which constitute a manufacturing or production activity, the determination of whether the services are an integral part of the business activity is based on the facts and circumstances of each case. Factors to be considered are "the time devoted to the rendition of the services, the relative cost of the services, the regularity with which the services are rendered, the amount of capital investment, the risk of loss involved, and whether the services are in the nature of supporting services or independent of the other activities of the renderer." *Sec. 1.482-2(b)(7)(ii)(a), Income Tax Regs.*

1. *Technical Assistance*

Petitioner recognized from the beginning that SunPac would need considerable technical support from petitioner in order to succeed as a CSD manufacturer. Under the SunPac license agreement, however, petitioner did not require SunPac to reimburse it separately for the value of the services rendered. Rather, for the years in issue, reimbursement for the technical assistance was included in the 2-percent royalty fee. On the other hand, in petitioner's licensing agreements with unrelated third parties petitioner also agreed to furnish technical [**309] assistance to its licensees to

[*397] assist in the manufacture, assembly, inspection, testing, and servicing of the CSD's but at the licensee's expense.

Petitioner denies that any allocation is needed for any services it gave to SunPac for the years in issue. Petitioner has argued that it did not charge the third-party licensees for the technical assistance it gave them even though it could have, while it did include reimbursement for the technical assistance it gave to SunPac in the SunPac license agreement. We have already found, however, that the 2-percent royalty fee contained in the SunPac license agreement was inadequate consideration for the intangible property transferred and used by SunPac. It follows then that, in effect, the technical assistance rendered to SunPac during the years in issue went uncompensated.

Moreover, considering all relevant facts, from this record, we do not agree that petitioner's rendering of assistance to the third-party licensees occurred under similar circumstances as occurred with SunPac. See *sec. 1.482-2(b)(3), Income Tax Regs.* The record does not show the costs petitioner actually incurred in assisting the third-party licensees or the [**310] amount or value of the technical assistance petitioner gave them. It appears from this record, however, that, since the third-party licensees were experienced manufacturers of precision aerospace parts and equipment before they entered into the licensing agreements, the extent of the assistance rendered to the third-party licensees and the costs incurred by petitioner in assisting them would not have been anywhere near the amount or the cost of the assistance petitioner gave to SunPac.

We are convinced that, had SunPac been an unrelated third party, petitioner would have charged SunPac separately for the technical assistance costs it incurred in each year relating to SunPac. Therefore, we find that, in order to clearly reflect the income of the related parties, petitioner must include the value of this assistance in income. We must now determine the amount to be included in income.

Petitioner rendered technical assistance to SunPac in 1977 and 1978 in the following amounts (see *supra* note 22):

[*398]

Technical assistance item	1977	1978
U.S. trainer in Singapore	$ 999,275	$ 865,217
Operational support personnel	78,656	25,839
Telephone and telex expense	75,442	145,240
Plant engineering support	17,050	
U.S. coordinator	27,940	81,260
Processing	186,822	171,550
Miscellaneous	4,180	
Total	1,389,365	1,289,106

[**311]

These amounts do not agree with the amounts reflected in Exhibit B to Amendment No. 11 of the SunPac license agreement which shows that petitioner rendered technical assistance to SunPac in 1977 and 1978 in the amounts of $ 1,298,701 and $ 1,335,574, respectively. n66 The difference of $ 90,664 for 1977 apparently represents the accounting misclassifications as explained in note 22, *supra*. The difference of ($ 46,468) for 1978 apparently is the administrative assistance costs incurred in 1978, see *infra*. We find $ 1,389,365 and $ 1,289,106 to be the correct amounts of technical assistance costs for 1977 and 1978, respectively. Respondent does not successfully challenge these amounts.

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	Offshore	Onshore	Total
1/1/77-6/30/77	$ 203,696	$ 452,171	$ 655,867
7/1/77-12/31/77	186,394	456,440	642,834
1/1/78-12/31/78	321,119	1,014,455	1,335,574
Total	711,209	1,923,066	2,634,275

We note that Arthur Andersen calculated petitioner's technical assistance costs for 1977 and 1978 to be $ 832,964 and $ 866,167, respectively. It did not include in these amounts, however, wages and salary costs for support personnel, trainers, the managing director, and plant manager. Other costs included by petitioner also may have been excluded. The record does not reconcile petitioner's calculations with Arthur Andersen's calculations.

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[**312]

In addition, we are not convinced from this record that the services rendered by petitioner to SunPac are an integral part of the business activity of either petitioner or SunPac as argued by respondent. *Sec. 1.482-2(b)(7), Income Tax Regs.* Consequently, we find that for purposes of *section 1.482-2(b)(3), Income Tax Regs.*, the arm's-length charge for the technical assistance petitioner gave to SunPac in 1977 and 1978 is $ 1,389,365 and $ 1,289,106, respectively.

2. *Other Assistance*

Petitioner also rendered administrative and marketing assistance to SunPac during the years in issue which were

[*399] not reimbursable under the SunPac license agreement. For 1977 and 1978, respectively, petitioner incurred $ 36,604 (see *supra* note 23) and $ 46,468 in administrative assistance costs (costs not contained in SunPac manufacturing costs) which were not reimbursable under the SunPac license agreement. These amounts are less than 1 percent of SunPac's sales for the years in issue. n67 The record does not show the amount of marketing expense petitioner incurred on SunPac's behalf for 1977 and 1978, but it appears from the record that these expenses would be nominal.

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n67 1977 administrative assistance costs of $ 36,604 divided by purchases of $ 6,595,000 equals 0.5 percent. 1978 administrative assistance costs of $ 46,468 divided by purchases of $ 18,605,000 equals 0.2 percent.

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[**313]

In 1976, petitioner represented to the U.S. Customs Service that the 15-percent discount off catalog for the SunPac parts transfer price included reimbursement for petitioner's distributor costs such as transportation costs (1 percent), duty (1 to 5 percent), and general and administrative costs (2 percent), in addition to a factor for profit (1.5 to 5.5 percent). Respondent did not satisfactorily rebut these cost estimates. We conclude that petitioner received reimbursement in the transfer price for the administrative and marketing services given to SunPac during the years in issue and, hence, we do not include in petitioner's income for the years in issue any additional amount for these costs.

E. *Recap of Our Section **482** Determination*

As for the transfer price, we find that the arm's-length consideration for the SunPac parts petitioner purchased from SunPac is a discount of 20 percent off the catalog price in effect at the time of the purchase. In addition, petitioner must include in income the cost of completing unfinished and reworked parts and the cost of the rejected parts.

As for the royalty fee, we find that the arm's-length consideration for the intangible property [**314] involved in this case is 10 percent of the net selling price of the SunPac parts sold.

Finally, we find that petitioner also must include in income $ 1,389,365 and $ 1,289,106, for 1977 and 1978,

[*400] respectively, for the arm's-length charge for the technical assistance petitioner gave to SunPac during those years.

II. THE FOREIGN TAX CREDIT ISSUE

SunPac withheld $ 62,916 and $ 150,999 of the royalty payments payable to petitioner in 1977 and 1978 under the SunPac license agreement as petitioner's liability for Singapore income taxes under sections 10(1)(f) and 12(7) of the Singapore Income Tax Act. Petitioner claimed foreign tax credits for these amounts for 1977 and 1978. In the notice of deficiency respondent disallowed these foreign tax credits. The only ground asserted in the notice of deficiency for the disallowance of the foreign tax credits was that the deletion of the royalty payments from petitioner's income for those years pursuant to section **482** eliminated petitioner's Singapore tax liability.

Section 901 n68 allows a credit against U.S. income taxes for the amount of foreign income taxes paid or accrued by a U.S. taxpayer to a foreign government during the taxable [**315] year. The credit is allowed in lieu of the deduction for taxes provided by section 164 and serves to assure that a taxpayer with foreign operations or other foreign income pays one tax on that income at the higher of the U.S. or the foreign tax rate, but is not subjected to double taxation on the same income. The amount of credit allowable in a given year is subject to the limitation of section 904 which serves, in general, to assure that the credit will be granted only against the U.S. tax applicable to the foreign income, and will not have the effect of offsetting the U.S. tax on U.S.

[*401] income. In order for the tax to be creditable under section 901, it must be the "'substantial equivalent of an "income tax" as the term is understood in the United States.'" *Schering Corp. v. Commissioner, 69 T.C. 579, 591 (1978).* Whether petitioner is entitled to a credit under section 901 must ultimately be determined under U.S. tax concepts and not "'by reference to foreign characterizations and classifications of tax legislation.'" *Schering Corp. v. Commissioner, supra at 591,* quoting *Biddle v. Commissioner, 302 U.S. 573, 579 (1938).* [**316]

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n68 Sec. 901 provided in pertinent part as follows:

SEC. 901. TAXES OF FOREIGN COUNTRIES AND OF POSSESSIONS OF THE UNITED STATES.

(a) Allowance of Credit. -- If the taxpayer chooses to have the benefits of this subpart, the tax imposed by this chapter shall, subject to the limitation of section 904, be credited with the amounts provided in the applicable paragraph of subsection (b) plus, in the case of a corporation, the taxes deemed to have been paid under sections 902 and 960. Such choice for any taxable year may be made or changed at any time before the expiration of the period prescribed for making a claim for credit or refund of the tax imposed by this chapter for such taxable year. * * *

(b) Amount Allowed. -- Subject to the limitation of section 904, the following amounts shall be allowed as the credit under subsection (a):

(1) Citizens and domestic corporations. -- In the case of a citizen of the United States and of a domestic corporation, the amount of any income, war profits, and excess profits taxes paid or accrued during the taxable year to any foreign country or to any possession of the United States; * * *

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[**317]

Petitioner argues on brief that, even if the Court sustains respondent's rescission of royalty income adjustment, the foreign tax credit would be allowable nonetheless since the tax was compulsory and there is no effective and practical remedy available to petitioner for obtaining a refund of the tax; therefore, the Singapore withholding taxes petitioner paid are properly creditable taxes under section 901.

In his pretrial memorandum, respondent argued that *section 1.901-2(e)(5), Income Tax Regs.*, sets forth a two-pronged test for a foreign tax to be considered compulsory: (1) The amount paid must not exceed the amount of the foreign tax liability as determined in a manner consistent with a reasonable interpretation of the foreign law; and (2) the taxpayer must exhaust all effective and practical remedies to reduce his foreign tax liability. Respondent contended that petitioner failed to meet either prong.

According to respondent, petitioner could have filed a timely claim for refund with the Government of Singapore concerning the tax after the notice of deficiency was issued but failed to do so. In addition, quoting portions of *section 1.901-2(e)(5)(i), Income Tax Regs.*, respondent [**318] argued further that the taxes withheld by SunPac exceeded petitioner's Singapore tax liability as determined in a manner consistent with a reasonable interpretation of the foreign law. According to respondent, his section **482** reallocation constituted

notice to petitioner that petitioner's interpretation of Singapore law was "likely to be erroneous." Finally, quoting from *Rev. Rul. 57-516, 1957-2 C.B. 435,* *n69* respondent

[*402] argued, without providing further explanation, that petitioner is not entitled to a foreign tax credit for the Singapore taxes withheld by SunPac because petitioner is claiming a credit for withholding of taxes rather than payment (hereinafter sometimes referred to as the withholding theory).

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n69 The specific language as quoted by respondent is as follows:

The term amount of income, war profits, and excess profits taxes paid or accrued during the taxable year, [sic] as used in *section 901 of the Internal Revenue Code* of 1954, relating to the allowance of a credit for taxes paid or accrued to a foreign country or possession of the United States, means such taxes proper, which are a legal and actual liability . . . The credit provided in section 901 of the Code is not based on tax withheld by a foreign country . . . since tax withheld is merely an advance collection of what may or may not be an actual tax liability. *Rev. Rul. 57-516, 1967-2 C.B. 435.*

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[**319]

Neither counsel addressed the foreign tax credit in their opening statements. In his opening brief, respondent argued that his determination relating to the foreign tax credit should be sustained since (1) pursuant to the reallocation of income under section **482** no royalty should have been paid; (2) the "royalty" described in the SunPac license agreement was not a royalty but a reimbursement of expenses to petitioner, and thus, any tax on those payments would be a tax on gross receipts rather than on net income as required by *section 1.901-2(a)(3), Income Tax Regs.*; and (3) the payments were noncompulsory under *section 1.901-2(e)(5)(i), Income Tax Regs.*

According to respondent, a foreign levy is an income tax "if and only if" it meets the requirements of *section 1.901-2(a)(1), Income Tax Regs.*, which relates: (i) It is a tax; and (ii) the predominant character of that tax is that of an income tax in the U.S. sense. Respondent argues that a foreign levy is a tax under *section 1.901-2(a)(2), Income Tax Regs.*, "if it requires a compulsory payment pursuant to the authority of a foreign country to levy taxes." Whether the predominant character of the tax is that of an income tax in the [**320] U.S. sense, respondent argues, is controlled by *section 1.901-2(a)(3), Income Tax Regs.*, which requires that the foreign tax be likely to reach net gain in the normal circumstances to which it applies. A foreign tax is likely to reach net gain, respondent contends, if and only if the tax judged on the basis of its predominant character satisfies each of these requirements relating to realization, gross receipts, and net income pursuant to *section 1.901-2(a)(3)(b)(1), Income Tax Regs.* Respondent contends further that, even if SunPac's payments to petitioner under the

[*403] SunPac license agreement were properly subject to Singapore taxation, the 1977 payments exceeded the amount of liability under Singapore law and, therefore, were noncompulsory since for 1977 SunPac withheld taxes at a rate of 48 percent, a rate 8 percent higher than required by Singapore law.

Petitioner argues preliminarily that respondent's arguments that (1) the predominant character of the Singapore tax was that of a tax on gross receipts and (2) the amount of taxes that SunPac withheld in 1977 actually exceeded petitioner's Singapore tax liability, are two entirely new theories, raised for the first time [**321] on brief, for disallowing the foreign tax credits claimed for 1977 and 1978 Singapore income taxes. Petitioner claims that it had no notice of these new theories and would be prejudiced by their introduction since, had it known respondent intended to assert them, petitioner would have elicited further testimony from Mr. Loke regarding Singapore law pertinent to these issues. Petitioner therefore asks the Court to refuse to address the new theories on procedural grounds. We agree with petitioner that respondent's theory as to the predominant character of the Singapore tax is a new theory raised for the first time on brief and that petitioner would be prejudiced by our consideration of it. Consequently, we will not consider this theory. We also agree with petitioner that respondent's argument that the amount of taxes SunPac withheld for 1977 exceeded petitioner's Singapore tax liability was raised for the first time on brief and we also refuse to consider this new argument.

Rule 142(a) provides that the burden of proof is on petitioner, "except that, in respect of any new matter, increases in deficiency, and affirmative defenses, pleaded in the answer, it shall be upon the respondent." [**322] A new position taken by respondent is not necessarily a "new matter" if it merely clarifies or develops respondent's original determination without requiring the presentation of different evidence, being inconsistent with respondent's original determination, or increasing the amount of the deficiency. *Achiro v. Commissioner, 77 T.C. 881, 889-891 (1981).* However, "The rule that a party may not raise a new issue on brief is not absolute. Rather, it is founded

[*404] upon the exercise of judicial discretion in determining whether considerations of surprise and prejudice require that a party be protected from having to face a belated confrontation which precludes or limits that party's opportunity to present pertinent evidence." *Ware v. Commissioner, 92 T.C. 1267, 1268 (1989),* affd. *986 F.2d 62 (2d Cir. 1990).*

As we said before, the only ground respondent asserted in the notice of deficiency for the disallowance of the foreign tax credits was that the deletion of the royalty payments from petitioner's income for those years pursuant to section **482** eliminated petitioner's Singapore tax liability. [**323] The only hints we found in the record that respondent questioned the character of the SunPac payments to petitioner are found in certain testimony on this subject elicited during the direct examination by respondent's counsel of Mr. Wayne Wahl, one of petitioner's employees, and of Agent Pierson by petitioner's counsel. Respondent's counsel did not follow up on this line of questioning during his own cross-examination of Agent Pierson. In as much as respondent repeatedly skipped from one theory to another throughout the proceedings, we believe that these two clues were insufficient to warn petitioner that respondent intended to try out yet another theory for disallowing the foreign tax credits claimed for the years in issue. Thus, we find that until the briefing stage, petitioner had no inkling that respondent intended to argue that the predominant character of SunPac's payments to petitioner pursuant to the SunPac license agreement was not that of an income tax in the "U.S." sense. Petitioner alleges, and we believe, that it would have elicited additional testimony from Mr. Loke, its expert witness on Singapore tax law, regarding this assertion had petitioner received fair warning [**324] that respondent intended to raise this theory. Therefore, considerations of fairness require us to refuse to consider this theory as a basis for a denial of the foreign tax credit. See *Ware v. Commissioner, supra.* The same rationale requires us to hold likewise for the second new theory regarding the foreign tax credit issue raised by respondent.

Respondent's quotation from *Rev. Rul. 57-516, 1957-2 C.B. 435* (see *supra* note 69) and his cryptic statement in his

[*405] pretrial memorandum that petitioner is not entitled to a foreign tax credit for the Singapore taxes withheld by SunPac because "petitioner is claiming a credit for withholding of taxes rather than payment" apparently was respondent's method of raising the argument that the amount of taxes SunPac withheld from royalties due petitioner exceeded petitioner's Singapore tax liability.

Respondent propounded two different arguments (one in his opening brief and another in his reply brief) regarding the withholding tax liability. In his opening brief respondent explained his withholding theory (hereinafter referred to as the first [**325] withholding theory) as follows:

For 1977, the withholding was at a rate of 48%, 8% greater than required by Singapore law. [The Singapore Tax Act, sec.] 45. Even if SunPac's gross payments to petitioner under the [SunPac license] Agreement were properly subject to Singapore taxation, the 1977 payments exceeded the amount of liability under Singapore law and therefore were noncompulsory.

In his reply brief, however, respondent flagrantly changed his withholding theory to the following (hereinafter referred to as the second withholding theory):

Independent of the Court's holding on the Section **482** issue, the Court must still determine whether petitioner's payments of Singapore tax were non-compulsory and in excess of petitioner's liabilities under Singapore law. Under Part IV of the Economic Expansion Incentives (relief from income tax) [sic] Act of 1967, petitioner could have applied for, and obtained, a certificate which would have allowed a withholding at a rate of 20%, rather than the normal 40% withholding rates. * * * Clearly, the payments under the [SunPac license] Agreement qualified for the reduction in withholding under the Act. Therefore, to the extent that any withholding [**326] exceeded 20%, petitioner's payments of Singapore tax were non-compulsory. * * *

In the reply brief, respondent did not reiterate his first withholding theory, as an alternative argument or otherwise. Respondent's second withholding theory is vastly different from his first withholding theory, and would require different evidence to prove or disprove. We do not condone respondent's method of "raising" this new theory, and we perceive that petitioner did not have sufficient opportunity, before trial, to become aware of this additional theory. We believe that had petitioner been aware of this

[*406] new argument, it would have presented pertinent evidence regarding this theory at the trial. See *Pagel, Inc. v. Commissioner, 91 T.C. at 211-212.* Consequently, we find that petitioner was unfairly surprised by respondent propounding his withholding theory in his opening brief. We, therefore, will not consider the theory.

We now come to respondent's argument that petitioner had no Singapore tax liability because, as a result of the reallocation of income under section **482,** SunPac should not have paid any royalty to petitioner. We have determined that [**327] a royalty of 10 percent of the net selling price of the SunPac parts was the arm's-length consideration for the intangible property SunPac acquired from petitioner. SunPac paid petitioner a royalty of 2 percent. Therefore, petitioner did not overpay its Singapore tax liability and is entitled to the foreign tax credits claimed for 1977 and 1978.

III. SECTION 6621(c) ISSUE

Finally, we must determine whether, as a result of the section **482** allocation determined by the Court, petitioner is subject to the higher interest rate under section 6621(c) for the years in issue.

By amendment to answer, respondent asserts that the underpayments of tax in this case resulting from petitioner's intercompany pricing and royalty arrangements with SunPac were tax-motivated transactions subject to increased interest under section 6621(c). According to respondent, the amount petitioner overpaid SunPac for the SunPac parts, pursuant to the section **482** adjustment, resulted in a "valuation overstatement" under section 6621(c)(3)(A)(i). Respondent bears the burden of proof with respect to this issue. Rule 142(a).

Section 6621(c) n70 provided, in general, that the interest

[*407] payable on substantial [**328] underpayments attributable to certain transactions was computed at 120 percent of the otherwise applicable rate. This provision was added by section 144(a) of the Deficit Reduction Act of 1984, Pub. L. 98-369, 98 Stat. 494, 682, which specified four types of transactions that would trigger the increased interest rate provisions, including any valuation overstatement within the meaning of section 6659(c). The Commissioner had the authority to specify additional transactions which would be treated as tax-motivated transactions. Sec. 6621(c)(3)(B). The increased rate of interest was applicable with respect to interest accruing after December 31, 1984, even though the transaction was entered into before the date of the enactment of section 6621(c). *Solowiejczyk v. Commissioner, 85 T.C. 552 (1985),* affd. without opinion *795 F.2d 1005 (2d Cir. 1986).*

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n70 Sec. 6621(c) provided in pertinent part as follows:

SEC. 6621. DETERMINATION OF RATE OF INTEREST.

(c) Interest on Substantial Underpayments Attributable to Tax Motivated Transactions. --

(1) In general. -- In the case of interest payable under section 6601 with respect to any substantial underpayment attributable to tax motivated transactions, the annual rate of interest established under this section shall be 120 percent of the underpayment rate established under this section.

(2) Substantial underpayment attributable to tax motivated transactions. -- For purposes of this subsection, the term "substantial underpayment attributable to tax motivated transactions" means any underpayment of taxes imposed by subtitle A for any taxable year which is attributable to 1 or more tax motivated transactions if the amount of the underpayment for such year so attributable exceeds $ 1000.

(3) Tax motivated transactions. --

(A) In general. -- For purposes of this subsection, the term "tax motivated transaction" means --

(i) any valuation overstatement (within the meaning of section 6659(c)), * * *.

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[**329]

Section 6659 was added by section 722 of the Economic Recovery Tax Act of 1981, Pub. L. 97-34, 95 Stat. 172, 341-343, effective for returns filed after December 31, 1981. n71 As enacted, sec. 6659 provided in pertinent part as follows:

SEC. 6659. ADDITION TO TAX IN THE CASE OF VALUATION OVERSTATEMENTS FOR PURPOSES OF THE INCOME TAX.

(a) Addition to the Tax. -- If --

(1) an individual, or

(2) a closely held corporation or a personal service corporation.

has an underpayment of the tax imposed by chapter 1 for the taxable year which is attributable to a valuation overstatement, then there shall be added to the tax an amount equal to the applicable percentage of the underpayment so attributable.

(b) Applicable Percentage Defined. -- * * *

(c) Valuation Overstatement Defined. --

[*408] (1) In general. -- For purposes of this section, there is a valuation overstatement if the value of any property, or the adjusted basis of any property, claimed on any return exceeds 150 percent of the amount determined to be the correct amount of such valuation or adjusted basis (as the case may be).

(2) Property must have been acquired within last 5 years. -- This section shall not [**330] apply to any property which, as of the close of the taxable year for which there is a valuation overstatement, has been held by the taxpayer for more than 5 years.

(d) Underpayment Must Be at Least $ 1,000. -- This section shall not apply if the underpayment for the taxable year attributable to the valuation overstatement is less than $ 1,000.

* * * *

(f) Other Definitions. -- For purposes of this section --

(1) Underpayment. -- The term "underpayment" has the meaning given to such term by section 6653(c)(1).

(2) Closely held corporation. -- The term "closely held corporation" means any corporation described in section 465(a)(1)(C).

(3) Personal service corporation. -- The term "personal service corporation" means any corporation which is a service organization (within the meaning of section 414(m)(3)). n72

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n71 Sec. 7721(c)(2) of OMBR-1989 repealed sec. 6659 effective for returns with a due date after Dec. 31, 1989. But see sec. 6662(b)(3), which, effective for returns due (without regard to extensions) after Dec. 31, 1989, under specified circumstances imposes an addition to tax of 20 percent of the underpayment attributable to any substantial valuation misstatement under ch. 1. [**331]

n72 Sec. 155(c)(1)(A) of the Deficit Reduction Act of 1984, Pub. L. 98-369, 98 Stat. 494, 694, eliminated the requirement that property be acquired within the last 5 years. Sec. 155(c)(1)(B) added a new subsec. (f) (not pertinent here) and redesignated subsec. (f) above as subsec. (g).

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Petitioner contends that, because section 6659(c) defines a valuation overstatement "for purposes of this section," section 6659(a) must be considered in defining valuation overstatements "within the meaning of Section 6659(c)." According to petitioner, since section 6659(a) limits the applicability of the valuation overstatement provisions to individuals, closely held corporations, and personal service corporations, the valuation overstatement provisions under section 6621(c) are not applicable to petitioner, at all relevant times a publicly held corporation engaged in a manufacturing business. Petitioner argues further that an income adjustment under section **482** involving a publicly held manufacturing corporation was not within the Congressional intent underlying section 6621(c)(3)(A)(i).

Petitioner also contends [**332] that a section **482** income allocation involving a publicly held manufacturing corporation is not within the statutory or regulatory definition of tax-motivated

[*409] transactions. First, petitioner contends that, even though respondent has been granted broad regulatory authority to identify other transactions as "tax-motivated," he has not included an intercompany pricing allocation under section **482** as a "tax shelter" transaction. Second, petitioner argues that section 6621(c) is analogous to a penalty provision and, therefore, should be strictly construed and a taxpayer should not be subjected to the increased interest unless the words of the statute plainly impose it.

Respondent argues that section 6659(a) is not necessary to the construction of section 6659(c) for purposes of understanding its definition of a valuation overstatement as described in section 6621(c)(3)(A)(i). According to respondent, there are no terms in section 6659(c) which are defined in sections 6659(a) or (g); the definition stands on its own and, therefore, failure to incorporate the other sections of section 6659 does not cause section 6621(c) to be applied in vacuo.

To have a valuation overstatement [**333] as defined in section 6659(c), the value of the property, or the adjusted basis of any property, claimed on any return must exceed 150 percent of the amount determined to be the correct amount of such valuation or adjusted basis. The SunPac parts transfer price under the distributor agreement is catalog price less a discount of 15 percent. We have found that the arm's-length consideration for this property is catalog price less a discount of 20 percent. In addition, we have determined that the arm's-length consideration for the intangible property used by SunPac is a royalty of 10 percent of the net selling price of the SunPac parts, not the 2 percent set forth in the SunPac license agreement. Thus, the value of the property claimed by petitioner does not exceed 150 percent of the amount determined to be correct. Hence, there is no valuation overstatement as defined in section 6659(c). Section 6621(c), therefore, is not applicable to this case for the years in issue. Consequently, we need not address the arguments raised by the parties as to this

[*410] issue. We, thus, make no determination as to the relative merits of the arguments raised by either party. n73

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n73 Sec. 11312 of the Revenue Reconciliation Act of 1990 (RRA-1990), Pub. L. 101-508, 104 Stat. 1388, 1388-454, amended sec. 6662, Imposition of Accuracy-Related Penalty, to apply to "substantial valuation misstatements under Ch. 1" arising from certain transfer price adjustments. This amendment, effective for taxable years ending after the effective date of the enactment of RRA-1990, has no effect on the instant case and, thus, is not considered here.

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[**334]

To reflect the foregoing,

Decision will be entered under Rule 155.