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A STUDY OF FOREIGN ACQUISITION OF U.S. FIRMS
PRIOR TO THE EXON-FLORIO AMENDMENT

by

Fred Otho Schellhammer

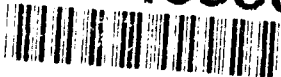
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A Study of Foreign Acquisition of U.S. Firms
Prior to the Exon-Florio Amendment

by

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Lieutenant Commander, Supply Corps, United States Navy
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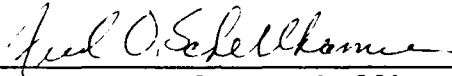
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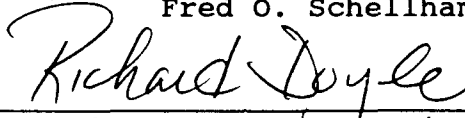
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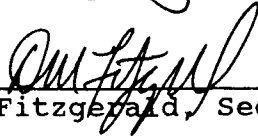


Fred O. Schellhammer

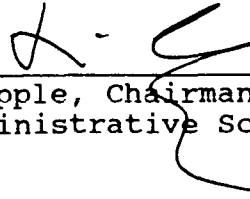
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ABSTRACT

This thesis examines the possible effects of foreign acquisition on the defense industrial base in the semiconductor industry. The problems and benefits of foreign acquisition are assessed in order to determine the consequences of foreign acquisition for industries critical to U.S. national security. Foreign investment in these critical areas has the attention of top officials in the legislative and executive branch, as evidenced by the passage of the Exon-Florio amendment. This legislation was intended to give the federal government the authority to prohibit foreign acquisition in cases where national security was a concern. This thesis examines foreign acquisition prior to the passage of Exon-Florio in order to discover whether such takeovers lead to the loss of such companies to the defense industrial base. Conclusions and recommendations are provided in the final chapter.



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I. FOREIGN INVESTMENT: A CAUSE FOR CONCERN

A. INTRODUCTION

There is a growing concern about foreign investment in the defense industrial base, particularly in the semiconductor industry. This thesis will endeavor to examine seven companies that were acquired by foreign concerns prior to the passage of the Exon-Florio Amendment. This legislation gave the Committee on Foreign Investment in the United States more power to review and investigate foreign acquisition of U.S. firms.

1. Research Objective

The research objective is to examine the foreign acquisition of U.S. firms in a specific industry critical to national security and to determine if there is a problem with foreign investment in these firms.

2. Research Question

The primary question of this research is, "What is the effect of foreign acquisition of U.S.-based semiconductor manufacturing companies on the defense industrial base?"

In addition the following subsidiary questions were formulated:

- What is the concern related to the defense industrial base regarding foreign ownership of companies which were previously owned by American interests?

- How can we identify and measure the impact of foreign acquisition of U.S.-based firms in the defense industrial base?
- Why is the semiconductor industry critical to the defense industrial base?
- What is the purpose of the Exon-Florio amendment with regard to foreign acquisition of U.S. firms?
- Do these findings support the assumptions underlying the Exon-Florio Amendment and the larger concerns regarding the defense industrial base?
- What has been the impact of foreign acquisition of U.S.-based firms in the semiconductor industry on the defense industrial base?

3. Methodology

The research methodology was twofold. First, a comprehensive literature review was conducted on the defense industrial base (DIB), the semiconductor industry, and the Exon-Florio Amendment. This review focused on semiconductor companies purchased by foreign concerns prior to the passage of Exon-Florio, on passage of Exon-Florio and on the status of these semiconductor companies which were acquired by foreign interests before Exon-Florio took effect.

Telephone interviews were also conducted with representatives of the seven semiconductor companies that had been acquired prior to Exon-Florio and also with staff members of the Committee on Foreign Investment in the United States (CFIUS), and the Office of Industrial Base Assessment.

B. DISCUSSION

"We believe that there are only winners, no losers, and all participants gain from it." --President Ronald Reagan

Foreign investment has played a critical role in the economic development of the United States. Foreign capital contributed heavily to the building of canals and railroads as well as factories and mines. By the end of the 19th century America had outstripped its rivals to become the leading manufacturer in the world. Although heavily in debt to most European countries, America rapidly advanced beyond the manufacturing capacity of its creditors in terms of industry growth and potential. [Ref. 1:p. 275]

As an aspect of U.S. foreign policy, foreign investment has been at the forefront. After the American Revolution, foreign investment continued at a very significant rate and was welcomed by the new government. Secretary of the Treasury, Alexander Hamilton, issued the first paper on foreign investment, entitled the "Report on Manufacturers," which set forth his government's policy. He wrote, "Foreign investment should be encouraged because it would permit an increased amount of productive labor and useful enterprise to work". [Ref. 1:p. 275]

Today, foreign investment comprises a wide variety of industries from high tech firms, real estate, and finance companies to U.S. Government Bonds. The foreign financed debt

currently sits at about 11 percent of the national debt or approximately \$240 billion dollars. [Ref. 1:p. 10]

C. BENEFITS

Many arguments are presented both for and against direct foreign investment. Dr. Donald A. Hicks, a former Under Secretary of Defense for Research and Engineering, argues that:

It's time to stop thinking about the nationality of a firm's parent and to start thinking about building alliances with firms based in the United States-- American, Japanese, or European--in order to maximize our industrial needs. [Ref. 2:p. 56]

Hicks quotes Mr. Craig Alderman, former Deputy Under Secretary of Defense:

Foreign owned U.S. companies are not foreign companies. They are incorporated in the United States and are subjected to U.S. laws and regulations, including the Arms Export Control Act and Export Administration Act. [Ref. 2:p. 56]

One view of foreign investment is that it brings a significant amount of new life into a company that could be tailing for a wide variety of reasons, from lack of management skills to an increase in research and development (R&D) funding. Many foreign governments look upon the United States as a safe haven for investments with a very stable government and an educated, diversified work force.

Foreign ownership of U.S. defense firms is another example of the way in which foreign companies are attempting to restructure and diversify. Investment in a U.S.-based defense contractor (particularly before 1992, when the European

Community will drop all trade barriers among member countries and become a significant world economic power) can have great benefit especially if the company is able to convert some of this technology from military to commercial use such as aeronautics, or semiconductors. [Ref. 2:p. 56]

In his article, "Foreign Ownership of Defense Firms Boosts U.S. Security," Donald Hicks contends that, "In the overall scheme of things foreign investment should be encouraged in U.S. defense firms; there is no risk of foreign capital invasion." [Ref. 2:p. 58] Despite an overall increase in foreign investment, Hicks asserts that foreign investment accounts for only five percent of total U.S. assets. [Ref. 2:p. 60]

He gives three reasons why foreign companies should be allowed to invest in U.S. defense companies:

- These investments create alliances for American firms and U.S. firms under foreign control. As a result, when we go outside the U.S. to compete procurement opportunities we have a natural advocate.
- When the U.S. argues for more open investment in the GATT, we gain more credibility in NATO if our shores are open to foreign capital.
- By exposing American workers to foreign business practices and technologies we become better prepared to understand how foreign markets and foreign firms operate. [Ref. 2:p. 60]

D. CONCERNS

The opposing side of this argument is that foreign investment should be controlled and that Americans need to be aware of this ever increasing dominance of our markets.

The United States is very different in the world markets in that until the passage of the Exon-Florio amendment (which gave the Committee on Foreign Investment in the United States (CFIUS) new power in reviewing foreign acquisitions and is explained in Chapter III), reporting requirements on foreign investment were very lax or non existent. [Ref. 3:p. 95]

As trade barriers became more of a national issue, policymakers began to notice inequities in investment relationships. Congress became concerned that America's open door policy to investment was not universally reciprocated. Japan was identified as a major offender. Most other nations do impose tight restrictions on investments that can be made by foreigners. A few examples of these restrictions are areas which might have an adverse affect on national security implications such as defense, communications, and real estate. Other non-tariff barriers include artificial performance requirements, unnecessary regulations, requirements for joint ventures, restrictions on work permits, and lack of cooperation. [Ref. 1:p. 12]

Foreign ownership of U.S. defense firms is not entirely risk-free. The Japanese in particular do not pursue as much research and development within the U.S. as they do within the

borders of Japan. A General Accounting Office study cited key examples of this research and development stance by the Japanese which occurred during the development of the FSX fighter. The Japanese wanted a greater role in the R&D effort. After attaining this goal, the Japanese proceeded to divide up the different components of the fighter among all or their top manufacturing firms. With civilian aerospace as a new target for the Japanese, the only significant skill they lack is system integration. Because of the structure of the Memorandum of Understanding they are aided in this work by the U.S. prime contractor, General Dynamics. In the future this will give the Japanese an ability to manufacture the entire product within their borders and possibly use that technology as a springboard for commercialization. [Ref. 4:pp. 26-27]

Another aspect of the Japanese business philosophy is to import top management and suppliers from Japan rather than using American resources. This circumvention of U.S. talent and resources has serious implications on the ability of firms to reinvest in capital expansion and R&D efforts. [Ref. 1:p. 14]

The process of restructuring and globalization that many American defense firms are going through is not unlike the rest of the American economy. Many economists feel that this "efficiency and consumer welfare" are necessary for world markets to function. This "laissez-faire" approach to Defense Department demands and the need for maintaining national

security has many U.S. national security analysts worried. Their argument is that the "increasing dependence of U.S. industries on foreign sourced hardware and technology severely limits our capacity to build or replace critical force structure independent of economic and political decisions of other sovereign powers". [Ref. 5:p. 2]

Theodore Moran presents some considerations that the United States should look to in considering the amount of foreign investment. These lessons were developed from the European struggle involving dependency on foreign companies and foreign technology.

First, there are dangers hidden in the globalization of industry critical to the functioning of modern nation states. These risks prove to be unacceptable even in peacetime relations among allies. It is not logical for a modern nation state to dismiss the problem of industrial dependency as liberal economic tradition advocates, by arguing that markets should be allowed to simply adjust themselves.

Secondly, a diversification and multiplication of companies and locales that a nation can draw on offers the most dependable method for minimizing the risk from foreign control.

Thirdly, the impulse of autarky, as Moran contends, though appealing, carries with it its own perils of higher cost, limited R&D innovation, and delay in deploying weapons. But it also offers the possibility of being locked into

unacceptable performance requirements attuned to narrow interests that have an impact only on national security.

[Ref. 3:p. 69]

The threat posed by foreign investment can then be understood and evaluated as arising in a few key industries critical to national security which can be reviewed by security analysts and economists. As the number of suppliers increases, the potential for foreign control decreases in direct proportion to the proliferation of suppliers. A broad description of the industrial base was assumed by the European analysts. Their definition of the industrial base was any good, service, component, or input to the national economy whose denial could plausibly damage the security interests of the state. [Ref. 3:p. 70] This broad definition helps lay the groundwork for criteria that incorporate industries that should be covered by special policy measures.

II. THE SEMICONDUCTOR INDUSTRY: A NATIONAL CONCERN

With the invention of the transistor at Bell Laboratories in 1947, the United States began four decades of leadership in the microelectronics field. With tremendous economic resources and superior technological advantages, the U.S. fostered an open exchange of ideas among all friendly nations of the free world. Along with this exchange of ideas, America has also offered a tremendous market for business and consumer products. [Ref. 6:p. 1]

The semiconductor industry in the United States is at a crossroads. Our technological leadership during the initial stages of this industry was clearly evident, with the early 1970's being completely dominated by American companies such as Texas Instruments, Intel, Rockwell and a host of others.

In 1970, when the first integrated chip was developed, the Japanese share of the Dynamic Random Access Memory (DRAM) market place was zero. Eighteen years later, in 1988, the Japanese market share was approximately 80 percent. The significance of this figure is in the fact that the majority of technological advances occur in the DRAM field because memory drives this progress in areas of process control and manufacturing. [Ref. 7:pp. 9-10]

The importance of the U.S. loss of market position in this very important technology is evident by reduced revenues,

which have a "snowball" effect on the amount of money spent for capital investment and also a reduction in the amount of R&D spending. As is evident from this cycle, a downward spiral soon develops which, if not altered becomes very hard to reverse. [Ref. 7:p. 10]

Mr. Donald J. Atwood, Deputy Secretary of Defense, had the following comments on the vitality of the U.S. microelectronics industry:

Current trends suggest that we are losing ground rapidly in a growing number of related microelectronics fabrication technologies. These shifts are due in large part to the fact that while U.S. firms spend only about 15 percent of their sales on semiconductor research, Japanese firms invest double that amount. Where their own research is insufficient, they invest in U.S. companies and U.S. academic research to obtain technology. [Ref. 8:p. 13]

Atwood concluded that, "by the year 2000, the U.S could be totally dependent on Japanese supplies of key electronic equipment." [Ref. 8:p. 13]

Sony chairman Akio Morita and former Japanese minister Shintaro Ishihara highlighted the growing issue of Japan's pivotal role in developing leading-edge military electronics technology that contributes to the global balance of power. They argue that because Japan has such advanced production skills, their semiconductors have achieved a level of sophistication unmatched anywhere. Their contention is that the U.S. could become almost totally dependent on Japanese manufactured chips. [Ref. 9:p. 23]

In years past the United States has been recognized as a world leader in virtually all military critical technologies. [Ref. 10:p. 1] The specter of foreign investment as a national security issue was never really assessed, and in fact considered a good thing by many parties from academia to industry.

There are different perspectives as to the proper amount and degree of foreign investment. The liberal economic perspective is one of letting markets function on their own. The other theory is one that is espoused by the national security analysts. Although this was discussed earlier in the paper it is important to recall those views for comparison with the view of the National Semiconductor Association.

The official view of the National Semiconductor Association is to encourage foreign investment. The Association argues that:

The net inflow of foreign capital into the United States has increased substantially in the last six years. There is a growing dependence on foreign capital to make up for the shortfall of domestic savings. Disrupting inflows of foreign capital could have disastrous consequences for the United States. [Ref. 7: p. 26]

Although capital is an important item to consider, it is also imperative to look at the effect foreign investment could have upon the national security. In further discussion the Association proposes the following;

Foreign purchases of U.S. corporate assets--especially in strategically sensitive industries such as electronics--are causing concerns that the United States is mortgaging its economic future.

Although they oppose all current oversight authority such as CFIUS, there is a dichotomy in the Association's viewpoint. On the one hand, they acknowledge U.S. dependence on foreign investment. This reliance has occurred due to of a lack of investment capability by U.S. firms and investment companies. This stems from a variety of reasons, including low personal savings, double taxation of corporate profits, leveraged buyouts, the concept of immediate profitability, low tax credits for R&D work, and the cost of capital. In short, the majority of U.S. firms are geared toward the immediate satisfaction of the stockholders. The American attitude of "what have you done for me in the last quarter" prevails.

However, they fear the dire consequences to national security of heavy foreign investment. With a recognition of this problem in the early 1980's, the Defense Science Board Task Force on Defense Semiconductor Dependency completed a study in February of 1987. The Task Force's report had a tremendous impact on the way American companies do business, with many of their recommendations applied by industry and DoD.

In the subsequent 18 months, two significant events would take place from these recommendations. One was the establishment of SEMATECH, a not for profit research institute that receives financing from the Department of Defense and from its 14-member institutions. The second was the passage of the Exon-Florio Amendment.

III. EXON-FLORIO: A CONGRESSIONAL RESPONSE TO FOREIGN INVESTMENT

With convincing debate from national security analysts and free market economists concerning the implications of foreign direct investment in the defense industrial base, Congress took keen interest in the subject. Foreign acquisition of U.S. high technology firms from 1981 to 1986 had increased from approximately 30 to more than 130 per year. [Ref. 11:p. 6] The Congressional response was to give the U.S. Government's screening mechanism, the Committee on Foreign Investment in the United States (CFIUS), more power. This power was imparted through the Exon-Florio Amendment.

The Exon-Florio Amendment was attached to the Omnibus Trade and Competitiveness Act of 1988. This amendment, section 5021, became section 721 of the Defense Production Act. The agreement that resulted from conference gave the President (or his designee) the power to review all mergers, acquisitions or takeovers proposed or pending on or after the enactment of the legislation. The legislation states further that this investigation will review all actions that give foreign persons control of a U.S. company engaged in interstate commerce. [Ref. 12:pp. 942-928]

Executive Order 12662 of December 27, 1988 designated the Committee on Foreign Investment in the United States (CFIUS)

to receive all notices and inquiries to determine whether investigations should be undertaken, and once an investigation has been completed, to prepare a report and a recommendation to the President. Membership in CFIUS includes the Secretaries of State, Defense and Commerce, the Director of the Office of Management and Budget, the Chairman of the Council of Economic Advisors, and the United States Trade Representative as permanent members. Other agencies are included when a notification raises questions within their specific area of expertise (e.g., NASA or Department of Energy). [Ref. 13:p. 2]

In its review process CFIUS has the responsibility to determine that:

- 1) There is credible evidence that leads the President to believe that the foreign interest exercising control might take action that threatens to impair the national security, and
- 2) Provisions of law, other than this section and the International Emergency Economic Powers Act (IEEP) do not in the President's judgement provide adequate and appropriate authority for the President to protect the national security in the matter before the President. [Ref. 14]

The Conference report set a standard for review, namely "national security." National security is not defined in terms of the Defense Production Act, but the legislative history states that national security is to be broadly defined, "without limitation to particular industries." The Congress rejected proposals to expand the statute's coverage to include threats to "essential commerce" and "economic

welfare." The intent of the conferees was not to discourage foreign investment, but to review foreign investment on items that had a potential to affect national security. [Ref. 15:p. 3]

Some items delineated were: the capability and capacity of domestic industries to meet national defense requirements, including the availability of human resources, products, technology, materials, and other supplies and services; and the control of domestic industries and commercial activity by foreign citizens as it affects the capability and capacity of the United States to meet the requirements of national security. [Ref. 12:p. 926]

Through regulation, the Department of the Treasury has established two types of reporting requirements. The first is a voluntary disclosure by the firm being acquired. The second is a request by a member of CFIUS to review a specific acquisition.[Ref 16] Essentially the Committee has a 30 day window to determine if the foreign control would be a threat to national security based on the criteria set forth in the amendment.

If it is determined that the investment will not meet the criteria, the Committee will notify the parties involved of its intent not to carry out an investigation. If it is determined by the Committee that the investment does require further review, there is a 45 day timeframe to conduct further investigation. After the 45 day period, the Committee will report to the President the results of its findings and present any recommendations. If unanimous consent is not achieved by the Committee, then the Chairman will present a

report to the President summarizing the different views.
[Ref. 16]

As of March 1990, CFIUS has undertaken only seven formal investigations from a total of over 350 filings. Two of the cases have resulted in notification being withdrawn with CFIUS' permission. One investigation is in progress. Four have reached the President's desk. He has exercised his divestiture authority in only one of these cases. [Ref. 13:p. 3]

The majority of cases reported to CFIUS are not in the category of a threat to national security. However, it is vital to national security that the effectiveness and the intent of Exon-Florio not be diminished.

The Exon-Florio amendment had attached to it a sunset clause, meaning that it was due to be reviewed and debated for continuing implementation or possibly to let it expire. During the past year, Congress failed to renew this amendment. Discussions with staff members of CFIUS indicate that they are still functioning as before but operating under Executive Order 11858 which formed CFIUS. The staff is still accepting reports of investment from U.S. companies that are being acquired by foreign concerns. However, Executive Order 11858 only established CFIUS; legislative power, meaning the reporting requirements, was provided by Exon-Florio. Without Exon-Florio, and with it the threat of divestiture, many

foreign acquisitions of U.S. firms would continue to take place with virtually no review process.

The staff at CFIUS fully expect that the law will be reviewed and will be included in new legislation when the 102nd Congress convenes in January.¹

¹This information was obtained from telephone interviews held with staff officials from the Department of Treasury, Office of International Affairs, Committee on Foreign Investment in the United States. Some members of Congress wanted to expand the purpose of the Exon-Florio Amendment by having it include stricter provisions as to where raw materials could be purchased. The Administration did not agree with this provision and others in conference, so Exon-Florio was one section of the Defense Production Act that did not get passed.

IV. U.S. FIRMS IN THE SEMICONDUCTOR INDUSTRY THAT WERE PURCHASED BY FOREIGN CONCERNS

With the creation of CFIUS in May of 1975 by Executive Order 11858, it was thought that there would now be an agency which had broad powers to review foreign investment in the United States.

The requirement for reporting to CFIUS was if a case had "national interest," which usually meant investment by a foreign government and was typically associated with large companies. A few examples of this reporting are Renault purchasing Mac Truck, and the Kuwaitis purchasing a very large retail chain of service stations. [Ref. 17] However, the majority of small non-government owned firms failed to acknowledge the reporting requirements and it was not until passage of the Exon-Florio amendment in 1988 that reporting requirements were established in legislation. Exon-Florio called for divestment of the completed transaction if the law was not followed. [Ref. 18] To date the President has ordered divestiture in the sale of only one company. This transaction involved the People's Republic of China and their purchase of an aviation parts manufacturer.

This chapter will review the purchase by foreign concerns of seven semiconductor companies which occurred prior to the passage of Exon-Florio. This researcher selected the

semiconductor industry for the reason that at one time the U.S. was the leader in technology. As referenced earlier, our world market share is roughly 15 percent in the DRAM field, a very critical area for technology advancements. Semiconductors are the leading edge of a great many technological advancements, including those critical for defense. Without this important industry, a deep chasm develops between technology takers and technology creators. All of these companies were reported to CFIUS as purchased by foreign concerns. Industries are classified by Standard Industrial Classification (SIC) and as such are listed under these codes by CFIUS.

A. STATE REPORTING REQUIREMENTS

States have varied reporting requirements as to the purchase or transfer of companies. Some states, such as Pennsylvania, Florida, Delaware and New Jersey do not require information reporting the sale or transfer of a company. Their only requirement is that in the case of merger, dissolution, or name change, a document must be filed with the bureau in each state responsible for corporate transactions. No other conditions are specified, nor is the acquiring corporation named.¹

¹In telephone interviews with representatives of each Bureau of Corporate Information (this is used as a generic term for expediency), Pennsylvania, Delaware, New Jersey, and Florida, had the least stringent reporting requirements. All four of these states required minimal information for any type

The state of Nevada requires that in the event of a sale or merger, the State Department of Corporate Information must be notified. The name of the company President must also be included in this report along with the name change or sale. The name of the newly formed company is the only information required when a transaction takes place. The company that acquires a firm based in Nevada is not required to give its name nor any other information.²

California requires that for each individual title transaction within a company, a report must be made to the Department of State, Capital Acquisition Bureau. This report includes the name of the company acquired as well as the name of the acquiring company. Other information required is the name of the chief executive officer, registered agent, and addresses for both.³

of corporate merger or dissolution. Notification of corporate transfer or sale was not required in any of the above mentioned states and when asked about that requirement, all of the representatives said that once a corporation is established a sale or transfer can occur without any notification. Information was available as to the names of the Presidents or CEOs; and all of the states did make available the names of the resident agents.

²All information was obtained through telephone interviews with representatives of the Nevada Department of State Corporate Information Bureau. The state of Nevada requires that all information regarding sale, merger, or transfer be reported to the state. If the company goes out of business a report is not required. Information is also available as to the name of the President or CEO of the corporation.

³Information was obtained through telephone interviews with representatives of the California Department of State, Capital Acquisition Bureau. The state of California has the

B. EVALUATION CRITERIA

The companies identified for this research were all reported to CFIUS as being in the semiconductor field and acquired by foreign firms. These companies were acquired prior to the passage of Exon-Florio. They include:

- Vernet Company.
- IMC Magnetic Corporation.
- Gain Electronics Incorporated.
- Electro Tech Incorporated.
- Exel Microelectronics.
- Powerex Incorporated.
- Zymos Corporation.

Of the companies identified for this research, Vernet, IMC, Exel, and Zymos are currently in business. The other companies, Gain, Electro Tech, and Powerex are no longer in existence at the addresses filed when incorporated. Further research of the county records and Better Business Bureaus, indicated that these companies had gone out of business.

Of the companies still in existence the following questions were asked to determine the impact of foreign acquisition on the availability of these companies to the defense industrial base:

most stringent requirements of all states mentioned in this thesis. The state requires that all information on merger, sale, transfer, and dissolution be recorded. The state also maintains files as to the primary business of the company.

- Do you currently have contracts with the Department of Defense (DoD)?
- If not, are you actively seeking DoD contracts?
- If you do business with DoD, what percentage are prime contracts and what percentage are subcontracts with DoD prime contractors?

C. ANALYSIS OF COMPANIES

1. Vernet Co.

Vernet Co., was formerly located in San Diego, California. It was purchased in 1986 by Vertex Inc., of Japan. Currently the company is located in Torrance, California. The purchase date reported to CFIUS concurs with that which the State of California currently holds on record as August 18, 1986. However, on September 1, 1989, the company was suspended by the California Franchise Tax Board for tax improprieties and on March 1, 1990 the resident agent resigned. The resident agent is usually an outside legal consultant. The Chief Executive Officer is Japanese and resides in Tokyo. [Ref. 20]

The majority of this company's work is as a subcontractor to large defense prime contractors. These include IBM, Lockheed, Hughes, General Dynamics and others. Approximately three percent of their total sales are directly to DoD.

Currently they do no research and development. Their work is primarily as a distributor for products manufactured by the parent company in Japan. [Ref. 21]

2. IMC Magnetic Corporation

IMC is located in Miami Lakes, Florida and was purchased by Mineba Co. Ltd., of Japan. The Department of State in Florida has no requirements for recording a sale or transfer of a corporate entity within the state. The only requirements are that if merger, dissolution, or name change takes place, a record must be made with the Department of Corporations. This record usually entails the filing of the annual report, along with the required form for official change of name. Also included in this filing are the names and addresses of the current director, executive secretary, and the registered agent. The registered agent controls access to any and all information about the company, thus keeping information confidential.

IMC had an amendment to their name on June 17, 1985. This amendment occurred in the same year that the transaction was reported to CFIUS. On August 9, 1990, the name was again changed to IMC Power Systems, Inc. [Ref. 22]

Discussions with personnel at the company revealed that IMC had really split the company into two divisions. One division was doing manufacturing and the other division was doing assembly of component type items. The division which does the assembly work is a subcontractor with major DoD prime contractors such as IBM, Lockheed, Hughes and General Dynamics. They do not sell directly to DoD.

No research is currently carried out at either of the sites. Senior officials at the company declined to discuss topics that they considered confidential, i.e., research. They did acknowledge that IMC was purchased by Mineba Co, Ltd., of Japan. [Ref. 23]

3. Gain Electronics Inc.

Formerly located in Branchberg, New Jersey, Gain was purchased by Mitsui and Co. Ltd., of Japan. The original name of Gain was Dingle Electronics.

The records show that Dingle Electronics was incorporated on October 7, 1985. On October 21, 1985, Dingle Electronics became Gain Electronics Inc., and under New Jersey law it was reported as being owned by a foreign concern. The last annual report filed with the New Jersey Department of State was September 27, 1988. [Ref. 24] Calls to Gain Electronics have proved unfruitful. It appears that they have closed down and are no longer in existence. The address given for the former President of the company, Raymond P. Dingle, is no longer in existence.

4. Electro Tech Inc.

Records show that this company is located in Las Vegas, Nevada. This company was purchased in 1985 by UNITECH PLC of Great Britain. The lack of reporting requirements in Nevada has resulted in a lack of information. Deficiencies of current and correct addresses and phone numbers filed with the Department of State, Division of Commercial Transactions have

been a significant obstruction in obtaining information on this company. This corporation is no longer in existence and there is no other means available of determining their current status. [Ref. 19]

5. Powerex Inc.

Formerly located in Youngwood, Pennsylvania, Powerex was purchased by Misubishi Electronics Inc., of Japan. The company is shown as a foreign concern with the Pennsylvania State Department, Corporation Bureau. The company is not registered as a Pennsylvania corporation, but rather as a Delaware corporation. This means that the company is qualified to incorporate within the state of Pennsylvania but the home office is located in Delaware.

Qualification requires a company to file two forms, a docketing certificate which is strictly for tax purposes, and a certificate of authority, which stays as a record with the Corporation Bureau.

The Pennsylvania Corporation Bureau shows that the company qualified for corporate status on April 23, 1986. A legal firm, C.T. Corporation Systems of Pittsburgh, Pennsylvania, is their registered agent in that state. In discussions with officials from C.T. Corporation Systems, they indicated that C.T. Corporation Systems was a firm that specializes in qualifying corporations from outside of Pennsylvania for incorporation within Pennsylvania. [Ref. 25]

Delaware's State Department of Corporate Information shows the company in good standing, with an official incorporation date of August 23, 1985. This date coincides with the filings with CFIUS. The corporation is set up through a registered agent. That agent is The Corporation Trust Company, located in Wilmington, Delaware. Officials of the registered agent declined to discuss any facts concerning Powerex, Inc. They cited client confidentiality as their reasons.

The state of Delaware does not require any information as to the sale or transfer of a corporation. The only information required is for mergers, dissolution or the change of corporate officers. State laws would only permit information to be provided regarding such matters as the standing of a company, its registered agent, and stock status. [Ref. 26]

6. Exel Micro Electronics

Exel Micro Electronics was formerly located in San Jose, California. This company was incorporated on February 22, 1983 as Omniquest, Inc. On April 5, 1983 the name of the corporation was changed to Exel Micro Electronics. Later that year the Rohm Corporation purchased Exel but did not change its name. On March 27, 1990 Exel merged with the Rohm Corporation and on March 28, 1990 the merger was formalized with the state of California.

Exel was originally located in San Jose, California and is still listed as being active with a permanent address

in San Jose. However, they have since close down in San Jose and moved to Irvine, California. The Chief Executive Officer is Japanese and he resides in Tokyo. The resident agent is Japanese and resides in the Los Angeles area. There is also a resident agent located in San Jose.

As of this writing officials from what is now the Rohm Corporation have refused interviews with the researcher. The resident agents will only acknowledge the information that was obtained through the California State Department of Capital Acquisition. [Ref. 20]

7. Zymos Corporation

Zymos Corporation is located in Sunnyvale, California. The company incorporated in the state of Delaware on October 29, 1986, and became incorporated in California on February 26, 1987. Because this firm was originally incorporated in Delaware, the state of California has no record of incorporation prior to 1987. The Corporation Trust Company of Wilmington, Delaware also was involved in the transactions for this firm.

The company that filed with CFIUS is the Daewood Corporation of Japan. Calls to the company in Sunnyvale, California indicated that they no longer sell to DoD or to major prime contractors other than IBM. The company states that all of their work is commercial. [Ref. 27]

D. SUMMARY

The research for this chapter proved to be quite varied and interesting. Four of the seven firms acquired by foreign interests were still in business. Two of these companies continued to have business dealings with DoD or with major DoD prime contractors. One company did not wish to involve itself with this research and therefore would not discuss its business base. The fourth company no longer did business with DoD or with any DoD prime contractors. They indicated that all of their sales were for commercial products.

The information gathered concerning the incorporation of firms proved to be important in attempting to answer the primary thesis question. Further research in this area could prove to be very beneficial in tracking firms that may have been acquired by foreign concerns and are critical to the industrial base.

The incorporation of a firm in this country is very easy for any one with the necessary legal expertise. By examining each state's method of recording the incorporation of business, it is concluded that it is very simple to move corporations within the state or to another state as conditions warrant without the state's knowledge. Since states do not track a firm once it leaves their jurisdiction, it is possible for a firm to move offshore without notifying any government authority. As different states compete for valuable resources from companies, i.e., employment and

investment, one could conclude that reporting requirements for incorporation might be relaxed in order to foster investment.

V. FINDINGS, CONCLUSIONS, RECOMMENDATIONS, AND SUMMARY

A. INTRODUCTION

The objective of this study was to examine foreign investment in a segment of the defense industrial base (DIB) and to assess its impact. Another objective was to evaluate the potential of the Exon-Florio Amendment as a remedy for foreign acquisition in cases with adverse implications for national security. The principal findings were developed through a literature review and non-attribution telephone interviews with the companies involved, with staff members of the Committee on Foreign Investment in the United States (CFIUS) and staff members from the Office of Industrial Base Assessment. This research has produced several findings relevant to the DIB and to the effectiveness of Exon-Florio.

B. FINDINGS AND CONCLUSIONS

The primary research question was, What is the effect of foreign acquisition of U.S.-based semiconductor manufacturing companies on the defense industrial base (DIB)? Findings which pertain to the subsidiary research questions are addressed as part of the discussion of general findings and conclusions.

Seven companies were surveyed for this thesis. Three of the companies were very cooperative. One company refused to

participate in the research, while the remaining three had gone out of business at some point in the past five or six years. Of the three companies that participated in this thesis two were currently contracting as a DoD prime or as a subcontractor to major DoD prime contractors. The third company no longer did DoD work and was dedicated to commercial work.

It is likely that those companies which had gone out of business did so for one of two reasons. The new foreign owners may have moved the entire company off-shore for R&D and production. The R&D and manufacturing expertise represented by these companies is no longer available in this country. This finding supports the view that critical industries are being lost to the DIB as a result of foreign acquisition. The other argument is that of the free market or "laissez-faire" approach. This view would assume that the companies that were no longer in business had been poorly managed and succumbed to market forces.

It was not possible to determine which explanation was applicable to the semiconductor companies surveyed for this thesis. This is a major problem in evaluating the impact of foreign acquisition. It is not clear that foreign acquisition "causes" companies to disappear from the DIB.

Determining the effect of foreign acquisition on the U.S. DIB is further complicated by the sample sizes and time frames available for this research. The time frame used here was the

two year period of 1985 and 1986. Clearly, a study that encompassed a longer period--perhaps a decade--might reveal other findings or alter the findings of this thesis.

Exon-Florio was established as a reaction to a serious concern, the rising amount of foreign investment in the U.S. The original charter of CFIUS was to review transactions that affected the "national interest." The legislative power of Exon-Florio significantly increased the leverage of CFIUS. The amendment directed CFIUS to review all transactions that had national security implications. Prior to Exon-Florio there was no enforcement vehicle if companies failed to report a sale to a foreign concern. The amendment provided the threat of divestment in cases of non-compliance. This legislation is a step in the right direction but does not go far enough in successfully monitoring foreign investment

Each state has records concerning the incorporation of various entities. Due to the sheer volume of filings each year, many requirements for reporting transactions go unreported by corporations for a variety of reasons. These include ignorance of the law, not taking the time to complete the required paper work, and possibly just to conceal a company for tax purposes.

States do not require notification of certain transactions that take place such as a sale. This was the case in every state surveyed with the exception of California. Although reporting requirements for merger, transfer, and name change

do exist, state regulators learn if a company opens up for operations only when these companies apply for a tax identification number and subsequently file tax returns.

There is no adequate data base available to monitor foreign companies and their manufacturing capability.

C. RECOMMENDATIONS

Firms which are acquired by a foreign concern should be accounted for differently than those which are domestic. When purchased by a foreign concern, a company in an industry such as semiconductors, which is critical to the DIB as well as the industrial base (IB), should be required to report all corporate transactions to the federal government, specifically CFIUS.

If the company moves out of state, that move should be documented and forwarded to the next state of incorporation. Presently, when a corporation moves from one state to another, they are able to move the research or manufacturing work but keep an address indicating a continued existence in that state although there may be no work being done there.

CFIUS should also be notified of moves between states. In discussions with staff members of CFIUS, it became evident that there was no way for the staff to know what happened to a foreign owned company following acquisition and completion of the investigation.

When a foreign company acquires a U.S. firm, a requirement should exist for reporting to CFIUS where research and manufacturing will take place. This researcher is recommending that CFIUS monitor what the company is manufacturing (if it is critical to national security), and whether they are taking that manufacturing ability out of the U.S.

CFIUS would notify each state of the name and manufacturing ability of each company. To minimize the amount of data coming into CFIUS, each state would report back to CFIUS on a yearly basis of the standing of the firm and the manufacturing work it is performing in that state.

The effectiveness of Exon-Florio should be reviewed. Once CFIUS rules on the transaction, the trail of the company is essentially lost. Policy makers need to look at the corporate reporting requirements of the states to develop an effective plan for monitoring foreign companies. CFIUS has no way of knowing the extent of an adverse impact on the DIB.

A broader study of this situation should be undertaken. A review of all semiconductor companies purchased by foreign concerns in the past ten years would show some evidence of what technological and manufacturing capability still exists in this country.

The key to a broader review would be to limit the analysis to a single industry. The sample size would be large enough to offer some facts yet small enough to work effectively.

D. SUMMARY

The requirements for a foreign firm reporting to CFIUS are modest. The majority of foreign governments place many more constraints on foreign investment than does the U.S. Although these reporting requirements may be viewed by many as protectionist measures, a balance needs to be struck between the "laissez-faire" theory of economics and national security concerns. The U.S. has a legitimate interest in the status of foreign acquired firms.

When this problem is viewed in the proper light, foreign investment will not be discouraged. The United States still has wide and varied resources to draw upon. These resources include raw materials, capital, a strong labor force, and stability of government. Foreign firms see this country as an investment opportunity. The United States should welcome that investment but continue to be concerned with the movement of technology to foreign shores.

LIST OF REFERENCES

1. Tolchin, Martin and Susan, Buying Into America, New York Times Company, 1988.
2. Hicks, Donald A., "Foreign Ownership of Defense Firms Boosts U.S. Security," Armed Forces Journal, October 1990.
3. Moran, Theodore, H., "The Globalization of America's Defense Industries," International Security, V. 15, No. 1, Summer 1990.
4. U.S. Government General Accounting Office, "U.S.-Japan FS-X Codevelopment," Government Printing Office, Washington DC, 6 February, 1990.
5. Costello, Robert B., "Bolstering Defense Industrial Competitiveness," Report to the Secretary of Defense by the Under Secretary of Defense (Acquisition), Government Printing Office, Washington DC, July, 1988.
6. Howell, Thomas, R., and others, The Microelectronics Race, Westview Press, 1988.
7. Ross, Ian M., A Strategic Industry at Risk, National Advisory Committee on Semiconductors, Arlington, Va, November 1990.
8. Atwood, Donald J., "Industrial Base: Vital to Defense," Defense 90, January/February 1990.
9. Compton, W. Dale and Solomon, George, E., The Technological Dimensions of international Competitiveness, National Academy of Engineering, Washington D.C., 1988.
10. Defense Science Board, Report on Defense Semiconductor Dependency, Government Printing Office, Washington D.C., February, 1987.
11. Defense Science Board, The Defense Industrial and Technological Base, Final report of the Defense science Board Summer Study, Government Printing Office, Washington, D.C., October, 1988.
12. House of Representatives Conference Report, 100th Congress, 2nd session, H.R. 100-576, Government Printing Office, Washington D.C., 1988.

13. Dallara, Charles H., Assistant Secretary of the Treasury for International Affairs, testimony before the Subcommittee on Commerce, Consumer Protection and Competitiveness of the Committee on Energy and Commerce, U.S. House of Representatives, Government Printing Office, Washington, D.C., March 1990.
14. Omnibus Trade and Competitiveness Act of 1988, P.L. 100-418, section 5021, section 721 pt d, subsection 1 and 2 of the Defense Production Act of 1980, Government Printing Office, Washington D.C., October 1988.
15. Barreda, William E., Deputy Assistant Secretary of the Treasury for Trade and Investment Policy, testimony before the Committee on Commerce, Science and Transportation, U.S. Senate, Government Printing Office, Washington D.C., July 1990.
16. 31 CFR Part 800, Subpart 800.401, Government Printing Office, Washington D.C., 1990.
17. Telephone conversation between Steven Altheim, Department of the Treasury, Office of International Affairs, Committee on Foreign Investment in the United States and the author, 4 December 1990.
18. Telephone conversation between Keith Palzar, Department of the Treasury, Office of International Affairs, Committee on Foreign Investment in the United States and the author, 4 December 1990.
19. Telephone conversations with representatives of the State Department, state of Nevada, Department of Corporate Information and the author, 26 September 1990.
20. Telephone interviews with representatives of the California Department of State, Capital Acquisition Bureau and the author, 26 September 1990.
21. Telephone conversation between James Schwartz, Director of Contracts, Vertex Inc. and the author, 16 October 1990.
22. Telephone conversation between representatives of the Florida Department of State, Bureau of Corporate Information and the author, 14 November 1990.
23. Telephone conversations between the Pat McGowan, Director of Purchasing, IMC Power Systems, Inc., and the author, 16 October 1990.

24. Telephone conversation between representatives of the New Jersey Department of State, Division of Commercial Recording, and the author, 23 October 1990.
25. Telephone conversation between Lisa Seminski, C.T. Corporate Systems and the author, 15 November 1990.
26. Telephone conversation between representatives of the Delaware State Department of Corporate Information and the author, 30 November 1990.
27. Telephone interview between David Hardif, President of Zymos Corporation, and the author, 18 September 1990.

BIBLIOGRAPHY

- Alford, Jeanne, Meeting the Global Challenge: Advanced Electronics Technology and the American Semiconductor Industry, Semiconductor Industry Association, 1989.
- Augustine, Norman R., Report of the Defense Science Board Task Force on Defense Semiconductor Dependency, Department of Defense, Washington, D.C., February 1987.
- Lamm, David V., "An Analysis of Reasons Companies Refuse to Participate in Defense Business," Unpublished paper, Naval Postgraduate School, Monterey, California, March 1987.
- Packard, David A., A Quest for Excellence, Final Report to the President by the Blue Ribbon Commission on Defense Management, Washington, D.C., June 1986.
- Schauber, Jon A., An Analysis of Why Non-Ferrpus Foundry Subcontractors Refuse to Participate in DoD Business, Master's Thesis, Naval Postgraduate School, Monterey, California, June 1988.
- Young, John A. Picking up the Pace: The Commercial Challenge to American Innovation, Council on Competitiveness, Washington, D.C., September 1988.

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